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Executive Vice Chancellor
William D. Schaefer, Ph.D.

Vice Chancellor—Graduate Programs and Dean of the Graduate Division:
Victoria A. Fromkin, Ph.D.

Deans Emeriti of the Graduate Division:
Vern O. Knudsen, Ph.D. (Deceased) (1934-1958)
Gustave O. Arlt, Ph.D. (1959-1962)
Horace W. Magoun, Ph.D. (1962-1972)

Associate Deans:
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David E. Lopez, Ph.D.

Ellen Benkin, Assistant Dean and Supervisor, Student and Academic Affairs
Diane E. Brandt, Senior Editor, Graduate Division Publications
Marie Demir, Assistant to the Dean, Recruitment
Mabel O. Dempsey, Assistant to the Dean, Budget
Mary E. Earl, Assistant Dean and Director, Fellowships and Assistantships
C. Sari Halasz, Director, Graduate Admissions
James Henson, Institutional Researcher, Office of Graduate Information Systems
Charles J. Johnson, Systems Analyst, Office of Graduate Information Systems
Helen Kaneko, Secretary to the Associate Dean

Hazel Love, Assistant Dean and Director, Graduate Affirmative Affairs Office
Carmen Taub, Secretary to the Associate Dean
Elizabeth Thoren, Assistant to the Dean
Ethel Toki, Systems Analyst, Office of Graduate Information Systems

Graduate Council:
Marcella (Hughes) Beeman, Coordinator and Assistant to the Chair

Graduate Students Association:
Scot Spicer, President
Jane Wishon, Vice President—Internal Affairs
Carla Mortensen, Vice President—External Affairs

Other Information...

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, Medicine, Nursing, Public Health, and Social Welfare; and in the announcement of the College of Fine Arts and the Undergraduate Catalog.

This book was produced by UCLA Publication Services Department.

Cover illustration by UCLA student, Masahiro Toriyama.

Please note

Every effort has been made to insure the accuracy of the information presented in the Graduate Catalog. However, all courses, course descriptions, instructor designations and curricular, degree requirements and fees described herein are subject to change or deletion without notice. You may consult the appropriate department, school, college, or division mentioned in the Catalog for further information.
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A Letter from the Dean

UCLA is a city within a city. It offers its graduate students a center for study just five miles from the Pacific Ocean and its expanse of beaches, and thirty minutes from downtown Los Angeles. You will read in the Graduate Catalog about our campus, our libraries, research centers, art museums, theaters, recreation centers, restaurants. You will also read of the medical complex, the professional schools, the diversity of fields of study offered here.

We have attempted to include in this catalog a wide range of information about UCLA. But, until you walk through the sculpture garden looking up at a Rodin or a Lachaise or a Lipchitz, or meditate in the serenity of the Japanese Gardens, or hear a noon concert at Schoenberg Hall, or move from the octagonal domes and Lombardian doorways reminiscent of 6th century Italian cathedrals in the North Campus, to the contemporary new buildings of the South Campus, UCLA will not yet be a part of your life. UCLA is a living, vital place, made so by our distinguished faculty and students. We welcome you as a new or continuing graduate student into our city; it is you for whom we exist.

Cordially,

Victoria A. Fromkin
Vice Chancellor—Graduate Programs
and Dean of the Graduate Division
### Calendar 1982-1983

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<th>Event</th>
<th>Fall '82</th>
<th>Winter '83</th>
<th>Spring '83</th>
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<td>Last day to file application for graduate admission</td>
<td>December 30, '81</td>
<td>October 1, '82</td>
<td>December 30, '82</td>
</tr>
<tr>
<td>or readmission or renewal of application (previously applied but did not register for a regular quarter) with complete credentials and the application fee, with Graduate Admissions, 1247 Murphy Hall.</td>
<td></td>
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<tr>
<td>Last day to file graduate petitions for change of major</td>
<td>December 30, '81</td>
<td>October 1, '82</td>
<td>December 30, '82</td>
</tr>
<tr>
<td>with Graduate Division, 1225 Murphy Hall.</td>
<td></td>
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<tr>
<td>First day to obtain UCLA Student Parking Request forms at Campus Parking Service.</td>
<td></td>
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<tr>
<td>Schedule of Classes goes on sale at Students' Store,Ackerman Union.</td>
<td>June 9</td>
<td>November 10</td>
<td>February 10</td>
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<td>Last mailing date for ALL students to register/enroll by mail.</td>
<td>September 3</td>
<td>December 10</td>
<td>March 9</td>
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<td>English as a Second Language Placement Examination (ESLPE)</td>
<td>September 28</td>
<td>January 5</td>
<td>March 30</td>
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<td>at 1:15 p.m. in 1200 Rolfe Hall.</td>
<td>September 28-October 1</td>
<td>January 5-7</td>
<td>March 30-April 1</td>
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<td>QUARTER BEGINS</td>
<td>October 4</td>
<td>January 10</td>
<td>April 4</td>
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<tr>
<td>Registration in person without late fee, 8:30 a.m. to 5:00 p.m.</td>
<td>October 4-15</td>
<td>January 10-21</td>
<td>April 4-15</td>
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<td>For details, see Schedule of Classes.</td>
<td>October 6</td>
<td>January 12</td>
<td>April 6</td>
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<tr>
<td>INSTRUCTION BEGINS</td>
<td>October 15</td>
<td>January 21</td>
<td>April 15</td>
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<tr>
<td>Late registration in person with $50 late fee, 8:30 a.m. to 5:00 p.m.</td>
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<td>Changes in study list without fee, file with major department by 4:00 p.m.</td>
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<tr>
<td>Graduate Study List Card should be filed with major department by 4:00 p.m.; approved cards due to Enrollment Office by 5:15 p.m.</td>
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<tr>
<td>Last day to file advancement to candidacy for master's degree with Graduate Division, 1225 Murphy Hall.</td>
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<tr>
<td>Last day to:</td>
<td>October 15</td>
<td>January 21</td>
<td>April 15</td>
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<tr>
<td>1. File Study List Card without fee.</td>
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<tr>
<td>2. Change Study List (add, drop) without fee.</td>
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<tr>
<td>3. Register in person with $50 late fee.</td>
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<td>4. File Graduate Leave of Absence with Graduate Division (prorated refund).</td>
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<td>Last day to register for foreign language examinations in French, German, Russian, and Spanish.</td>
<td>October 15</td>
<td>January 28</td>
<td>April 1</td>
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<td>Last day to (with approval of Graduate Dean):</td>
<td>October 22</td>
<td>January 28</td>
<td>April 2</td>
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<tr>
<td>1. File Study List Card with $50 fee.</td>
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<tr>
<td>2. Add courses to official study list and/or change unit credit with $3 petition fee.</td>
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<td>Orientation meetings on format for master's theses and doctoral dissertations (See Manuscript Adviser, 134 Powell Library).</td>
<td>October 21-23</td>
<td>January 27-29</td>
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<tr>
<td>ETS foreign language examinations in French, German, Russian, and Spanish.</td>
<td>October 23</td>
<td>February 5</td>
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<tr>
<td>Last day to submit drafts of dissertations to doctoral committees for degrees conferred in current quarter.</td>
<td>November 5</td>
<td>February 11</td>
<td>May 6</td>
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<td>Last day to file removal of incomplete petition ($5 fee) with Registrar, Window &quot;A&quot;, Murphy Hall.</td>
<td>November 12</td>
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<td>Last day to submit final drafts of theses to master's committees for degrees to be conferred in current quarter.</td>
<td>November 19</td>
<td>February 25</td>
<td>May 20</td>
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<td>Last day to file completed copies of theses for the master's degree and dissertations for the doctor's degree to be conferred in current quarter with Graduate Division, 1225 Murphy Hall.</td>
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<td>June 6</td>
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<td>Last day for graduate students to drop courses from study list without penalty of Grade &quot;F&quot;, and/or change grading basis, with $3 petition fee.</td>
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<td>June 11</td>
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<td>June 13-17</td>
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<td>Last day to file applications for financial support tenable at Los Angeles for the 1983-1984 academic year (date to be postmarked). Applications postmarked after the published deadlines will be considered only in accordance with the availability of remaining funds.</td>
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<td>consult department</td>
<td>consult department</td>
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<td>Commencement</td>
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*Combined Application for Graduate Admission/Fellowship and Financial Aid. Application date of March 15, Graduate School of Management, M.B.A. program. Departments with earlier application date, please consult Graduate Admissions.
Introduction

History of Graduate Study at UCLA
In the 43 years since the award of its first Ph.D. degree, the advances in graduate training and research at UCLA have transformed a small branch of the University into a major institution of a system of higher education which now embraces nine campuses throughout the State.

First established in 1919, the Southern Branch of the University of California was officially renamed UCLA in 1927 and moved in 1929 to its present home on a 411-acre campus in Westwood, a suburb of metropolitan Los Angeles overlooking the Pacific. Graduate study was first authorized for the M.A. degree in 1933, with graduate enrollments limited to approximately 125 students. The M.A. was offered in 16 fields that first year, and UCLA's total student population was then 6,060. The Graduate Division was established in 1934, and in 1936 authorization for graduate education at UCLA was extended to the Ph.D. degree with four departments offering programs. In 1938, the first doctorate was awarded at UCLA, and graduate student enrollments had increased to 538 with the number of fields for the Ph.D. increasing to 21.

In Fall of 1981, total UCLA enrollments numbered 34,611. Of these, 8,197 students were enrolled in the Graduate Division, and an additional 3,806 in graduate professional programs in Dentistry, Law, and Medicine. During the year, 1980-81, 2,309 graduate degrees in a variety of fields were awarded to students enrolled in the Graduate Division.

Graduate Education: Nature and Objectives
Undergraduate study concerns itself primarily with the transmission of existing knowledge and concepts and is designed to provide a broad base in the arts and sciences and an understanding of contemporary society. Graduate study, on the other hand, is intended to deepen the student's grasp of a chosen field of knowledge, to introduce him/her to the tools and techniques of research and to develop his/her capacity eventually to make significant contributions to his/her field.

The first stage of graduate education leads to the degree of Master of Arts or of Science, or of one of several professional degrees (e.g., Master of Business Administration, Master of Education, etc.). The degree is intended to develop the mastery of a field and to prepare the student for school or college teaching or for practice of a profession.

The second stage leads to a doctoral degree (Ph.D., Ed.D., etc.) and is designed to prepare the student for creative activity and research, often in association with teaching at a university or college. Doctoral study requires rigorous intellectual discipline, meticulous scholarship, and full dedication to the field of study.

Like all distinguished universities, UCLA subscribes to the three chief hallmarks of graduate education: excellence in scholarship, creative productivity in research, style and skill in the transmission — both written and oral — of knowledge.

The Graduate Division
The Graduate Division has surveillance over students holding the bachelor's degree or its equivalent. It is also responsible for master's, doctoral, and certain graduate professional degrees and for scholars engaged in postdoctoral work.

The Graduate Division is headed by a Dean, who also serves as the Vice Chancellor — Graduate Programs, appointed by the Chancellor with the approval of the Regents. She is assisted by two Associate Deans and the Graduate Division staff in such matters as graduate fellowships, assistantships, recruitment, admissions, and all aspects of graduate student and academic affairs.

The Graduate Council
The Graduate Council is a standing committee of the faculty Academic Senate and is selected to give proper representation to the academic departments, colleges, professional schools, and interdepartmental programs which offer graduate curricula. The Council consists of 19 members, including the Dean of Graduate Division who serves ex officio. In addition, three student representatives are appointed to the Graduate Council by the Graduate Students Association.

The Graduate Council makes policy for all graduate education at UCLA, including, the establishment, changes in, or discontinuance of degree programs and the periodic reviews of current graduate programs for their quality and appropriateness.

A Combined Effort
Together, the Graduate Division and the Graduate Council provide information to departments, establish graduate standards for the campus as a whole, approve admissions, programs, examinations, and degrees of graduate students, review graduate students' petitions, encourage and approve new academic programs, advise the Chancellor in matters concerning graduate study and support, promote graduate study on this campus, and protect the quality of graduate programs.
Student Life at UCLA

The Cultural Community

Public lectures, concerts, art exhibits, dance recitals, and the theater are an integral part of the University community. Professional artists of national and international fame, as well as distinguished guests in many fields, augment the year-round cultural life at UCLA.

The Performing Arts

The UCLA Center for the Performing Arts presented a diverse array of new and legendary artists during its 1981-82 season. Renowned performers such as soprano Leontyne Price, flamenco guitarist Carlos Montoya, and mime Marcel Marceau, made rare West Coast appearances at Royce Hall. The art of the keyboard was explored by pianist Aldo Ciccolini, Claudio Arrau (performing with the Los Angeles Chamber Orchestra), and Philippe Entremont in concert with flutist Wolfgang Schulz. The Los Angeles Philharmonic crowned the fall music season at UCLA with a three-evening "Festival of Music Made in Los Angeles."

Pauley Pavilion was the scene of "A Gala Evening with Henry Mancini — A Tribute to the Man and His Music," honoring the composer for his extensive support of the performing arts at UCLA through his donations of scholarships, fellowships and original manuscripts to the Department of Music and its Library. Master of Ceremonies Andy Williams hosted a retrospective of Mancini’s film scores performed by Quincy Jones, The New American Orchestra conducted by Jack Elliott, the UCLA Marching Band and the UCLA Jazz Band Sextet. The highlight of the evening was a recital of operatic arias and Mancini compositions by tenor Luciano Pavarotti. Chancellor Charles E. Young honored Mr. Mancini as the first recipient of The Distinguished Artist Circle Award. Mayor Tom Bradley also cited his contributions to Los Angeles' artistic and educational communities. Sponsored by The Royce Two-Seventy, the senior support group for UCLA's Council for the Performing Arts, this event was coordinated by 14 graduate and undergraduate students under the supervision of professional volunteers from the entertainment community, all proceeds to benefit the performing arts at UCLA.

UCLA offered a feast of dance, with performances by the Alvin Ailey American Dance Theater, Pilobolus, the Jazz Tap Ensemble, Les Ballets Trockadero de Monte Carlo and the Oakland Ballet, as well as the Lar Lubovitch, Dan Wagoner, Laura Dean, Robert Small, UCLA and Merce Cunningham dance companies.

Special events throughout the year included the U.S. debuts of both the Aboriginal Arts of Australia and the Court Dance Theater and Music from Okinawa. Residencies were presented by the Asian Performing Arts Summer Institute's living treasures of Japanese theater and by the Actors from the Royal Shakespeare Company. "Central Avenue Breakdown," two performances by the legends of the Los Angeles jazz scene at Royce Hall was recorded for broadcast by National Public Radio. Finally, the Mizoguchi Film Festival made rare footage by Japan's eminent director accessible to local film buffs.

As this sampling of established artists and young masters indicates, the UCLA Center for the Performing Arts honors its commitment to present the finest entertainment available across the spectrum from the commercial to the esoteric. Special student tickets and discounted faculty/staff tickets are available to these events.

Recreation

UCLA provides extensive recreation opportunities and facilities for swimming, organized competition, informal play, physical exercise, and skill development. Twenty-one tennis courts, five handball courts, and several sports fields are open daily. Pauley Pavilion seats 13,000 persons for athletic and cultural events. The club program offers involvement in more than 40 activities on- and off-campus. A varied intramural program serves student interest in sports competition. Non-credit classes are offered in aquatics, dance, art, outdoor studies, fitness, and sports.

Sunset Canyon Recreation Center

The Sunset Canyon Recreation Center is a recreational and cultural facility aesthetically designed to serve the University community. It is open all year, seven days a week, for formal and informal use on both an individual and a group basis. Located in the hills of the west campus adjacent to the residence halls, it features an Olympic-sized pool, a family pool, picnic-barbecue areas, multipurpose play fields, and an outdoor amphitheater. Rooms are available for meetings, receptions, symposia, dances, luncheons and dinners. The Center sponsors programs of poetry readings, informal concerts, exhibitions and art classes for adults and children, as well as summer swim classes for children.

Graduate Students Association

The Graduate Students Association (GSA) is the sole, campuswide student organization established for the purpose of representing the interests of graduate students. Departmental representatives coupled with a campuswide Forum and an executive branch comprise GSA's representative network. The location of the GSA office is in 301 Kerckhoff Hall (phone (213) 206-8512).

The GSA is financed by mandatory student government fees paid by all graduate students. Departmental graduate student organizations receive pro rata funds from the GSA. Additional funds are available upon request from the GSA Cabinet. Early application for funds is advisable.

The GSA appoints representatives to the ASUCLA Board of Control, the Communications Board, the University Policy Commission, Registration Fee Committee, Wooden Center Board of Governors, and various funding and planning committees as well as to committees of the Academic Senate and various administrative committees.

Graduate student activities vary widely from one department to another. Included in the range of activities are: participation on such key committees as admissions, fellowships, curriculum, and appeals; organizing symposia and publications; preparing guides to survival in graduate school; and sponsoring guest lectures, social events, and orientation sessions for new students.

Living Accommodations

Note: Rates and information are subject to change without notice.

Early application is important for students interested in University accommodations. For off-campus rentals, students should plan to arrive at UCLA at least 14 to 21 days prior to the date of registration to give themselves a fair chance in the competition for housing. Persons interested in temporary accommodations may obtain a list of hotels and motels by writing to the UCLA Housing Office, 78 Dodd Hall.

The Office of Residential Life

The Office of Residential Life advises student governments in University-owned residence halls and Married Student Housing and assists them in developing social, educational and recreational programs. A live-in staff of professional and student advisers in the residence halls help students become acquainted with the University, with the residence halls' environment and with each other. The staff enforces rules, counsels individuals on normal student problems and makes referrals to specialized services as needed.

University Residence Halls

Four 800-student, and one 335-student, on-campus, coed residence halls combine social, cultural and recreational opportunities with complete liv-
ing and dining facilities. Additional on-campus housing is available in the 708-bed Residential Suite Complex. Graduate students are housed in Hershey Hall (335 beds).

Graduate students must return the housing information request form from their admissions packet in order to obtain an application. Assignment procedures for housing are included with the application form.

The rate for room and board (19 meals per week) covers the Fall, Winter and Spring Quarters; but it does not include University academic holidays and the recesses between quarters. There is also a residence hall association fee to cover social events within the halls.

Married Student Housing

University-owned housing for married students, single parents, and their immediate families (spouse and children only) is provided at Married Student Housing. These units are located approximately five miles from campus near a direct city bus line. The buildings are two-storied and have unfurnished one, two, and three-bedroom apartments. Ample play area is provided for children in the apartment complex and in the nearby Mar Vista Playground. Rental rates for each year are published in June for the following year.

Information pertaining to rental rates, eligibility, and assignment procedures may be obtained from: Married Student Housing Office, 3240 Sawtelle Boulevard, Apt. #1, Los Angeles, CA 90066, (213) 391-0686. Applicants can anticipate an average wait of 12 to 24 months.

Cooperative Residences

Privately-owned and cooperative residence halls for men and women are located close to the campus. In these non-profit organizations governed by the members, students work from 4-5 hours a week as part-payment for room and board (14-20 meals per week). A small fee for social activities is usually required.

Membership is open to all students. To apply or to request further information, write directly to the cooperatives: The University Cooperative Housing Association (men and women), 500 Landfair Avenue, Los Angeles, CA 90024; YWCA (women), 574 Hilgard Avenue, Los Angeles, CA 90024; Stevens House (women), 839 Landfair Avenue, Los Angeles, CA 90024; Hillete House (Co-op), Westwood Bayhill House, 619 Landfair Avenue, Los Angeles, CA 90024; Asher Foundation (men and women), 536 Hilgard Avenue, Los Angeles, CA 90024.

Off-Campus Housing

Many apartments and rooms in private homes are listed in the UCLA Housing Office. The University does not Inspect these accommodations; listings simply provide basic information. The University requires that the landlord not engage in practices which are discriminatory, unhealthful, unsafe or unfair to the student. Landlords who do so and are reported are not included in future listings.

Rents vary from $100-$200 per month for rooms in private homes; $170-$350 per month for a bachelor; $250-$450 per month for a furnished single. One-bedroom apartments range from $325-$600 per month; two bedrooms range from $450-$1,000. Rental rates depend upon furnishings and distance from campus; utilities (except water) are usually not included.

Most married students live in apartments and rented houses in the area. Up-to-date listings are available in the UCLA Housing Office. Students should check listings in person since they change from day to day.

The UCLA Housing Office also provides area maps, bus schedules, and information to students regarding their rights and obligations as tenants, guides students in evaluating rental opportunities and leases, mediates landlord-tenant disputes, and refers students to other agencies when necessary.

University Apartments

Additional University-owned housing for single students is provided in three off-campus apartment complexes. Housing accommodations in all of these apartment complexes are available to both single graduate and undergraduate students. Students sharing all University-owned apartments must be of the same sex. The rental rates for each year are published in June for the following academic year.

The University Landfair Apartments are conveniently located within walking distance of campus. Furnished bachelor's, singles and one-bedroom with den apartments are available. The bachelor's accommodate one student, singles accommodate two, and one-bedroom with den apartments accommodate four.

The University Glenrock Apartments are located approximately four blocks from campus, also within walking distance. The two-three-storied buildings have furnished single, one-, two- and three-bedroom apartments available. Single and one-bedroom apartments accommodate two students, the two-bedrooms accommodate four, and the three-bedrooms accommodate five or six, depending upon size.

The University Venice-Barry Apartments are located 5-6 miles from campus. There is no direct city bus line from the apartments to campus so the University provides a shuttle bus to the campus during weekdays. The complex has 122 furnished units made up of executive suites and one-bedroom apartments accommodating three students and two-bedroom apartments accommodating four to five students.

All University-owned apartment complexes do not permit pets. For rental rates and assignment information, visit or write to the UCLA Housing Office, 78 Dodd Hall, Los Angeles, CA 90024, (213) 825-4491.

Child Care

Child Care Center

The Child Care Center provides part-time and full-time care, depending upon parents' needs, for children 2 months to 6 years. Fees range from $123-$292 per month depending on full or part-time care. Some grants are available for income-eligible families.

The Child Care Center is located in Parking Lot 1, behind the Credit Union and the BRI trailers at 10833 Le Conte. For information regarding fees call Child Care Services at (213) 825-5086.

Family Day Care

This care is provided in homes in the community which are licensed by Los Angeles County and participate in training and enrichment by the Child Care Services staff. Full and part-time care is available; fees and hours may be arranged with individual caregivers. For more information, telephone (213) 825-8474.

UCLA Parent Toddler Group

Located in the Married Student Housing complex 4 miles south of campus (3327 S. Sepulveda Blvd., telephone (213) 391-9155 or (213) 398-8739), a cooperative pre-school is open to all members of the UCLA community: full-time students, faculty and staff.

The program is designed to help toddlers aged 18 months to 3 years develop a sense of independence; self-worth and the ability to relate to other children and to adults outside their own families. Some structured activities which encourage mobility and dexterity are available, but the children are encouraged to make their own choices and decisions.

Tuition is on a sliding scale, according to parental income. Parents participating in this cooperative scheme are required to work at school one morning in every four that their child attends. The Parent Toddler Group operates mornings, Monday through Friday, 9:00 a.m. to 12:00 p.m.

University Parents Cooperative Nursery School

Located in the Married Student Housing complex 4 miles south of campus (3327 S. Sepulveda Blvd., telephone (213) 391-9155 or (213) 398-8739), the University Parents Cooperative Nursery School offers a warm, supportive, educational environment to children of the UCLA community. The school provides parents of varied cultural backgrounds the opportunity to gain insights and skills in the art of being a good parent. Care is provided for children ages 3-6 years. The hours are Monday through Friday, 9:00 a.m. to 12:00 p.m. and 12:00 p.m. to 3:45 p.m. with extended care available 3:45 p.m. to 5:30 p.m.
Transportation and Parking

There are several other means of personal transportation than the automobile for commuting to and from the campus. Alternatives such as carpooling, public transportation and bicycling are described in the brochure, How to Get to UCLA Without Using Your Car, distributed by the Transportation Services Administration. This brochure is available at Campus Parking Service, and includes bus route maps and a UCLA Ridesharing application.

UCLA Parking Permits

A limited number of parking permits are sold to students for Fall, Winter and Spring Quarters. Students who wish to obtain parking permits may obtain UCLA Student Parking Requests from the Campus Parking Service. Parking assignments will be based on the information on the completed Requests. Because of space limitations, all students who submit Student Parking Requests may not receive parking assignments. Parking permits assigned and purchased for the Fall Quarter may be renewed for the Winter and Spring Quarters without submitting a new Request. Students not assigned parking in any quarter, must reapply for subsequent quarters. New or reentering students for each quarter must file Requests. Permits are not renewable from Spring Quarter for the following Fall Quarter.

Deadlines for returning a completed UCLA Student Parking Request to the Campus Parking Service will be established for each quarter and are listed in each quarter's Schedule of Classes. Students with physical disabilities which preclude walking long distances may apply for parking permits through Student Health Service. Parking permits for Summer Quarter are available on a first-come, first-service basis from the Campus Parking Service. Parking Permits are not transferable and may be purchased only from the Campus Parking Service.

Students may obtain UCLA Student Parking Requests and instructions for filing, including current deadlines and fees, by either writing to the Campus Parking Service, 405 Hilgard Avenue, Los Angeles, CA 90024, or by calling (213) 825-9871.

The Escort Service—Campus Police

The Escort Service is provided for members of the UCLA community 365 days per year from dusk until 1:00 a.m. and during finals week until 2:00 a.m. Escorts are available to walk women students between campus locations and to and from campus and the immediate vicinity (dormitories, cooperative residences, apartments, sororities, and Westwood Village).

The escort service is specially trained UCLA students who are employed by the Department of Police/Community Safety. They can be identified by the blue shirts or jackets with "University Police" emblems which they are required to wear on duty. In addition to the distinctive shirts, escorts carry a Police Department I.D. Card and a police radio.

Persons wishing to request an escort should phone UCLA Police at 825-1493. To insure prompt service, women students are encouraged to phone 15 minutes before they will need an escort.

The Escort Service is provided free of charge and is funded through Regular Parking Fees, ASUCLA Board of Control, and the Department of Police/Community Safety. For further information, contact the UCLA Police at 825-9800.

ASUCLA Services

The Associated Students UCLA (ASUCLA), under the control of the ASUCLA Board of Control, manages the Ackerman Union-Kerckhoff Hall complex. In these facilities, the campus community will find a complete student store, daily food service, places to relax, have meetings and engage in leisure activities. Among other services offered by ASUCLA for the campus' convenience are a check cashing service, travel service, print shop, and photographic center. Some of these services are described below.

Food Service

ASUCLA offers the campus many distinct food service facilities, each unique in its makeup and atmosphere.

The Treehouse is on the first floor of Ackerman Union in the heart of campus. This unit features the Butcher Block and the Salad Bowl which includes carved-to-order hot roast beef sandwiches, barbecued chicken and ribs, and make-your-own salads in addition to the customary cafeteria fare. One of the more recent additions is La Quicheria, serving daily baked quiche, fresh breads, and spinach salads with an array of garnishes. These areas combined with the traditional cafeteria entrees provide a wide variety of full meal options for breakfast, lunch and dinner. The Treehouse is open from 7:00 a.m. to 7:00 p.m. Monday through Thursday, and 7:00 a.m. to 5:00 p.m. on Friday.

Housed within the Treehouse is the Sandwich Room. This facility carries a variety of low-cost made-to-order sandwiches including Italian-style submarine sandwiches served hot or cold. The Sandwich Room is open from 8:00 a.m. to 4:00 p.m. Monday through Friday.

The Cooperage, ASUCLA's newest food service opened its doors in September, 1981. Located on the A-Level of Ackerman Union (where the old "Coop" was located), the Cooperage features an innovative menu, a warm atmosphere, a stage, a sound system for live entertainment and a large screen TV for major events. Fred's Green Grocer offers filled croissant sandwiches and special salads, and Cooper's Grill provides a variety of burgers with fries and onion rings. Casa del Oso features an authentic Mexican food selection, and Two Bears from Italy serves fresh baked pizza with a selection of toppings. There are also plans to serve beer and wine in the near future. The Cooperage is open from 10:30 a.m. to 10:00 p.m. Monday through Thursday; 10:30 a.m. to 7:00 p.m. on Friday; 11:00 a.m. to 6:00 p.m. on Saturday; and Sunday, noon to 8:00 p.m.

The wood and brass decor of the Kerckhoff Coffee House creates an environment not found on most college campuses. Located on the second floor of Kerckhoff Hall, the Coffee House offers ice cream specialties, a variety of teas and coffees, plus an assortment of gourmet potates. Open during the week from 7:30 a.m. until 1:00 a.m. and weekends from 11:00 a.m. to 12:00 midnight, the Coffee House provides UCLA students with a relaxed atmosphere featuring live entertainment almost every evening.

The Campus Corner is located on Bruin Walk directly across from Kerckhoff Hall. The oldest of the ASUCLA Food Service facilities, the Campus Corner features pits bread pocket sandwiches, the traditional fare of hamburgers and hot dogs, and frozen yogurt with your favorite topping. The Campus Corner is open Monday through Thursday from 8:00 a.m. to 8:00 p.m., Friday from 8:00 a.m. to 4:00 p.m.

Located in the southern portion of campus, in the Court of Science, is the Bombshelter Deli and Burger Bar. This unit specializes in authentic delicatessen fare, and also offers falafels, hamburgers and hot dogs. A favorite luncheon spot, the Bombshelter features outdoor patio dining and is open through the week from 7:30 a.m. to 5:00 p.m., and on Saturdays from 10:00 a.m. to 3:00 p.m.

The largest ASUCLA Food Service is the North Campus Student Center, located between the Research Library and Campbell Hall. It is known for its wide variety of pasta specialties as well as its established reputation of serving fresh baked donuts, Pot Au Fau entrees, deli sandwiches, a full salad bar, and its grill. North Campus is open for breakfast, lunch and dinner Monday through Thursday from 7:30 a.m. to 11:00 p.m., Friday 7:30 a.m. to 8:00 p.m.; Saturday 10:00 a.m. to 6:00 p.m. and Sunday 11:00 a.m. to 9:00 p.m.

Potlatch, a lounge on the first floor of the Graduate School of Management (GSM 1323A), offers sandwiches, snacks and beverages. Hours are Monday through Thursday 8:00 a.m. to 9:00 p.m., Friday 8:00 a.m. to 2:00 p.m.

ASUCLA also provides a Catering Service within the Student Union complex ranging from waiter-served functions and buffets to coffee service. Arrangements can be made through the catering office located in 1311 Ackerman Union.

In addition, the ASUCLA Food Service furnishes concession service in season or during events at the Sunset Canyon Recreation Center, Pauley Pavilion, and Drake Stadium.
Students' Store

The ASUCLA Students' Store is actually a "mini department store" with three locations on campus: Ackerman Union, the Center for the Health Sciences, and the North Campus Student Center. The Students' Store offers a wide variety of textbooks, general books, school and art supplies, dental and medical supplies, electronics, sporting goods, "UCLA" merchandise (Beanies), casual and fashion clothing, food, health aids, greeting cards, and Lecture Notes. The main store is located on B-level of Ackerman Union; telephone 825-7711. It is open Monday through Thursday 7:45 a.m. to 7:30 p.m.; Friday 7:45 a.m. to 6:00 p.m.; Saturday 10:00 a.m. to 5:00 p.m.; and Sunday 12:00 noon to 5:00 p.m. during school session; and Monday through Friday 8:30 a.m. to 6:00 p.m., Saturday and Sunday 12:00 noon to 5:00 p.m. during school breaks.

Graphic Services

ASUCLA Graphic Services is the campus center for photographic, printing, typographical and other related services. It is located on the first floor lobby of Kerckhoff Hall. Services include Xerox and book copying, quick offset, custom printing, color Xerox, typesetting, color portraits, commercial photography, passport photographs, "Perma Plaques", film, darkroom supplies, and discount photofinishing. Hours are: Monday through Friday, 8:30 a.m. to 6:00 p.m.; Saturday, 10:00 a.m. to 3:00 p.m.; phone (213) 825-0611, Ext. 291.

Check Cashing

Students, staff and faculty with current UCLA identification may cash a personal check for up to $50 a day, with a 20-cent service charge for each check at the Service Center in 140 Kerckhoff Hall. Postdated checks may also be cashed for up to $50 with a 45-cent service charge. Any postdated check will be held up for two weeks before being sent to the bank. Only one postdated check per 2-week postdating period is allowed. Traveler's checks in amounts of up to $50 per day may be cashed with a 20-cent service charge. Check cashing hours are Monday through Friday, 9:00 a.m. to 4:00 p.m. Weekend check cashing is available Saturdays, 10:30 a.m. to 5:00 p.m. at the Main Cashier's Office, A-Level Ackerman Union. No postdated checks may be cashed during the weekend hours.

Money Orders

At Window 7 in 140 Kerckhoff Hall (Service Center), students may purchase money orders for up to $300, with the exception of those to the UC Regents which can be over this limit. There is a 50-cent service charge for each money order. Hours are: Monday through Friday, 8:30 a.m. to 4:30 p.m.

Post Office Boxes

These are available to students, staff and faculty in 140 Kerckhoff Hall for $6.00 per quarter for a small box or $8.00 per quarter for a large box. The Post Office Box Rental Window is open Monday through Friday, 8:30 a.m. to 4:30 p.m.

Meeting Rooms and Lounges

The following rooms are available for the use of the entire campus community: five meeting rooms, two large activity rooms, and the Grand Ballroom in Ackerman Union; three meeting rooms in Kerckhoff Hall; and two meeting rooms in the North Campus Student Center.

Public lounges include the Upstairs Lounge located on the third floor of Kerckhoff Hall; the Downstairs Lounge and the Alumni Lounge, on the second floor of Kerckhoff Hall; and a lounge in the North Campus Student Center.

Students may reserve space for a meeting in Ackerman Union or Kerckhoff Hall by visiting the Information Desk on the first floor of Ackerman Union or by phoning (213) 825-0611, and may reserve space at the North Campus Student Center by visiting the information area at North Campus or by phoning (213) 825-0611, Ext. 331.

Travel Service

The ASUCLA Travel Service is located on the A-Level lobby of Ackerman Union and provides a complete selection of scheduled air ticketing service, charter flights, student-oriented packages and tours, U.S. and European rail tickets, as well as other travel-related services. The Travel Service is open Monday through Thursday, 8:30 a.m. to 6:00 p.m.; and Saturday, 10:00 a.m. to 2:00 p.m.; or phone (213) 825-9131.

Central Ticket Office

The Central Ticket Office serves the UCLA community through two locations—the Ticket Office in the James E. West Alumni Center (ground floor) and at the trailer at 650 Westwood Plaza (across from the Police Station).

Tickets for all UCLA events are sold at either location. In addition, the following special ticket services are provided at each location:

The James E. West Alumni Center location offers student tickets to athletic events at reduced prices. Tickets to off-campus events are also sold, through both the Ticketron system and the Mutual Ticket Agency. Bus tickets for RTD, bus tokens for the Santa Monica bus system, and special student discount tickets for local motion picture theaters are also available.

The 650 Westwood Plaza location offers student tickets for on-campus cultural events at reduced prices, subsidized by the Student Committee for the Arts. For all student tickets, students must present their Registration Card and Photo I.D. Card. There is a limit of two tickets per person. Watch the Daily Bruin ads for ticket sales dates.

Visitors Center

The Visitors Center, which is located in 100 Dodd Hall (phone: (213) 825-4338, domestic; 825-4467, foreign), has a reception area where visitors are met, welcomed, and assisted. Campus tours and appointments for both domestic and foreign visitors, including escorting and interpreting, are part of the services offered.

Personalized campus tours are arranged on special request for visitors and guests of University staff and faculty.

Literature and information on campus events, concerts, exhibits, lectures, and recreation areas are kept on hand in the Center.

Student Health Service

Benefits

Student Health Service benefits include: outpatient care for general, and some specialized medical and surgical conditions, gynecological and family-planning services; dental care; psychiatric counseling; laboratory, x-ray, and pharmacy services. Students may obtain services for general care by making an advance appointment (phone 825-2463) or by walking in without an appointment. Most benefits are provided without additional charge; service-charges, when applicable, are moderate. Presently, there are charges for all prescription medications, dentistry, routine immunizations and physical examinations, orthopedic supplies, missed appointments, contraceptive medications and devices, and required health evaluations. The full costs of hospitalization, and of specialized diagnostic and clinical services, unavailable within Student Health and ordered in the UCLA Medical Center or other community outpatient facilities, are the student's responsibility.

Location and Hours

Student Health Service is located on the A-Floor of the Medical Center, Room A2-130, Center for Health Sciences. Office hours are: Monday through Friday, 8:00 a.m. (9:00 a.m. on Tuesdays) to 11:30 a.m. and 1:00 p.m. to 4:30 p.m.; emergencies only 11:30 a.m. to 12 noon and 4:30 p.m. to 5:00 p.m. A small satellite office, in Pauley Pavilion, is open from 1:30 p.m. to 6:00 p.m., Monday through Friday, mainly for sports injuries, but open to all students. Emergency care after-hours, on weekends and holidays is available in the UCLA Hospital Emergency Room, on a fee-for-service basis.
Eligibility
Graduate students paying full registration fees are eligible for all benefits of Student Health Service during each quarter for which they are enrolled. A UCLA registration card and photo I.D. must always be presented for service. Students who do not pay full registration fees may obtain benefits upon written confirmation of student status, by electing either a fee-for-service plan or the SHS Optional Health Service Fee plan. The Optional Health Service fee must be paid to the Student Health Cashier at the beginning of each quarter. For additional eligibility information, phone 825-1855.

Hospitalization and Insurance
Necessary hospitalization may be arranged by Student Health Service, but the costs of inpatient hospital care at UCLA or at any hospital ARE NOT COVERED as a University benefit. Students are personally responsible for all such costs, and should be sure that they have adequate health insurance. Foreign students are required by University policy to have health insurance as a condition of registration.

Students without adequate insurance coverage are encouraged to purchase the UCLA-sponsored Student Supplemental Health Insurance Plan which is available at the beginning of each quarter. Extended coverage, at additional cost, is available for dependents of insured students. For additional insurance information, phone 825-1856.

Requirements
All registering graduate students must complete and return the insurance application and waiver form, whether or not they are purchasing insurance. All new and re-entering students in the Graduate Schools of Dentistry, Education, Medicine, Nursing or Social Welfare must complete and return the health evaluation form provided to them. All foreign students, new and re-entering, must complete and return the health evaluation form, and must be cleared for adequacy of health insurance and the absence of active tuberculosis before completing registration.

Exclusions
No coverage is provided through Student Health Service nor through Student Insurance for cosmetic surgery, care of chronic diseases, or rehabilitation. Dependents of students, whether insured or not, are not eligible for care and treatment at the Student Health Service.

Further Information
Inquire at the Student Health Service directly, or by telephone — (213) 825-4073. Deaf and hard-of-hearing students may communicate with the Student Health Service via the UCLA Hospital Interpreter Translation Service at 825-7275, or the Office of Special Services at 209-6053.

Psychological and Counseling Services
The Psychological and Counseling Services includes two separate divisions — The Behavioral Division and The Counseling Division. They provide professional services focusing upon student development, and are for the voluntary use of any regularly enrolled student.

Behavioral Division
The Behavioral Division (4223 Math Science Building, 825-4207) offers counseling for students who want to increase their effectiveness in handling specific problems encountered in university life. The staff is composed of professional psychologists. Both individual and group programs are offered. Students should call or come in to arrange an appointment or to receive further information. Evening hours can often be arranged.

Counseling Division
The Counseling Division (4223 Math Science Building, 825-0768) offers individual and group counseling for students who are experiencing any of the number of general concerns, dilemmas, crises or indecisions which are often encountered by students. Educational and career interest inventories can be taken upon request. Marital and premarital counseling, and counseling related to problems encountered in other forms of relationships, is also available.

The staff is composed of counseling psychologists and other professionals familiar with the needs and interests of college students. Students should call or come in to arrange an appointment (immediate appointments are possible, if indicated) or to receive further information. Evening hours can often be arranged.

Placement and Career Planning Center
The Placement and Career Planning Center offers career development and placement services to students of all disciplines and all degree and class levels. It is comprised of three functional divisions: Career Development, Student Employment, and Educational Career Services. Services are located in the Placement and Career Planning Center building and in two satellite locations: 1349 GSM, specializing in Management, and 5289 Boelter Hall, specializing in Engineering and the Physical Sciences.

Career Development
A staff of career counselors is available to assist in career exploration, choice, and the job search. The Career Resources Library furnishes information for planning further education and alternative careers. The Campus Interview Program provides convenient access for students to interview with employers and graduate school representatives. A more diverse array of job opportunities is posted for direct referral to the employer.

Student Employment
A job listing and referral system is provided for currently enrolled students and their spouses who are seeking part-time, temporary, or vacation employment. Career-related opportunities (including paid and non-paid internships) are available either through the listings or through personal search with the assistance of this unit.

Educational Career Services
Specialized information and counseling is available to assist students and alumni seeking positions in universities, colleges, community colleges, and secondary and elementary schools. Current listings of educational job opportunities, internships in educational institutions, and a professional file service are included.

Special Services and Veterans Affairs
The Office of Special Services, A-255 Murphy Hall, certifies the enrollment status of students who receive direct educational assistance benefits from the U.S. Veterans Administration and the Social Security Administration. The Office also issues fee deferments to students sponsored by the California Department of Rehabilitation and fee waivers to dependents of deceased or disabled California veterans as authorized by Education Code 10652. Physically disabled students may receive assistance through the Office in such areas as registration and enrollment, parking permits, readers for the blind, interpreters for the deaf, proctoring examinations, van service, and minor repairs to students' wheelchairs.

Office of International Students and Scholars
The Office of International Students and Scholars (formerly called the Foreign Student Office) exists for the purpose of assisting the 5,000 international students and scholars to achieve the objectives for which they came to UCLA. Its staff, including both professional and peer counselors, is uniquely attuned to the questions and concerns of persons from other cultures. Matters commonly brought to this office include financial issues, questions relating to the Immigration and Naturalization Service, offices and departments at UCLA and outside agencies including sponsors and consular offices, academic and career decisions, interpretation of the American educational system, and the nature of interpersonal relations in this country. In addition, the Office serves to bring together American and foreign students for the exchange of information, opinions and for a variety of cross-cultural experiences.

The Office works closely with the International Student Center, located adjacent to campus, which provides an informal gathering place where American and foreign students meet with the local community.

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Placement and Career Planning Center
The Placement and Career Planning Center offers career development and placement services to students of all disciplines and all degree and class levels. It is comprised of three functional divisions: Career Development, Student Employment, and Educational Career Services. Services are located in the Placement and Career Planning Center building and in two satellite locations: 1349 GSM, specializing in Management, and 5289 Boelter Hall, specializing in Engineering and the Physical Sciences.

Career Development
A staff of career counselors is available to assist in career exploration, choice, and the job search. The Career Resources Library furnishes information for planning further education and alternative careers. The Campus Interview Program provides convenient access for students to interview with employers and graduate school representatives. A more diverse array of job opportunities is posted for direct referral to the employer.

Student Employment
A job listing and referral system is provided for currently enrolled students and their spouses who are seeking part-time, temporary, or vacation employment. Career-related opportunities (including paid and non-paid internships) are available either through the listings or through personal search with the assistance of this unit.

Educational Career Services
Specialized information and counseling is available to assist students and alumni seeking positions in universities, colleges, community colleges, and secondary and elementary schools. Current listings of educational job opportunities, internships in educational institutions, and a professional file service are included.

Special Services and Veterans Affairs
The Office of Special Services, A-255 Murphy Hall, certifies the enrollment status of students who receive direct educational assistance benefits from the U.S. Veterans Administration and the Social Security Administration. The Office also issues fee deferments to students sponsored by the California Department of Rehabilitation and fee waivers to dependents of deceased or disabled California veterans as authorized by Education Code 10652. Physically disabled students may receive assistance through the Office in such areas as registration and enrollment, parking permits, readers for the blind, interpreters for the deaf, proctoring examinations, van service, and minor repairs to students' wheelchairs.

Office of International Students and Scholars
The Office of International Students and Scholars (formerly called the Foreign Student Office) exists for the purpose of assisting the 5,000 international students and scholars to achieve the objectives for which they came to UCLA. Its staff, including both professional and peer counselors, is uniquely attuned to the questions and concerns of persons from other cultures. Matters commonly brought to this office include financial issues, questions relating to the Immigration and Naturalization Service, offices and departments at UCLA and outside agencies including sponsors and consular offices, academic and career decisions, interpretation of the American educational system, and the nature of interpersonal relations in this country. In addition, the Office serves to bring together American and foreign students for the exchange of information, opinions and for a variety of cross-cultural experiences.

The Office works closely with the International Student Center, located adjacent to campus, which provides an informal gathering place where American and foreign students meet with the local community.
Libraries, Museums and
Special Facilities

The University Library

Library facilities are crucial to excellence in graduate research. The University Library on the Los Angeles campus is the largest academic library in the Southwest and ranks 12th in the nation. It consists of the University Research Library, the College Library and a number of specialized subject libraries. Its collections contain more than 4 million volumes and extensive holdings of government publications, pamphlets, manuscripts, maps, microtext editions, music scores, recordings, and slides. The Library regularly receives about 55,000 serial publications.

The University Research Library, on the North Campus, is a modern six-story building designed primarily as a graduate research library serving the social sciences and humanities. This building houses nearly 2 million volumes of the Library's total collection. The University Research Library provides special study and research facilities, including facilities for reading microtext materials and for the use of typewriters. All students have access to the main book stacks in the Library.

The card catalog lists all cataloged books in the Research Library, the College Library, other campus libraries, and the William Andrews Clark Memorial Library. Biweekly issues of the Catalog Supplement on microfiche list recent publications which have not yet been fully cataloged. Both it and the UCLA Serials List, also issued on microfiche, may be consulted at principal service points in campus libraries.

The College Library is located in the Lawrence Clark Powell Library Building and exhibits many interesting architectural details. An open-stacks collection of materials to support classroom instruction is maintained there. The College Library Audio/Visual Center contains a collection of plays, speeches, poetry, and satire and a selection of popular music on audio cassettes as well as video cassettes on such subjects as biology, chemistry, dance, drama, engineering, and kinesiology.

The Department of Special Collections, in the Research Library, contains rare books and pamphlets, manuscripts, the University Archives, early maps, and files of early California newspapers. Collections of rare materials are also in the Art Library (the Belt Library of Vinciana), the Biomedical Library (the Benjamin Collection of Medical History), and the Management Library (the Gross Collection of Business and Economic History); others are located in the Music Library and the Theater Arts Library.

The Public Affairs Service, in the Research Library, provides a coordinated service embracing collections of official publications of governments and international organizations and of other books and pamphlets in the social sciences. It is a depository for the official publications of the United States government, the State of California, California counties and cities, the United Nations and some of its specialized agencies, and a number of other international organizations. Also available are selected publications of the other states and possessions of the United States, publications of foreign governments, books and pamphlets on local government, and reference and pamphlet materials on industrial relations and social welfare. The Public Affairs Service provides access to research data which are available on computer tapes.

The Biomedical Library, in the Center for the Health Sciences, has collections in all of the health and life sciences. Materials for engineering, astronomy, meteorology, and mathematics are kept in the Engineering and Mathematical Sciences Library. Education, kinesiology, and psychology are principal subjects served by the Education and Psychology Library. Other libraries serving specific academic programs include Architecture and Urban Planning, Art, Chemistry, English, Geology-Geophysics, Law, Management, Maps, Music, Oriental Languages, Physics, Theater Arts, and the University Elementary School.

The resources of these libraries are available to all students and members of the faculty and staff of the University. A Library handbook, describing the organization and services of the University libraries and listing their schedules of hours, may be obtained in any of the campus libraries.

An on-line computer system featuring the use of bar-coded labels in books and on borrowers' cards is utilized at the Loan Desks of the University Research Library and the Biomedical Library in order to record loans. Student borrowers must have a bar-coded label affixed to the back of their Student Photo ID Card in order to borrow materials from these libraries. This may be done at the Loan Desks of the University Research Library, the Biomedical Library, or the Engineering and Mathematical Sciences Library.

The Photographic Services, in the Powell Library Building, offers complete documentary photographic service, where photos, slides, and other photographic work are done. Self-service photo-copying machines for copying periodical articles and portions of books and other library materials are available in most library units on campus.

Supplementing the University Library is the William Andrews Clark Memorial Library of about 75,000 books, pamphlets, and manuscripts, featuring English culture of the 17th, 18th, and 19th centuries, and the history of Montana. Materials in the Library do not circulate. The Clark Library sponsors an annual program of summer postdoctoral fellowships. The areas of study are based on the particular strengths of the Library's holdings. Each year a Clark Library Fellowship is granted to a UCLA graduate student working toward a doctorate within one of the Library's fields of interest, and each year also an eminent scholar is brought to the Library as its Senior Research Fellow. A distinguished scholar is appointed each year to the Clark Library Professorship. This Library is not on the University campus, but is situated at 2520 Cimarron Street, at West Adams Boulevard.

The Clark Library is open Monday through Friday from 8 a.m. to 5 p.m. Leaflets describing the Clark Library are available at the Reference Desk in the Research Library, and information on University transportation to the Clark Library may also be obtained here.

Museums

The Frederick S. Wight Art Gallery is located in the Dickson Art Center at the north end of the campus. The permanent holdings include the Franklin D. Murphy Sculpture Garden, 66 sculptures from the 20th century including Arp, Calder, Lachaise, Lithich, Moore, Noguchi, Rodin and Smith.

Twelve exhibitions of painting, sculpture and drawings, architecture and design are presented annually in close conjunction with the UCLA Museum of Cultural History and the Grunwald Center for the Graphic Arts. One major exhibition yearly is sponsored by the UCLA Art Council, the supporting organization of the Gallery.

The Gallery has exhibitions of Kuna Women's Art; the Graphic Work of Henri Matisse (presented by the Gruenwald Center for the Graphic Arts); Afro-American Arts from the Suriname Rain Forest (presented by the Museum of Cultural History); Realism and Expressionism in Berlin Art; Glass from the 6th Century B.C. to the 19th Century A.D.; Collection of Hans Cohn; Lorser Feitelson and Helen Lundeberg; A Retrospective Exhibition (Annual UCLA Art Council Exhibition); Warrington/Colescott/A History of Printmaking; Edouard Vuillard/Drawings, 1885-1930, as well as undergraduate and graduate student exhibitions of the UCLA Department of Art. The Gallery is open Tuesday through Friday, 11 a.m.-5 p.m.; Saturday and Sunday, 1:00 p.m.-5:00 p.m.; closed Monday. There are daily tours at 1:00 p.m. and 2:00 p.m. and group tours by appointment (phone: (213) 825-3244).

Jack B. Carter, Acting Director

The Gruenwald Center for the Graphic Arts, which houses a distinguished collection of prints, drawings, and photographs, is maintained as a study and research center for the benefit of students, scholars, and collectors as well as the general public. The permanent holdings of the Center include significant examples from the 15th century to the present which were originally selected to complement courses given in the history and connoisseurship of the graphic arts. It is particularly noted for its collection of German expressionist prints formed by Fred Gruenwald as well as for specialized collections in 19th and 20th century lithography (including the Tamarian archive), the history of ornament, Japanese...
prints (including the Frank Lloyd Wright collection), and comprehensive holdings of Matisse, Picasso and Rouault. A major exhibition is organized each year accompanied by the publication of *Grunwald Center Studies*, a scholarly journal devoted to documenting the Center’s holdings.

E. Maurice Bloch, Director

The Museum of Cultural History comprises growing collections of objects which represent a wide range of the material culture, and specifically of the arts, of peoples who lived until recently at, or beyond, the margin of the major Oriental and Occidental civilizations. These collections represent the arts and archaeology of Africa, Melanesia, the Americas, the Ancient Near East, the circum-Mediterranean cultures, the European, Neolithic and Bronze ages, and the folk arts of Latin America, Europe, and the Orient.

The Museum promotes the study of arts and artifacts as one of the most important avenues toward an understanding of man’s cultures. As a resource for UCLA faculty, students, visiting scholars and the general public, the Museum offers assistance with instruction, research field work, exhibitions, and seminars, and sponsors exhibitions, lecture programs, symposia, and publications.

The Museum directs a satellite museum program which organizes and mounts exhibitions that are located throughout greater Los Angeles, and a pre-history program which is designed to make children familiar with museum objects in a classroom setting. Trained volunteers teach classes in prehistoric archaeology in the Los Angeles City School System. The Museum has an 1,800 square foot multi-purpose facility which is used primarily for exhibits directly related to teaching and research, a focus for classes, seminars, and lectures. Designed as a home for many University, Museum, and community activities, the gallery enhances the effectiveness of existing programs and gives impetus to further development. The exhibitions highlight various aspects of the Museum’s collections.

Christopher B. Donnan, Director

Special Facilities

The UCLA Film Archives, located in 1438 Meinek Hall, currently holds approximately 12,000 titles, making it the largest film center west of the Library of Congress.

Strongest in American sound cinema, the Archives’ holdings are mainly in 35mm studio prints, making the collection excellent for detailed studies of all aspects of cinematic styles. Other areas of strength include animation, “B” westerns, “Exploitation” films and documentaries.

These films are regularly exhibited at UCLA. The Archives is open from 9:00 a.m. to 5:30 p.m., Tuesday through Friday. Viewing appointments can be made in person or by calling 206-8013.

The UCLA Radio Archives, located in 1438 Meinek Hall, offers an opportunity to examine a form of mass media that dominated popular culture long before television. It contains more than 10,000 broadcasts from the early 1930's to the present.

The Archives’ greatest strengths are in the areas of dramatic, comedy and variety programs. A significant collection of programs (1930-1955) donated by the Hallmark Company includes 700 broadcasts. Among the highlights of the personal collections are 700 Jack Benny programs. Other personal collections feature Dick Powell, Bing Crosby and other famous radio personalities. The Clete Roberts Collection joins other news and documentary material in giving the Radio Archives a wealth of radio history.

The Radio Archives is open from 9:00 a.m. to 5:30 p.m., Tuesday through Friday. The phone number is 825-7357.

Under the joint auspices of the Academy of Television Arts and Sciences (ATAS) and UCLA, the ATAS-UCLA Television Archives strives to make television programs accessible to the public and researchers. The kinescope, telefilm and video tape collection currently totals 20,000 titles, making the Archives the largest university collection in the United States.

The holdings include examples from all types of broadcasting but are particularly strong in dramatic and comedy-variety programming from 1947 to the present. Documentaries and public affairs programs are well represented also.

The ATAS-UCLA Television Archives is located in 1438 Meinek Hall and is open from 9:30 a.m. to 5:30 p.m., Tuesday through Friday. Appointments can be made in person or by calling 206-8013.

The 8-acre Mildred E. Mathias Botanical Gardens contain a useful teaching and research collection of about 4,000 species of plants of the world. Included are a native section, desert garden, lath-house, and experimental field. Adjoining is the Plant Physiology Building, with glass houses and growth chambers. The Herbarium contains a teaching and research collection of about 250,000 specimens representative of the flora of the world, with special collections of the native flora and of ornamental species cultivated in Southern California.

Arthur Gibson, Director

The Office of Academic Computing (OAC) is responsible for all general-purpose computing activities on the UCLA campus. In support of instructional and research activities, OAC provides a broad range of computing services to the UCLA academic community and, through a nationwide computer network, to institutions throughout the United States. The principal computing resource is an IBM System/370, 3033 computer. The 3033 is available to all departments and schools within UCLA, and timesharing terminals and remote-job-entry stations are located throughout the campus.

Both interactive and batch methods are available for performing work on the 3033. Interactive terminal-oriented systems available are VS/SPIL (IBM’s version of A Programming Language), TSO (IBM’s Time Sharing Option), and WYLBUR. The 3033 supports standard MVS batch services as well as a fast, student-oriented batch service (QUICKRUN). Turnaround for jobs on the 3033 typically ranges from under a minute for student jobs to under an hour for jobs requiring extensive setup operations.

OAC will also be providing computing services on an IBM 4341 computer. Any member of the UCLA student body or faculty can individually establish an account for using the 4341. Other noteworthy equipment provided to OAC users is special equipment for graphics work; two
computers, as well as other esoteric computer languages, are also supported on the 3033.

W.B. Kehl, Director

The Division of Laboratory Animal Medicine is the centralized animal resource facility responsible for the procurement, husbandry and general welfare of animals required for teaching and investigative services. The Division's veterinary and support staff administers the veterinary medical and husbandry programs throughout the campus. The Division's veterinary programs and physical facilities have been approved for full accreditation by the American Association for Accreditation of Laboratory Animal Care.

Jessie O. Washington, D.V.M, Director

The University of California Natural Land and Water Reserves System offers 25 reserves statewide to be used for field studies in unspoiled natural sites and for protected scientific experiments. Graduate students at UCLA regularly use several of these for thesis and dissertation research, including the 14,000-acre Boyd Deep Canyon Desert Research Center and the 56,000-acre Santa Cruz Island Reserve, both of which have field stations. A complex of three Santa Monica Mountain Reserves administered by UCLA is close enough to the campus for easy daily access.

Clarence Hall, Jr., Campus Representative

Zoological collections of the Department of Biology include a research collection of marine fishes, primarily from the eastern Pacific and the Gulf of California, and the Dickey Collection of birds and mammals, primarily from the western United States, western Mexico and Central America. The Department also maintains a more limited collection of amphibians, reptiles and fossil vertebrates. Through a cooperative arrangement, the large zoological collections of the Los Angeles County Museum, containing both fossil and recent specimens, are available for research by qualified students.

The Department also maintains an extensive collection of algae, and a smaller collection of fungi and bacteria (including photosynthetic bacteria). These collections, which are part of the culture facility, are available for both teaching and research.

UCLA is a member of the Organization for Tropical Studies, a consortium created to promote research and educational programs in the New World tropics. Fellowships are available for subsistence in field-oriented programs in Central America.

Other Programs and Training

A variety of other programs, projects, facilities and specialized research units are presently in operation at UCLA. Inquiries concerning these activities should be addressed to the Dean of the Graduate Division, 1237 Murphy Hall, University of California, Los Angeles, California 90024.

Recognizing the value of an interdisciplinary approach to the search for knowledge, the University maintains Regentally-designated organized research units and other research programs outside the usual departmental structure. An organized research unit consists of an interdepartmental group of faculty and students engaged in research with them. Such units aid research and may enhance the teaching of participating members of the faculty, but they do not offer regular academic curricula or confer degrees. They may provide research training to graduate students employed in research programs with faculty supervision. These units, along with more specialized activities in focal fields, provide significant support to the educational program and enhance the overall academic quality of the institution.

African Studies Center

The African Studies Center provides a framework for furthering teaching and research on Africa involving social sciences, education, linguistics, humanities, fine arts, law, the health sciences and the natural sciences. The Center participates in an interdisciplinary master's degree program in African Area Studies, an articulated degree program with the School of Public Health, and in an undergraduate program in conjunction with degrees in the social sciences or African languages. The Center has also become increasingly involved in special programs which entail the dissemination of knowledge about Africa to the larger community. Through its Fellowship Committee, the Center makes grants to assist UCLA and students in furthering their studies of Africa. It participates in administering the NDEA Title VI fellowship awards for the study of African languages, and offers a limited number of supplementary grants-in-aid to students both in master's and in doctoral programs whose focal point is Africa. The Center provides information to faculty and students on extramural sources of research support and employment opportunities which require knowledge of Africa. It also brings Africans to the University for lectures or as Visiting Professors or Research Associates, and sponsors interdisciplinary colloquia focused on integrative and innovative themes. Other Center activities include the publication of quarterly journals, African Arts, UFAHAMU, a student journal, Studies in African Linguistics, and The Journal of African Studies, African Law Studies, The African Studies Center Newsletter, Research in Progress, as well as occasional papers and books based on the interdisciplinary colloquia. The Center also provides facilities for a student organization, the African Activist Association, which is active in sponsoring events that focus public attention on important aspects of African culture or politics.

Michael F. Lototch, Director

Institute of American Cultures

The Institute of American Cultures is charged with promoting and coordinating the activities of the four ethnic centers — the Center for Afro-American Studies, the American Indian Studies Center, the Asian American Studies Center, and the Chicano Studies Research Center. The Institute conducts no research itself, but fulfills its purpose by making research funds available to the ethnic centers and by encouraging and coordinating the efforts of the centers to recruit faculty and develop new instructional programs. The Institute is guided by an Executive Committee consisting of the four center directors, three faculty members (one of whom serves as the chair), and the Vice Chancellor-Research Programs (ex officio). The Director of the Institute is the Executive Vice Chancellor.

The Center for Afro-American Studies is an organized research unit established on the UCLA campus in 1969. Its basic mission is to encourage and support research that enhances the interpretation of the Afro-American experience. Pursuant to this objective, it provides faculty and graduate student research grants, sponsors in-house research projects, offers fellowship and scholarship awards, supports interdisciplinary symposia, encourages related curriculum development, and most important, relates these findings to the community at large via lectures, publica-
archaeologists active on campus. Through the Archaeological Survey, the Institute serves the needs of California archaeology, especially in the Southern part of the state. Besides occasional publications, the Institute issues a yearly journal, a series of technical monographs and a series devoted to major archaeological reports and investigations. The Institute has recently expanded its laboratory facilities for the analysis of ceramics, bones, metals and other materials. These are largely operated by graduate students in archaeology. Its archives, such as those devoted to rock art and archaeological sites in Southern California, provide an important research resource for archaeologists, historians, folklorists, art historians and other interested scientists. Given the considerable amount of public interest in archaeology, the Institute promotes a variety of activities which serve a broadly based need in the off-campus community, such as an Extension curriculum in archaeology, field trips, public lectures and publications for the interested lay public. Giorgio Buccellati, Director.

Laboratory of Biomedical and Environmental Sciences
The Laboratory of Biomedical and Environmental Sciences conducts research in the fields of biomolecular and cellular science, environmental biology, and nuclear medicine. It is funded through a contract with the Department of Energy (formerly ERDA and AEC). Research and training in nuclear medicine is conducted at the Center for Health Sciences. Most of the remaining program is conducted in Warren Hall, located on the West Medical Campus.

Warren Hall is equipped with modern research tools including a cobalt radiation source with an activity of 10,000 curies at the time of installation. The Laboratory also operates a biomedical cyclotron at the Center for Health Sciences which produces isotopes and is capable of activation procedures in support of its research programs. The Laboratory staff consists of about 160 scientists, technicians and supporting personnel representing many disciplines. Graduate student and postgraduate research programs are supervised by the staff in several fields.
O.R. Lunt, Director

Brain Research Institute
The Brain Research Institute provides an environment for research in the neurological and behavioral sciences for investigators particularly from the behavioral, health and life sciences fields but also from the physical sciences and engineering. Three principal goals of the Institute are: (1) to support and conduct research which contributes to an understanding of brain mechanisms and behavior; (2) to contribute to the training of predoctoral and postdoctoral students for professional careers in brain science; (3) to develop and disseminate information about brain function in the interest of the social and scientific communities. Located in the Center for the Health Sciences, the Institute conducts programs which are largely interdisciplinary. General activities include attention to such broad fields of interest as neurobiology, neuropsychology, neurochemistry, neuroanatomy, neuropharmacology, neuroendocrinology, neuropsychiatry, biophysics and communications, neuroimmunology, behavior and neuropathology.
Carmine D. Clemente, Director

Center for the Study of Comparative Folklore and Mythology
The Center for the Study of Comparative Folklore and Mythology is an interdisciplinary research facility that supports and coordinates the comparative study of folklore and mythology from throughout the world. Research facilities in the Center include the Wayland D. Hand Library of Folklore and Mythology, the Visual Media Archive, the Western Folklore Archive, the John Edwards Memorial Foundation, a recording studio and sound laboratory, and collections of field recordings, phonograph records, films, and slides. Center-sponsored research projects include such diverse subjects as the mythologies of the Indo-European peoples, American popular beliefs and superstitions, American legends, Anglo-American ballads, Irish narrative songs, Chicano traditional arts and oral history.
Patrick K. Ford, Director

Institute of Archaeology
The Institute of Archaeology was established in the summer of 1973 for the purpose of developing and coordinating activities relating to archaeology. Its goal is to contribute to the ideal of a comprehensive interdisciplinary reconstruction of the human past, as evidenced especially from archaeological remains.

The Institute includes faculty members from 11 academic units at UCLA as well as faculty from various other UC campuses. It provides an intellectual focus for all University of California archaeologists, facilitating the exchange of views on theoretical models and technical developments. It does so by sponsoring lectures, seminars, symposia and arranging for visiting faculty; it also helps support excavation programs of the individual
The Crump Institute for Medical Engineering

The Institute joins medicine and certain aspects of engineering, especially chemical engineering and materials science. Its research interest include: 1) pharmacokinetics (the analysis and modeling of drug and hormone distribution, and metabolism), 2) design of optimal experimental strategies for identifying pharmacokinetic models, 3) design of new therapeutic systems for the controlled delivery of drugs, 4) physiological systems analysis by combined animal experimentation and computer simulation, 5) development of synthetic polymers with programmed surfaces (chemically coded) to provoke selective bonding to certain tissues, 6) analysis of transports of air and soil pollutants, with emphasis on risk assessment, 7) development of an extended statistical, irreversible thermodynamic approach to the understanding of complex systems, including nervous systems.

The Institute will ultimately occupy a new building being constructed for it in Fall 1986. At maturity, the Institute will have 15 faculty members, from engineering and medicine. The Crump Institute is housed in the Engineering building, 6417 Boelter Hall. F. Eugene Yates, Director

Dental Research Institute

The Dental Research Institute, located mainly on the seventh floor of the School of Dentistry, involves faculty, graduate and professional students engaged in original research in six program areas as follows: (1) Immunology/Immunogenetics; (2) Periodontal Disease; (3) Ultrastructure and Cell Biology; (4) Oral Neurology/Pain; (5) Craniofacial Biology, and (6) Biomaterials. M.S. and Ph.D. students are sponsored by individual Institute faculty members. An informational brochure outlining current studies of Institute members is available from the Office of the Director (CHS 43-180, Ext. 55478).

William H. Hildemann, Director

The Institute of Geophysics and Planetary Physics

The Institute of Geophysics and Planetary Physics is engaged in interdisciplinary programs of studies of the interior of the earth, moon, and other planets, the fluid and gaseous parts of the planets, and interplanetary space. Major research programs being actively explored in the laboratories of the Institute include investigations into the configuration of the earth's magnetic field in space; the earth-sun interaction; structure and properties of the lunar surface and interior; meteorites; origin of the earth's magnetic field; the history of the solar system; astrophysical plasmas; high energy astrophysics; ocean-atmosphere interactions; seismology; earthquake control and prediction; internal structure of the earth; earth tides; continental-drift and plate tectonics; properties of materials under high pressures and temperatures; mineral synthesis; radiocarbon archeology; geochronology; glaciology; petrology and metamorphism; isotope geochemistry; origins of life; man's interaction with the environment.

The laboratory facilities of the Institute and its faculty are available to guide the dissertation research of students in the physical sciences, including the Departments of Earth and Space Sciences, Physics, Chemistry, Mathematics, Atmospheric Sciences, Astronomy, Engineering and Anthropology. Leon Knopoff, Associate Director

Gustave E. von Grunebaum Center for Near Eastern Studies

The Gustave E. von Grunebaum Center for Near Eastern Studies was established to promote individual and collaborative research and training in this area. The Center encourages the research of individual faculty members and collaborators in the solution of basic research problems which require institutional backing. The Center also sponsors lectures, seminars and conferences on various topics falling within the scope of Near Eastern studies, and actively promotes an extensive publication program.

Speros Vryonis, Jr., Director

Institute of Industrial Relations

The Institute of Industrial Relations, authorized by the Legislature of the State of California in 1945, is concerned with three principal types of activity. The first is an interdisciplinary research and publishing program directed primarily toward the study of labor-management relations, wages and related problems, economic security programs, the labor market, occupational safety and health, the quality of working life, the status of disadvantaged groups in the work force, labor law, labor history, comparative studies, and employment problems. Research staff members of the Institute are usually drawn from the regular faculties of the Graduate School of Management, the Departments of Economics, History, Political Science, Psychology, and Sociology; and the School of Law. This program affords opportunities to graduate students specializing in personnel management and industrial relations to engage in investigative work under expert guidance. The second main activity consists of community and labor relations programs serving unions, management, the public, and other groups interested in industrial relations. The programs consist of public lectures, conferences, symposia and institutes of varying duration, and include a series of courses through University Extension leading to a Certificate in Industrial Relations. A third activity is the promotion of University teaching of personnel and industrial relations in the southern California area. The Institute sponsors an intercampus program involving the Management or Administration schools at UCLA, UC Irvine, and UC Riverside. Master's students in these schools may take coursework at any of the three campuses. The intercampus arrangement was established pursuant to a grant from the Systemwide intercampus activities fund. Daniel J.B. Mitchell, Director

The Jerry Lewis Neuromuscular Research Center

The Jerry Lewis Neuromuscular Research Center is located in the northwest corner of the Center for Health Sciences (on Westwood Boulevard — phone (213) 825-3733) adjacent to the Red Neurological Research Center, Brain Research Institute (BRI), and Neuropsychiatric Institute (NPI). It houses the research programs of members of several departments, with a common focus of interest in the physiology, anatomy and biochemistry of nerves and muscles and of pathological conditions affecting muscles. Alan D. Grinnell, Director

Jules Stein Eye Institute

The Jules Stein Eye Institute is a comprehensive facility located within the Center for the Health Sciences, devoted to research in the sciences related to vision, the care of patients with eye disease and the dissemination of knowledge in the broad field of ophthalmology. Incorporated in this structure are outpatient, inpatient and operating room facilities for the care of patients with ophthalmic disorders; areas for research in the sciences related to vision; and facilities for scientific reading, lectures and seminars. The Institute affords a unique opportunity for the training of students in the School of Medicine, residents and graduate physicians, as well as postgraduate and postdoctoral fellows in fields related to vision science. A close relationship with graduate and undergraduate research and teaching facilities at UCLA is maintained. B.R. Stratsma, Director

Latin American Center

The Latin American Center is an organized research unit providing support for the multidisciplinary study of Latin America. With over 90 affiliated faculty and visiting scholars, the Center is a major resource for individual and collaborative research activities in the social sciences, arts, humanities, and professions. Cooperation between the Center and seven colleges and professional schools of the University is facilitated by the Dean's Advisory Committee for Latin American Studies.

Designated as a “center of excellence” by the U.S. Department of Education, the NDEA Latin American Language and Area Studies Center at UCLA supports the Interdisciplinary B.A. and M.A. degree programs in Latin American Studies and coordinates articulated graduate degree programs with the Schools of Public Health, Library and Information Science, Management, Education, Engineering and Applied Science, and Archi-
The Molecular Biology Institute was established to serve various interested departments of the biological, medical, and physical sciences in the coordination, support, and enhancement of research and training in molecular biology. Interests and activities of the Institute encompass all approaches which aim to explain biology at a molecular level, with particular emphasis on correlation of structure and function. These include study of structure and function of macromolecules, molecular genetics and virology; bioenergetics, catalysis and control; molecular basis of cellular architecture, development, evolution, neurobiology and oncology. Staff members from departments in biological, physical, and medical sciences participate in Institute programs, and the Institute aids departments in graduate training and postdoctoral programs in the general area of molecular biology.

Most of the Institute staff are housed in the Molecular Biology Institute building completed in 1976. Approximately one-half of the building space is devoted to the Parvin Cancer Research Laboratories. The Institute building is located adjacent to the Chemistry, Biology and Bacteriology Departments and close to the School of Medicine.

Paul D. Boyer, Director

National Center for Intermedia Transport Research (NCITR)

A National Center for Intermedia Transport Research (NCITR) has been established at UCLA with the support of the U.S. Environmental Protection Agency (EPA). At the Center, studies will be conducted of the transport of particles and gases across interfaces and of chemical conversion processes involving particulate matter at interfaces. Of special interest will be the transport of chemical species such as trace metals and organic compounds of pollution concern. The Center will emphasize the fundamentals of these processes. At the same time, however, the Center will apply the results of these and other studies to systems of practical interest such as emissions from the new synthetic fuel technologies and the chemical and petrochemical industry. For this purpose, theoretical and modeling approaches will be employed in the evaluation of field and monitoring data collected by EPA and others.

Participants in the Center include faculty and students from the Departments of Chemical Engineering and Atmospheric Sciences, and the Institute of Geophysics and Planetary Physics. Professor S.K. Friedlander, Vice Chair, Chemical Engineering, serves as Center Director and Professor Hans. R. Pruppacher, Chair, Atmospheric Sciences, as Associate Director.

S.K. Friedlander, Director

Neuropsychiatric Institute (NPI)

The Neuropsychiatric Institute (NPI), in the UCLA Center for the Health Sciences, is an organized activity of the University of California devoted to education, research, and patient care in psychiatry, neurology, and related fields. The mission of the Institute is threefold: (1) acquiring new knowledge about the factors affecting social, psychological, intellectual and neurological health; (2) training professionals in mental health, mental retardation, and diseases of the nervous system within an interdisciplinary setting; and (3) developing and utilizing the most effective techniques of diagnosing and treating these disorders.

Louis Jolyon West, M.D., Director
Center for Russian and East European Studies

The Center for Russian and East European Studies was established to promote, assist and coordinate research and teaching on Russia and the countries of Eastern Europe. It furthers the research of individual faculty members and graduate students; sponsors colloquia, seminars and lectures, organizes conferences, and participates, with other universities, in academic exchange programs with Russia and Eastern Europe.

Barisa Kreskić, Director

Institute for Social Science Research (ISSR)

The Institute for Social Science Research (ISSR) undertakes basic and policy studies on a broad spectrum of contemporary sociological, psychological, political and economic problems and other social-related community issues. The Institute encourages collaborative research between faculty in the various social science departments as well as cooperative projects that involve members of the professional schools. The core staff of the Institute provides research consultation and supportive services to University faculty members engaged in research investigations as well as advice on the designing and funding of projects. From time to time, the Institute offers special opportunities for graduate students to gain research experience. As funds permit, the Institute provides seed-funding for project development and pilot studies.

An integral part of the Institute is the Survey Research Center (SRC) which not only serves the UCLA faculty but investigators from other universities and research groups in the local and national social research community.

The current research program includes studies in medical care, mental health, human development, housing, law, demography, economic resources, gerontology, energy, and economic behavior.

Director to be announced.

Western Management Science Institute

The Western Management Science Institute fosters research and advanced study in management science and operations research, with special emphasis on developments needed for more effective practical applications. The Institute conducts mathematical and computer-oriented studies on a variety of subjects. These include the construction of optimization models for production and distribution systems, finance and marketing policies, conservation of natural resources, and resource allocation in organizations. Appropriate tools of decision analysis, mathematical programming, microeconomics, simulation, and stochastic modeling are being developed and applied.

In addition to its research programs, the Institute is engaged in developing faculty resources and graduate curricula in the management sciences, and in sponsoring workshops and seminars such as the Jacob Marschak Interdisciplinary Colloquium on Mathematics in the Behavioral Sciences.

Although composed largely of faculty members of the Department of Management, the Institute staff is interdisciplinary. Fruitful collaborative relationships have occurred with the Departments of Economics, Engineering, Mathematics, Political Science, and Psychology.

J.C. LaForce, Director

White Mountain Research Station

The White Mountain Research Station, a Systemwide organized research unit of the University of California, was established (1) to provide laboratory facilities for any qualified research investigator who wishes to utilize a high-mountain environment in his/her work; and (2) to serve as a teaching facility for field courses conducted in the region. Located in the vicinity of Bishop, California, the Station includes four separate laboratory sites: (1) the Owens Valley Laboratory, 3 miles east of Bishop at an elevation of 4,050 feet above sea level; (2) the Crooked Creek Laboratory on the White Mountain Range northeast of Bishop at an elevation of 10,150 feet, used in conjunction with the U.S. Forest Service; (3) the Barcroft Laboratory at an elevation of 12,470 feet; and (4) the summit Laboratory atop White Mountain Peak at an elevation of 14,250 feet. The three laboratories above 10,000 feet are within the Inyo National Forest, and their operation is subject to the regulations of the U.S. Forest Service, as well as to those of the University of California. General operational policy for the Station is set by the President's Advisory Committee for the White Mountain Research Station (WMRS), which includes faculty representatives from every campus of the University.

In the more than 25 years of its existence, several hundred scientists have used the laboratories to conduct research in the agricultural, biological, and physical sciences, and have come to the Station from universities and colleges, government laboratories, and industrial research laboratories located both in this country and abroad. The facilities also have been used by several hundred undergraduate students enrolled in field courses conducted at the WMRS by a number of academic institutions. Primary emphasis of the Station is high altitude research. The administrative offices of the WMRS are located at UCLA in 3805 Geology Hall, phone: (213) 825-2093.

Clarence A. Hall, Jr., Director
Special Programs and Training

Certificate Programs

UCLA offers graduate programs leading to the following certificates: Certificate of Specialization in Architecture/Urban design (School of Architecture and Urban Planning), Certificate of Specialization in Engineering and Applied Science (School of Engineering and Applied Science), Certificate in the Teaching of English as a Second Language (Department of English), Certificate of Specialization in Library and Information Science (Graduate School of Library and Information Science), Certificate of Postgraduate Medical Study, for interns and residents (School of Medicine), postgraduate certificate programs in Dentistry (School of Dentistry), teaching and other advanced credentials for public school service (Graduate School of Education). Further information can be obtained from the Dean of the appropriate school or the departmental Graduate Adviser.

Defense Language Institute — Presidio of Monterey

University of California graduate students (who are currently enrolled and have completed one quarter of graduate work) and faculty have a unique opportunity to acquire fluency in one of 34 foreign languages taught at the U.S. Defense Language Institute, Presidio of Monterey.

Each year 80 persons certified by the University of California Language Training Advisory Committee may be admitted. Regulations and procedures for applicants, and application forms, may be obtained from the Fellowship and Assistantship Section, Graduate Division. For further information, write to the Administrative Assistant, University of California Language Training Advisory Committee, Cowell College, University of California, Santa Cruz, California 95064, or call UC Santa Cruz extension 3064 (message center 2009).

Departmental Scholar Program

Departments may nominate exceptionally promising undergraduate students (juniors and seniors) as Departmental Scholars to pursue bachelor’s and master’s degree programs simultaneously.

Qualifications include the 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 participation in the honors program in the college or school in which the student is resident. To obtain both the bachelor's and master's degrees the Departmental Scholar must be provisionally admitted to the Graduate Division. He/she will fulfill requirements for each program and maintain a minimum average of B. No course may be used to fulfill requirements for both degrees.

The Department Chair will make the student's nomination to the dean of the undergraduate college for recommendation to the Dean of the Graduate Division. Under provisional admission to the Graduate Division, the student will be evaluated by the instructor on that campus.

Under provisional admission to the Graduate Division, Departmental Scholars are accorded the usual privileges of graduate students with the exception of leaves of absence and participation in the Intercampus Exchange Program.

Education Abroad Program

Graduate students may, with the approval of the departmental Graduate Adviser and the Dean of the Graduate Division, participate in the Education Abroad Program at the University's study centers overseas. Such students remain under the academic direction of their home campus departmental Graduate Adviser but may seek assistance from the Director of the Study Center when appropriate. Participation in the Education Abroad Program may prove especially valuable to doctoral candidates who have been advanced to candidacy and are engaged in independent study and research directed toward their dissertations. By approval of the Graduate Council, courses (units) to be applied toward an advanced degree shall be accepted only under all of the following conditions: a) students, after returning, must present a transcript (or equivalent) showing work done abroad under the Education Abroad Program; b) the major department indicates its approval of those courses which it recommends for credit toward an advanced degree; c) the recommendations of the department are then submitted to the Dean of the Graduate Division for approval. For further information, graduate students should consult the Education Abroad Office, 2221-B Bunche Hall, 825-4889, where applications may be obtained. A graduate student is eligible to participate after completion of one full academic year of study at a UC campus. Applications should be filed with that office well in advance of the planned period of study.

The Graduate Cross-Enrollment Program

As an integral part of a Regent-approved program in Academic Resource Sharing, which links UCLA with USC, the Graduate Cross-Enrollment Program makes possible graduate student exchanges in many departments. The program is limited to specialized course offerings which would not otherwise be available to UCLA students.

With the approval of the instructor and Department Chair on the host campus, the UCLA student signs up for a 501 course with his/her UCLA adviser and completes The College and University Regional Student Exchange Petition for Enrollment and Certification of Grade. The complete form must be filed with the Graduate Dean's Office on the host campus by the third week of the UCLA quarter in which 501 credit is requested. Upon completion of the period of study at the host institution, the student will be evaluated by the instructor on that campus, who will forward the grade (S or U) to the UCLA Graduate Adviser, to be recorded against the 501 course and submitted to the UCLA Registrar. There is a credit limit of 8 units of such courses applicable toward the requirements for the master's degree. These 8 units cannot be used to satisfy the 5-graduate-course requirement.

The UCLA student must have completed at least a year of graduate study here, must make petition for study at the host campus in the manner detailed above, and must have registered and paid his/her other fees to UCLA before permission to cross-enroll will be granted. Library privileges will be extended at the host institution, but other privileges or services cannot be proffered.

Limited programs in specialized language courses and in special education with the State University and College System are also available through the College of Letters and Science or the Graduate School of Education.

Intercampus Exchange Program

The Intercampus Exchange Program makes resources of all campuses of the University of California available to graduate students in good standing who have completed at least one quarter of graduate study in the University. It is reserved for use by those students whose graduate study may be enhanced by work with distinguished faculty or use of facilities and resources accessible only on another campus. Applications must be approved by the graduate Department Chair in the student's home department and by the Department Chair in the department (or departments) in which he/she expects to work on the host campus, as well as by the Deans of the Graduate Divisions on both campuses. The student will register, pay fees, and earn credit toward academic residence requirements on his/her home campus, but the host campus will provide library, student health service, and other privileges. Course grades will be transferred to the home campus.

Application forms for the Intercampus Exchange Program are obtained from the Graduate Division on the student's home campus and should be filed at least four weeks before the beginning of the quarter in which the student expects to enter this program. UCLA graduate students may obtain application forms from the Student and Academic Affairs Section of the Graduate Division, 1225 Murphy Hall, 825-4226.

It is the responsibility of the Intercampus Exchange Student to make sure that he/she is registered on both his/her home and host campuses. Information regarding UCLA registration may be obtained from the Registration Clerk, Room 1134, Murphy Hall, 825-1092.
Students for whom UCLA is the host campus will be sent an Appointment to Register in Person upon receipt of the approved quarterly application. With presentation of the current validated home campus registration card to the Registration Clerk, 1134 Murphy Hall, the student will be registered as a UCLA student.

Students for whom UCLA is the home campus and who are studying outside the Los Angeles area an Intercampus Exchange participant may request that the registration packet for the following quarter be mailed to them. These requests may be in writing, addressed to the Registration Clerk, 1134 Murphy Hall, and should be sent no later than six weeks prior to the opening date of the specified quarter. This will ensure that the IEX participant will be able to meet the established deadlines for registration by mail.

Postdoctoral Scholars

Opportunities and facilities of the University are made available to qualified scholars holding doctoral degrees, or their foreign equivalents, who wish to engage in further supervised advanced study and research under faculty guidance, not leading to any degree. Postdoctoral Scholar Status is limited to a maximum of three years. The date the individual’s doctoral degree is awarded determines the maximum length of enrollment. Scholars have to enroll within three years of the receipt of their qualifying degrees in order to be eligible for the 3-year maximum. Individuals may enroll for lesser periods, provided their degrees were awarded before a 6-year time period has elapsed from the receipt of their degrees. The qualifying doctorate is a Ph.D. or its foreign equivalent, or in the case of a professional degree, after completion of postdoctoral clinical residency training.

An interested person should first contact the department or research unit with which he/she would like to become associated. After informal acceptance by the department, all Postdoctoral Scholars must enroll through the Fellowship and Assistantship Section of the Graduate Division. Upon written request from the Scholar’s faculty supervisor and recommendation by the Department Chair or Unit Head, a Certificate of Postdoctoral Study is issued to the Scholar to confirm satisfactory completion of the approved program of research and training.

General information on Postdoctoral Scholar Status and privileges may be obtained from the Fellowship and Assistantship Section of the Graduate Division, 1228 Murphy Hall.

Visiting Scholars

Facilities of the University are made available whenever possible to senior scholars and distinguished visitors with doctoral degrees from U.S. institutions or their foreign equivalents, who wish to become associated with UCLA to pursue independent research or advanced study for a limited period of time, normally not to exceed one calendar year. Such persons are “Visiting Scholars.” Ordinarily, they are self-supported, or with adequate support funds from other sources outside the University. Thus, they should be clearly distinguishable from Postdoctoral Scholars who “enroll” with the Graduate Division for an approved postdoctoral research or training objective under faculty supervision, and from academic appointees who are primarily employees.

Prospective Visiting Scholars should communicate in advance with the Chair of the department, or Head of the academic unit, with which they wish to become associated. On recommendations of the Chair of the department, indicating that the necessary faculty sponsorship and facilities are available, formal invitations are issued by the Dean of the Graduate Division.

General information on Visiting Scholar status and privileges may be obtained from the Fellowship and Assistantship Section of the Graduate Division.

Admissions

An applicant for admission to the Graduate Division from a U.S. college or university is expected to hold a bachelor’s degree from a regionally accredited institution, comparable in standard and content to a bachelor’s degree from the University of California. In addition, the applicant is expected, at minimum, to have achieved a “B” average, or its equivalent if the letter grade system is not used; for the last two years of undergraduate and any postbaccalaureate study.

An applicant for admission to the Graduate Division with a university-level degree from a fully recognized academic institution outside the United States, is expected to hold an academic degree or professional title (i.e., Engineer) comparable in standard and content to a bachelor’s degree from the University of California. Eligibility is judged by grades (marks), class obtained, or rank achieved in class. For preliminary screening purposes, foreign applicants should accompany a request for application material with information about previous academic background (names of institutions attended, degrees obtained or expected, and scholarship attained), and state the proposed graduate program or major field of interest. Because the evaluation of foreign credentials may take considerable time, however, applicants with credentials from institutions in other countries are advised to submit applications at least two months before the published preferred dates for receipt of applications and supporting materials.

Please note that whatever the type of educational system from which one has graduated, there are no special graduate, limited or unclassified categories of admission to UCLA. On some occasions, however, applicants may be considered for admission for coursework without a degree objective (No Degree Objective-NDO). For example, applicants in this category may be teachers with master’s or higher degrees who wish a term or two of refresher study for sabbatical leave, foreign students on a year’s stay in the United States, or those with a professional master’s degree in one discipline wishing to gain knowledge in another. Those applying for this status must meet the above general University admission requirements.

Application

The prospective student may obtain the combined application for Graduate Admission/Fellowships and Financial Aid forms in person or by mail from Graduate Admissions, Graduate Division, 1247 Murphy Hall, UCLA, Los Angeles, California 90024, or from the department in which he/she wishes to study. The pamphlet, UCLA Information for Graduate Applicants which lists the major fields offered, the individual departmental requirements, and other pertinent information, is part of the application packet.

Application for admission to graduate status is limited to Fall, Winter, and Spring Quarters of the regular academic year. Some departments limit admission to Fall Quarter only, because of their sequential arrangement of courses and seminars. Such restrictions are listed in the UCLA Information for Graduate Applicants pamphlet. Enrollment in courses in the Summer Sessions does not constitute admission to graduate status (see Enrollment in Summer Sessions, page 17). Applications and supporting papers for those interested in applying for the 1982-83 academic year should be submitted to Graduate Admissions, Graduate Division, on or before the following dates:

December 30, 1981 for the Fall Quarter, 1982
October 1, 1982 for the Winter Quarter, 1983
December 30, 1982 for the Spring Quarter, 1983

Applications postmarked after the above preferred dates will be considered only in accordance with enrollment limitations, and availability of funds remaining for financial support.

The following materials should accompany the application:

1. Application fee of $25.00 (nonrefundable), by check or money order payable to the Regents of the University of California.
2. Official transcripts of record, in duplicate, from each college or university at which the applicant has completed work. (Transcripts should accompany or immediately follow the application and are nonreturnable.)
One set of transcripts will become a part of the Graduate Admissions file, and the other set will be sent to the major department to assist in the evaluation of the applicant's past record and for advisory purposes regarding whether graduate studies at UCLA. If the student has graduated from UCLA or from another University of California campus and completed there the last two years of study for the bachelor's degree, transcripts are requested from only that campus. (For detailed information, see UCLA Information for Graduate Applicants.)

The Graduate Record Examination

As an additional means of evaluating the qualifications of applicants, a number of departments and schools require the nationally standardized Graduate Record Examination (GRE). (For departments requiring the GRE, consult UCLA Information for Graduate Applicants pamphlet.) Departments requiring the GRE will not make a recommendation prior to receipt of the score reports.

Applications for and information concerning the GRE may be obtained from offices of the Educational Testing Service, either at Box 995, Princeton, New Jersey 08541, or at 1947 Center Street, Berkeley, California 94704. GRE scores should be directed to the department. Graduate Admissions has no provision for forwarding these scores.

U.S. students who will be seniors in 1981-82, who are receiving financial aid at an undergraduate institution, and whose estimated parental contribution is calculated at zero are eligible to apply for GRE Fee Waivers. For additional information on the GRE Fee Waiver, write to the Associate Program Director, Educational Testing Service, Princeton, New Jersey 08541.

1982-83 GRE TEST DATES

<table>
<thead>
<tr>
<th>Date</th>
<th>GRE Test Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 16, 1982</td>
<td>(February 5, 1983)</td>
</tr>
<tr>
<td>December 11, 1982</td>
<td>(April 23, 1983)</td>
</tr>
<tr>
<td>June 11, 1983</td>
<td>(Ability Only)</td>
</tr>
</tbody>
</table>

We strongly urge that all nationally administered tests be taken by February.

Letters of Recommendation

Though letters of recommendation are not a Graduate Division requirement, most graduate professional schools, departments and interdepartmental programs require applicants to submit three letters of recommendation attesting to the ability of the applicant to succeed in graduate study. The letters are typically used to augment, validate or explain the information provided in the formal application. Statement of Purpose, and/or essay. For some applicants, the information provided in these letters will mean the difference between acceptance and rejection. The forms to be used are part of the application packet.

Foreign Applications

Foreign applicants should submit official transcripts of record, in duplicate, for all college and university work. Official records are defined as original documents issued by the institution which bear the actual — not a photocopy — signature of the Registrar and the seal of the issuing institution. Applicants should not send the original of an academic record which cannot be replaced, but should obtain a properly certified copy instead. College and university transcripts must show subjects studied, examination grades achieved, and award of degrees. Specific instructions are given in the information pamphlet for admission requirements and required credentials. (For detailed information, see UCLA Information for Graduate Applicants.)

Foreign Applicants are advised not to come to UCLA until they receive formal notice of admission from the Director of Graduate Admissions. They are notified by airmail as soon as a decision has been reached and, if requested on the application, the Certificate of Eligibility to secure the appropriate visa is enclosed with the notification of admission. Foreign applicants who have been accepted are encouraged to report to Graduate Admissions as well as to the Office of International Students and Scholars as soon as possible after they arrive at UCLA in order to receive assistance in completing admission and registration procedures.

English as a Second Language Placement Examination (ESLPE)

Since English is the language of instruction at UCLA and success in graduate study depends largely on facility in its use, foreign students whose first language is not English are required to take a proficiency examination before the term in which they are to register. The achievement in this examination determines whether they will be required to include English courses in their program or will be permitted to carry a full or a moderate graduate program. If they should be required to take English courses, they should anticipate spending a longer period of time at the University than they normally would require to complete a degree program. Admission of an applicant who fails to pass this examination will be deferred until the applicant has acquired the necessary proficiency in the use of English.

Foreign students who hold a bachelor's or higher degree from a university located in the United States or in another country in which English is the spoken tongue and the medium of instruction, or who have completed at least their last two years of full-time study at such an institution, are not required to take the UCLA English Examination.

As a preliminary screening test, nonetheless, foreign applicants are urged to take the Test of English as a Foreign Language (TOEFL), administered by the Educational Testing Service in some 95 foreign centers. Applications for the TOEFL Examination may be obtained from the Educational Testing Service, Box 995, Princeton, New Jersey 08541. It is a useful and important way of helping students determine whether they are well enough prepared to undertake graduate study conducted in English before they make extensive plans for graduate study in the U.S.A. The TOEFL, however, may not substitute for the required examination in English, which must be taken at UCLA on arrival. As a matter of policy, neither is any other English test (i.e., Michigan Test) accepted in place of the examination given at UCLA.

Even though the TOEFL examination is not a general University requirement, some departments request it and will not make a recommendation unless the test result is submitted. (Consult UCLA Information for Graduate Applicants pamphlet.)

Application Review and Notice of Admission

Graduate Admissions screens all applicants to determine whether or not they meet University minimum requirements for graduate status. Ordinarily, only the applications of those students who have fulfilled at least the minimum requirements are then referred to the department. There they are subjected to a more specific and intensive review. Although, at this stage, departments may choose to make contact with applicants, Graduate Admissions alone is empowered to make the formal offer of admission, taking the departmental recommendation into full consideration. Thus, the official admission letter is issued by the Director of Graduate Admissions.

To applicants offered admission, Graduate Admissions sends instructions on required registration procedures with the formal notification.

Applicants who are offered admission with work in progress are reminded that their admission is contingent upon receipt of evidence of satisfactory completion of this work, plus statement of award of degrees and all other required materials upon which admission is contingent. The applicant should also be aware of any conditions placed on his/her admission as given in the admission letter or as received from the department.

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 the holders of either an academic or professional degree may have the pressing need to earn another degree in an area quite different from that of their first endeavors.

All applicants for a second academic graduate degree at the same level as, or at a lower level than the graduate degree they already hold, will be required to show compelling cause to the department before it reviews and recommends admission by the Dean of the Graduate Division.
If admitted for a second graduate degree, students will be held to all the usual degree requirements and University regulations pertaining to fees, registrations, examinations, advancement to candidacy, residency, etc. Courses already applied to the earlier degree cannot be applied to the second degree.

Enrollment in Summer Session Courses

Enrollment of prospective graduate students in Summer Session courses does not constitute admission to graduate status in the University, which is possible only through application for graduate admission during the regular academic year. Students who wish to apply Summer Session courses to their subsequent graduate programs should consult in advance with their departmental graduate advisers concerning this possibility. This is true also for students readmitted to graduate status who wish to resume their study in the Summer Sessions. (See Readmission, below.)

Information and applications may be obtained from the Office of Summer Sessions, 1254 Murphy Hall, University of California, Los Angeles, California 90024. The 1982 Summer Session bulletin will be available from that office by March 1.

Renewal of Application

An offer of admission is valid for a specific quarter only. Applicants who filed applications but were not admitted, or who failed to register in the quarter for which they were accepted in graduate status, but who wish to reactivate their applications for a later quarter, should file a Renewal of Application form. Such forms are obtained from Graduate Admissions, or from the departments, and should be submitted to Graduate Admissions, Graduate Division, 1247 Murphy Hall, UCLA, Los Angeles, California 90024. Filling dates are the same as those for new applications. The Renewal of Application should be accompanied by official transcripts, in duplicate, of any college or university work completed since the former application. Acceptance for admission at any earlier date does not guarantee approval of the Renewal of Application.

Only one renewal of application will be accepted without the $25.00 (nonrefundable) application fee. The application fee is due with each renewal of application filed after the first one.

Applicants seeking admission more than two years after their original application, file new applications rather than Renewal of Application forms, since records are not retained more than two years.

Readmission

Current University requirements state that unless granted a formal leave of absence, continuing graduate students who fail to register are considered to have withdrawn from the University and must compete for readmission with all other applicants. Thus, applicants who have registered at any time as a graduate student at UCLA, whether having completed a graduate program or not, must file the "Application for Graduate Admission/Fellowship and Financial Aid" form. Instead, they should request an "Application for Readmission" form from Graduate Admissions, Graduate Division, 1247 Murphy Hall, UCLA, Los Angeles, California 90024.

Applications for readmission should be accompanied by:

(a) Application fee of $25.00 (nonrefundable), by check or money order payable to the Regents of the University of California. Fee verification from another University of California campus is not acceptable.

(b) Official transcripts of record, in duplicate, for all college and university work completed since last registration at UCLA.

(c) The "Graduate Petition for Change of Major," if appropriate. This form should be requested with the "Application for Readmission" if reapplying in a "new" major.

Formal application for readmission, however, is not required of a student returning from an official leave of absence.

Admission to Concurrent and Articulated Degree Programs

In addition to those programs offered in an individual discipline, it is possible to complete studies leading toward two degrees through concurrent and articulated degree programs. Both of the programs have the advantage of allowing the student to acquire two degrees in less time than normally required if the courses of instruction are taken in sequence. The aim of these programs is to provide an integrated curriculum of greater breadth between the two disciplines. The programs differ in that concurrent programs are designed to allow a specified amount of credit to apply toward both degrees, while articulated programs do not allow any credit overlap.

Programs leading to concurrent degrees have been approved 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. — 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.

Programs leading to articulated degrees are offered by the following disciplines:

- African Area Studies, Interdepartmental M.A. — Public Health, M.P.H.
- Latin American Studies, Interdepartmental M.A. — Architecture and Urban Planning, M.A.
- Latin American Studies, Interdepartmental M.A. — Education, M.Ed. (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. — Library and Information Science, M.L.S.
- Latin American Studies, Interdepartmental M.A. — Public Health, M.P.H.
- Medicine, M.D. — Any Graduate Division major, Ph.D.
- Oral Biology, M.S. — Dentistry, D.D.S. or Certificate

In addition to the application form to the graduate program, the applicant should also file a separate application to the School of Law, Medicine, or Dentistry where they are involved in an articulated or concurrent degree program.

*Applicants apply only to and are admitted only to African Area Studies. For further information, see African Area Studies or Public Health sections in this Catalog.
**Admission to the Schools of Dentistry, Law and Medicine**

Applicants for programs leading to the M.A., M.S., and Ph.D. degrees in departments of the School of Medicine or the School of Dentistry should apply for admission to the Graduate Division in accordance with procedures described above. For admission to the D.D.S., J.D. and M.D. degree programs in the Schools of Dentistry, Law, or Medicine, applicants should write to the respective schools for their published announcements and for information and application procedures.

**Nondiscrimination**

The University of California, in compliance with Titles VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972 (45 CFR 86), and Sections 503 and 504 of the Rehabilitation Act of 1973, does not discriminate on the basis of race, color, national origin, religion, sex or handicap in any of its policies, procedures or practices; nor does the University, in compliance with the Age Discrimination in Employment Act of 1967 and Section 402 of the Vietnam Era Veterans Readjustment Act of 1974, discriminate against any employees or applicants for employment on the basis of their age or because they are disabled veterans or veterans of the Vietnam era. This nondiscrimination policy covers admission, access and treatment in University programs and activities, and application for and treatment in University employment.

In conformance with University policy and pursuant to Executive Orders 11246 and 11375, Section 503 of the Rehabilitation Act of 1973, and Section 402 of the Vietnam Era Veterans Readjustment Act of 1974, the University of California is an affirmative action/equal opportunity employer.

Inquiries concerning Title IX may be directed to Campus Counsel, 2241 Murphy Hall, UCLA, phone (213) 825-4042 or to the Director of the Office for Civil Rights, Department of Education, Washington, D.C, 20202.

Students may complain of any action which they believe discriminates against them on the ground of race, color, national origin, religion, sex or handicap and may contact the Dean of Student Relations, 2224 Murphy Hall, for further information and procedures.

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**Financial Assistance**

**Fellowships, Grants, and Assistantships**

Numerous types of financial assistance are available to graduate students at UCLA. Student support funds are categorized in two areas: support based on academic excellence and support based on financial need. These are not mutually exclusive; that is, a student who is eligible for need-based financial aid may receive an award based on academic excellence and vice versa. Graduate applicants are strongly urged to apply for all categories for which they may qualify. Note the applications for national, international, or special grants or fellowships other than those administered by UCLA, do not preclude applying for UCLA support.

The Fellowship and Assistantship Section of the Graduate Division publishes an annual general information brochure which describes the following types of funds available to graduate students: 1) Teaching Assistantships provide teaching experience of undergraduates with faculty supervision; 2) Research Assistantships provide experience working on faculty-supervised research projects; 3) Fellowships and Registration Fee Grants provide stipends and fees for graduate study; and 4) Nonresident Tuition Waivers provide tuition payment for U.S. and foreign students who are not residents of the State of California (Other types of financial assistance are described below.)

Entering graduate students who wish to be considered for University-administered awards should complete the combined "Application for Graduate Admission, Fellowship and Financial Aid" form which may be obtained from the Graduate Admissions Office. Completed applications must be returned to that office by the December 30 published deadline. Some departments have earlier deadlines and therefore students should consult the information pamphlet which accompanies this application for details.

Students who have applied to Graduate Admissions within the last two years, but did not register, or those who have registered previously at UCLA as graduate students, should request either the "Renewal of Application" or the "Graduate Application for Readmission" form.

All of the above forms contain a "Graduate Financial Awards Section" where students may check the types of University-administered awards for which they wish to be considered.

Some restricted fellowships programs require a special application form which is available in both the "Application for Graduate Admission, Fellowship and Financial Aid" and in the UCLA Graduate Student Support Resources brochure.

Continuing graduate students should complete the "Fellowship and Assistantship Application for Continuing Students" form which is available in departments, organized research units, and the Fellowship and Assistantship Section. Continuing students must file a separate application with the Financial Aid Office in order to be considered for funds (grants, loans and work-study jobs) based on need.

The In-Candidacy Fee Offset Grant Program provides financial assistance to eligible Ph.D. students who have been advanced to candidacy and who will complete their degree requirements within the normative time set by their departments. The grant pays a student's Educational Fee. This program is described in detail under Doctoral Degrees, page 36.

The Fellowship and Assistantship Section maintains a library of reference materials on extramural funding. The library is located in Room 1228 Murphy Hall. Program descriptions and information regarding application procedures are cataloged according to the following: research and/or dissertation year; travel; by discipline; other institutions; information on teaching/study abroad; minority students; women; foreign nationals; arts/writers; study/research abroad; postdoctorals; miscellaneous.

In addition, the following publications are also available for reference: Annual Register of Grant Support; The Grants Register; The Foundation Directory; Directory of Internships; Grants and Aid to Individuals in the Arts; Handbooks on Study Abroad Programs (IE); NSF Program Guide; NIH Program Guide; UNESCO Study Abroad.
Supplementation Policy

Supplementation refers to the provision of funds to graduate students in addition to support provided by fellowships, grants and assistantships. During an academic year, the aggregate amount of University-administered financial support which may be received by any student may not exceed the salary level paid to a 50% time Teaching Fellow plus $500 for each dependent.

Supplementation by employment within the University is restricted to policies set forth in the Academic Apprentice Personnel Manual. It is intended that the same restrictions, apply to off-campus employment, although this is difficult to monitor. Students who are recipients of federal, state or privately funded fellowships must adhere to the supplementation limits, if any, of the individual funding agency. Students who receive need-based aid from the Financial Aid Office and the Graduate Affirmative Affairs Office may not supplement their awards during the academic year if the combined amount of support results in a total income greater than the students' eligibility as determined by the Financial Aid needs analysis.

Any questions regarding these policies may be directed to the Fellowship and Assistantship Section of the Graduate Division, 1228 Murphy Hall.

Teaching Assistant Advance Loan Check

Each graduate student appointed as a Teaching Assistant, Teaching Associate or Teaching Fellow is eligible to receive, upon application, an interest-free advance loan check through the Fellowship and Assistantship Section of the Graduate Division. These advance loans are discharged by payroll deductions with one-half of the loan deducted from the second paycheck and the remaining amount from the third paycheck of the quarter. Authorization forms may be obtained from the student's department.

The Graduate Affirmative Affairs Office

The Graduate Affirmative Affairs Office was established to increase the graduate enrollment of students from those groups which, as a result of economics or societal inequities, have been traditionally underrepresented in the University.

Financial support is available for students from groups with historically low participation in graduate work such as American Indians, Asian Americans, Blacks, and Chicanos, in graduate study leading to the master's or doctoral degree in the sciences, humanities, social sciences, and the arts, including the Schools of Architecture and Urban Planning, Library and Information Science, and Education.

Out-of-state applications in the applied and pure sciences are particularly encouraged, as well as those fields in which manpower availability pools for ethnic minorities must be increased.

Applicants must be U.S. citizens or permanent California residents and admitted to graduate status, in order to be eligible for these awards. In certain instances, an additional departmental application for admission is required. Students should contact the major department for full details on admission requirements. Students interested in the professional fields listed below should address their inquiries to the professional school of their choice.

Management
Dentistry
Engineering
Computer Science
Law
Medicine
Nursing
Public Health
Social Welfare

Applications for other areas of study may be obtained by contacting the Graduate Counseling Affirmative Affairs Office, 1248 Murphy Hall. Retention and degree attainment are primary goals of the program. Counseling and academic assistance on a one-to-one basis are provided to students enrolled in graduate study through the Graduate Affirmative Affairs Office.

Graduate Advancement Program Awards (GAP)

Awards are made on the basis of academic record and promise and award amounts are limited to the student's needs. A financial aid application must be submitted. A limited number of awards are in the form of fellowship grants. Others are a combination of grant, work-study and loan to cover fees and to provide a modest living allowance.

Graduate Opportunity Fellowship Program (GOFP)

Awards are for one academic year and may be renewed for a second year upon application and satisfactory progress. New awards are limited to entering students admitted to departments approved under this program. Fellowships provide up to $4200 per year in stipend plus registration fees and, where applicable, nonresident tuition.

Graduate and Professional Opportunity Program (GPOPOP)

Fellowships are for one academic year and may be renewed for second and third years upon satisfactory academic progress. New awards are limited to entering students in the fields of Archaeology, Management and Urban Planning. Applications are particularly encouraged from Native Americans, Blacks, and Chicanos — groups which have severe academic underrepresentation in these fields. Awards provide $4500 per year stipend plus registration fees and nonresident tuition where applicable.

Dorothy Danforth Compton Fellowship

UCLA has been selected as one of 10 universities to receive a grant from the Danforth Foundation to support outstanding Black, Mexican American, Native American, and Puerto Rican students who are committed to careers in college and university teaching.

Under this grant, a limited number of 4-year fellowships will be awarded to entering students enrolled in programs leading to the Ph.D. degree in the Humanities, Social Sciences, Physical Sciences, Health Sciences, and Fine Arts.

During the first and fourth years of the fellowship, recipients will receive a $5000 stipend plus registration fees and, where applicable, nonresident tuition. During the second and third years, students will serve as teaching or research assistants and will receive the appropriate salary. Applicants must be in departments offering a doctoral program having teaching or research provisions.

Other Financial Assistance

Graduate students are eligible for other forms of financial assistance including various types of grants, loans, and work-study jobs. These awards are based on need computed according to federally accepted criteria. Need is determined by subtracting an applicant's resources from allowable school-related expenses. These resources include a student's assets and expected earnings, parental contributions, a spouse's earnings, and University and non-University fellowships, traineeships and assistantships.

Entering graduate students who wish to be considered for financial aid should check the appropriate box in the financial aid section of the "Application for Graduate Admission/Fellowship and Financial Aid." The Financial Aid Office will forward a complete packet containing application forms, detailed instructions, and general information to each student checking this box. Continuing students may obtain the graduate financial aid application packet at window A128 Murphy Hall in November of the preceding year.

International students holding F-1 and J-1 student visas or temporary visas are not eligible to apply for financial aid for their first year of study at UCLA. They are urged, therefore, to make every effort to secure funds from other sources. International students who have completed at least one year of study at UCLA are eligible to apply for University financial aid grants and President's Work-Study awards.

Students are usually awarded a financial aid "package" which is a combination of grants, loans, and work-study job opportunities.
Types of Aid. A grant is an outright gift and does not have to be repaid. There are several federal, state, and university grants. Loans include educational fee deferment loans, national direct student loans, health profession loans, nursing loans, and regents and university loans. Most of the loans awarded through the financial aid office are interest-free during the time an individual is a registered student. Repayment of principal plus 3% to 7% interest begins 6, 9, or 12 months after a student is no longer registered at the university, depending on the type of loan.

Work-study employment provides on-campus jobs and jobs with non-profit off-campus agencies. Whenever possible, work-study employment is provided in a student's particular academic field of interest. The financial aid office also administers the federal and california guaranteed student loan programs enabling students to negotiate loans with private lending institutions. (Applications are available throughout the year at window A217 murphy hall.)

Emergency loans of $75 or less are available to all registered students from the office of student loan services, A227 murphy hall. Emergency loans are repayable within one month.

The in-candidacy fee offset grant program provides financial assistance to eligible ph.d. students who have been advanced to candidacy and who will complete their degree requirements within the normative time set by their departments. The grant pays a student's educational fee. This program is described in detail under doctoral degrees, page 36.

Further information on financial aid and applications for assistance can be obtained at the financial aid office, A129B murphy hall.

General Information and Regulations

Graduate Courses

Courses numbered in the 200, 400, and 500 series are ordinarily open only to students who have completed those courses basic to the subject matter of the course. Graduate courses and seminars which can fulfill the minimum graduate course requirement of any advanced degree are numbered in the 200 series. All graduate courses especially designed for programs leading to graduate degrees other than the M.A., M.S., and Ph.D. are numbered in the 400 series; these may not be used to satisfy the minimum graduate course requirements for M.A. or M.S. degrees. Courses numbered in the 500 series are directed individual study or research at the graduate level (see individual study or research courses, below). Courses numbered in the 300 series are professional courses or preprofessional experience and are not applicable toward university minimum requirements for graduate degrees.

Individual Study or Research Courses

Graduate individual study or research courses are numbered as follows: 596 (directed individual study or research); 587 (preparation for the master's comprehensive examination or doctoral qualifying examinations); 588 (master's thesis research and preparation); and 599 (doctoral dissertation research and preparation). Certain 500 series courses, with limitations as to their use, have been approved by the graduate council for satisfactory/unsatisfactory grading for application to the minimum course requirements for master's degrees, or for repetition for credit. The same method of grading (either by letter grade or on an S/U basis) is determined in advance for all of the students enrolled in a particular course. Before enrolling, students should obtain full information from the graduate advisor in the department which offers the course.

No more than two courses in the 500 series shall apply toward the divisional minimum of nine courses required for a master's degree; and only one of these two courses may be counted toward the minimum of five graduate courses required for the degree.

Master's degree programs requiring more than the minimum nine courses may allow proportionately more 500 series courses, as follows: for programs of 10 to 11 courses, two 500 series courses; for programs of 12-15 courses, three 500 series courses; and for programs of 16-18 courses, four 500 series courses.

Standard of Scholarship

UCLA requires at least a B (3.0) average in all courses taken in graduate status on any campus of the university of California, and in all courses applied toward advanced degrees. This standard applies to all graduate students, including candidates in graduate level certificate programs. In courses graded on an S/U basis, a grade of S (satisfactory) shall be awarded only for work which would otherwise receive a grade of B or better.

Scholarship Probation

Graduate students are considered in probationary status and subject to dismissal if their cumulative scholarship average in all work attempted in graduate status falls below a B (3.0), or if their work in any two consecutive quarters falls below a B (3.0) average. The dean of the graduate division, in consultation with the student's major department, determines his/her eligibility to continue graduate study. Students who are allowed to continue in probationary status are required to make expeditious progress toward improvement of their scholarship.

1. Types of Aid. A grant is an outright gift and does not have to be repaid. There are several federal, state, and university grants.
2. Loans include educational fee deferment loans, national direct student loans, health profession loans, nursing loans, and regents and university loans. Most of the loans awarded through the financial aid office are interest-free during the time an individual is a registered student. Repayment of principal plus 3% to 7% interest begins 6, 9, or 12 months after a student is no longer registered at the university, depending on the type of loan.
3. Work-study employment provides on-campus jobs and jobs with non-profit off-campus agencies. Whenever possible, work-study employment is provided in a student's particular academic field of interest.
4. The financial aid office also administers the federal and california guaranteed student loan programs enabling students to negotiate loans with private lending institutions. (Applications are available throughout the year at window A217 murphy hall.)
5. Emergency loans of $75 or less are available to all registered students from the office of student loan services, A227 murphy hall. Emergency loans are repayable within one month.
6. The in-candidacy fee offset grant program provides financial assistance to eligible ph.d. students who have been advanced to candidacy and who will complete their degree requirements within the normative time set by their departments. The grant pays a student's educational fee. This program is described in detail under doctoral degrees, page 36.
7. Further information on financial aid and applications for assistance can be obtained at the financial aid office, A129B murphy hall.
Disqualification and Appeal of Disqualification

The record for any student who is subject to disqualification for reasons other than failure to maintain a grade point average greater than 3.0 will be reviewed by the Graduate Division, in consultation with the student's Graduate Adviser. Unless there are indications of procedural error or other substantive mitigating factors to explain the student's record, the student will then be disqualified from further registration in graduate status on the campus, and will be given written notice stating the reasons for this action.

A student who is subject to disqualification or who has been disqualified may submit a written appeal for reconsideration for cause to the Dean of the Graduate Division. Such appeals will be considered only if based upon appropriate cause such as: (a) procedural error, (b) judgments based upon non-academic criteria, (c) personal bias, or (d) specific mitigating circumstances contributing to the student's performance. Alleged errors in academic judgment or evaluation will not be considered as appropriate bases for consideration of a student's appeal from disqualification. In cases of appropriate cause, the Dean of the Graduate Division will refer the appeal to the Graduate Council's standing Committee on Instruction and Degree Requirements.

In all cases of student appeals, so referred, the student must submit a written statement of the basis for his/her appeal and is entitled to a personal appearance before the Committee on Instruction and Degree Requirements. The Committee may solicit information on the matter from any other person or office. This Committee will make a recommendation to the Dean as to the disposition of the case and the Dean of the Graduate Division will make the final decision. In reporting the final decision of the Dean to the student, the basis for the decision, its effective date, and the nature of the recommendations of the Committee on Instruction and Degree Requirements will be included.

Grading Regulations

General

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 upon the course description as approved by the appropriate course committee.

The final grade in the course is based upon the instructor's evaluation of the student's achievement in the course. When 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.

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, the Committee on Privilege and Tenure shall communicate that information to the Academic Senate Chair. Within a period of two weeks after notification, guided by the Committee on Committees, the Academic 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 ade-quate, 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 Academic Senate 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.

Grading of Graduate Students

The work of all graduate students is reported in terms of the following grades: A (superior achievement), B (satisfactorily demonstrated potentiality for professional achievement in the field of study), C (passed the course but did not do work indicative of potentiality for professional achievement in the field of study), F (fail), I (incomplete), IP (in progress), DR (deferred report), S (satisfactory), U (unsatisfactory). The passing grades A, B and C may be modified by plus (+) or minus (−) suffixes. Grade points per units are assigned by the Registrar as follows: A—4, B—3, C—2, F—0. "Plus" grades (except A+) carry three-tenths grade point more per unit and "minus" grades carry three-tenths grade point less per unit than unsuffixed grades. The grade A+ carries 4.0 grade points per unit, the same as for an unsuffixed A; but when A+ is assigned it represents extraordinary achievement. Courses in which a student receives an S grade may be counted in satisfaction of degree requirements, but courses in which either an S, U, DR, I, or IP has been awarded are disregarded in determining a student's grade point average.

The grades A, B, and S denote satisfactory progress toward a degree. A graduate student is subject to dismissal if his/her cumulative grade point average falls below 3.0.

The "I" Grade

The grade "I" may be assigned when a student's work is of passing quality, but is incomplete. The grade "I" is only assigned when it is established to the instructor's satisfaction that the student's work is incomplete for good cause. When the instructor assigns the grade, "I" on the grade sheet, the grade should be accompanied by a notation specifying what work must be done to remove the Incomplete. The student is entitled to have the grade "I" replaced by a passing grade and to receive unit credit and grade points provided he/she satisfactorily completes the work of the course by the end of the next full quarter that he/she is in residence in regular session following the quarter in which the "I" was received. The Dean of the Graduate Division has authority to extend the deadline for completion in the event of unusual circumstances that would clearly impose an unfair hardship on the student if the original deadline was maintained. If the work is not completed, the grade "I" is automatically replaced with F, NP or U as appropriate.

The Graduate Council may establish rules under which the authority to approve limited extensions of time for graduate students is delegated to departmental advisers.

The S and U Grades

With the approval of the Graduate Council, and the consent of the departments involved, individual study or other work undertaken for credit toward a degree by a graduate student may be evaluated by means of grade S and U. A graduate student in good standing may enroll each term in one course graded on an S/U basis. This course shall be outside the major field and in addition to those individual study and research courses (500 series) graded S/U in the student's major field. A grade of S is awarded only for work which would otherwise receive a grade of B or better.

The IP Grade

(In Progress). For courses authorized to extend over more than one quarter and where evaluation of the student's performance is deferred until the end of the final term, a provisional grade of IP is assigned in the intervening term(s). The provisional grade is replaced by the final grade(s) if the student completes the full sequence. The Graduate Council is authorized to regulate the award of credit in cases where the full sequence is
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 upon written request of an instructor, provided that a clerical or procedural error is the reason for the change; or b) upon 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 a 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 filling 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.

Repetition of Courses

Unless repetition of the course for credit has been authorized by the Committee on Undergraduate Courses and Curriculum or the Graduate Council, repetition is subject to the following conditions:

- A student may repeat only those courses in which he/she received a grade of C- or F, or U. Courses in which a grade of C- or F has been received may not be repeated on a S/U basis.
- Repetition of a course more than once requires approval by the Dean of the Graduate Division in all instances.
- Degree credit for a course is given only once, but the grade assigned at each enrollment is permanently recorded.
- All courses attempted and graded on the A, B, C, F, basis and modifications thereto, including repeated courses, are used in computing the grade point average.

The DR Grade

The grade DR (deferred report) is entered on the student’s record: a) when the student or another individual’s knowledge, the student’s work in the course is complete, but the faculty member is not able to assign a grade; or b) when disciplinary proceedings are in progress. The DR is not calculated in any way in the student grade point average. The DR is changed to a grade, or perhaps to an incomplete, only when the Registrar receives a written request from the instructor which indicates that the student has clarified the situation.

The report of the grade DR must be accompanied by a letter from the instructor to the Dean of the Graduate Division, and to the student stating the basis of the action. For students enrolled in a course approved by the Graduate Council, the Dean of the Graduate Division is the Dean of Record. The Dean establishes a date or a specific circumstance terminating the period of the Deferral of Report and informs the Registrar, the instructor and the student. Unless changed by the instructor as specified in the preceding paragraph, the DR automatically becomes an F grade.

Removal of “I” (Incomplete) Grade

The grade I (Incomplete) is assigned when a student’s work is of passing quality but is incomplete for good cause. A grade I (assigned after July 1, 1972) will not be taken into account in calculating the grade point average for one quarter after it is assigned. The student is entitled to have the grade I replaced by a grade and to receive unit credit and grade points providing he/she satisfactorily completes the work of the course by the end of the next full quarter that he/she is in academic residence in regular session following the quarter in which the I was received. If the work is not completed by the end of the next quarter of residence, the I grade will automatically be replaced with the grade F or U (Unsatisfactory) as appropriate. On the other hand, it is not necessary for a student to be registered at the time he/she completes the work to remove an I grade.

The work for a course for which the I grade has lapsed to an F or U may, with the permission of the instructor, be completed in a subsequent quarter and the appropriate earned grade assigned. Until that time, however, the F or U grade will appear on the student’s record and be calculated in the grade point average. A student filing to remove an I grade which has lapsed to an F or U follows the procedures for removing an I grade described below. When the grade is assigned by the instructor, the Registrar will remove the lapsed F or U and replace it with the earned grade.

While completing the conditions for removal of the I grade, the student obtains “Petition for Removal of Incomplete Grade” forms at the departmental office, completes a petition for each course (name, address, Instructor, course, quarter), submits it to the Instructor for signature, pays the $5 fee (one fee for all petitions submitted together) at Main Cashier, 1125 Murphy Hall, and files the petition with the Registrar at Information Window “A,” Murphy Hall.

The “Petition for Removal of Incomplete Grade” should be filed no later than the eighth week of instruction in the next quarter of registration after the Incomplete grade was assigned. Coursework must be completed by the end of the quarter to avoid lapse to grade F (see UCLA Grading Regulations, page 21).

When the required work has been completed, the instructor fills out the “Petition for Removal of Incomplete Grade,” on which the final grade is entered, and forwards it to the Registrar.

Summer Sessions

Enrollment of prospective graduate students in Summer Session courses does not constitute admission to graduate status in the University, which is possible only through application for graduate admission during the regular academic year. This is true also for students readmitted to graduate status who wish to resume their study in Summer Sessions.

Graduate students should register continuously in the Fall, Winter, and Spring Quarters. Enrollment in either Summer Session does not constitute a substitution for the requirement of continuous registration.

Students who wish to enroll in Summer Session courses and apply them to requirements for graduate degrees or University-recommended credentials should consult in advance with their departmental graduate advisers concerning this possibility.

Academic Residence

Enrollment in two six-week Summer Sessions (must be consecutive for doctoral candidates) counts as one quarter of residence provided the candidate is enrolled in each session for the equivalent of at least 2 units of upper division and/or graduate work as given in a regular quarter. Enrollment in an eight-week Summer Session counts as one quarter of residence provided the candidate is enrolled in the equivalent of at least 4 units of upper division and/or graduate work as given in a regular quarter. Academic residence that is earned through enrollment in Summer Sessions is limited to one-third of the degree requirements.

Course Credit

Regular session courses offered in Summer Session at UCLA by regular faculty qualify automatically for credit toward a higher degree. Regular session courses offered in Summer Session at UCLA by visiting faculty
may apply, provided the chair of the department so recommends, in ad-
vance, to the Graduate Dean.

Summer Session courses offered elsewhere may not apply, unless
approved in advance by the Committee on Instruction and Degree Re-
quirements of the Graduate Council. Recommendations for such credit
should be made by the department chair of the students involved.

Applications and information on course offerings may be obtained
from the Office of Summer Sessions, Room 1254 Murphy Hall.

Credit by Examination
Graduate students in good standing may petition to the appropriate in-
structors, the department, and the Dean of the Graduate Division for
permission to take courses for credit by examination, up to a maximum
of three courses. To be eligible for this privilege a student must be registered
in graduate status at the time of the examination. Credit earned by examina-
tion may be applied toward the minimum course requirements for mas-
ter's degrees, but it cannot apply to academic residence requirements for
master's and doctoral degrees.

Forms for this purpose are available in the Student and Academic
Affairs Section of the Graduate Division. There is a $5.00 fee for each
credit by examination petition.

Registration and Enrollment Procedures

Registration
Registration is the payment of fees, enrollment in classes and the filing
of various informational forms. Students' names are not entered on official
rolls of the University unless the registration process is completed as
published by the Registrar in the Registration Circular and the Schedule
of Classes. Students who fail to complete and file all forms by the estab-
lished deadlines may be delayed or even prevented from receiving credit
for work undertaken.

Registration is divided into two equal, but separate processes. Regis-
tration materials (the "registration packet") are issued by the Registrar
and include cards for payment of the term fees and a Study List Card for
requesting enrollment in classes. When fee payment and enrollment are
complete, students are considered duly registered and enrolled for the
quarter.

Registration by Mail. In advance of the quarter, the registration pro-
cess may be completed through the mail. All eligible students are encour-
gaged to register by mail. "Registration packets" for currently registered
students are available approximately the fifth week of the term in prog-
ress. Dates and place of packet issuance are announced in the campus
newspaper, the Daily Bruin and on official campus bulletin boards. New
and reentering students eligible to register by mail (see Calendar) will
receive the "registration packet" in the mail from the Registrar approxi-
mately six weeks before the quarter begins. Complete instructions and
envelopes for return of the cards are included with the registration materi-
als. Each student is responsible for consulting the quarterly Schedule
of Classes available for purchase in the Students' Store on campus. At the
end of the registration by mail process, materials are returned to all
students who participated. Students who requested enrollment will re-
ceive the results of the enrollment processing, while students who paid
their term fees will receive the valid Registration Card (proof of student
status for University services). These separate mailings are made ap-
proximately 10 days prior to the beginning of the quarter.

Registration In Person. At the beginning of the quarter, in-person
processing of fee payment is available for all students not processed by
mail. Dates and location of registration in person are announced in the
Schedule of Classes, the Registration Circular, the Daily Bruin and on
official campus bulletin boards. Students eligible to register by mail are
not issued specific times for registration in person, but are advised to
observe the registration time recommended in the Registrar's publica-
tions. By observing the suggested time schedule for reporting to register,
students can complete the registration procedure with a minimal delay.
New and reentering students processed for registration in person will be
mailed an Appointment to Register In Person by the admitting (or readmit-
ting) officer upon receipt of their Statement of Intent to Register and after
classification for tuition purposes is completed from the Statement
of Legal Residence. The Appointment to Register In Person is the student's
notice of the date, time, and location that the Registrar will be prepared to
issue individualized materials for the registration process.

While a combination of both processes (by mail/in person) may be used
to pay fees and enroll in classes, the University requires that the full
amount of fees be paid by the Friday before instruction begins. If fees are
not paid by that date, all course enrollment is dropped and the student
must register late.

Any student allowed to register on or after the first day of instruction is
subject to a late fee. Late registration with payment of the late fee is
accepted during the first 10 days of instruction. Any student who requests
registration after the 10th day of classes will be subject to the late registra-
tion fee and must submit to the Graduate Division, a memo from his/her
major department supporting the late registration and a Study List ap-
proved by the authorized departmental adviser.

Graduate students studying out-of-state may make advance arrange-
ments with the Registration Supervisor, 1134 Murphy Hall, regarding the
release of registration materials for the duration of their absence.
Continuing students out of the Los Angeles area during the registration
packet distribution period may request the packet be mailed by writing to
the Registration Supervisor, 1134 Murphy Hall, 405 Hilgard Avenue, Los
Angeles, CA 90024. In the request, students must give their full name as it
appears on University records, the student ID number, major, address for
receipt of the packet, and include $1.00 for postage and handling.

Holds on Registration
Students with outstanding obligations to the University, primarily financial
(overdue bills or loan repayments), academic, or administrative will not
be allowed to register until such obligations are satisfied.

Enrollment
A student's name is entered on official rolls of the University only after the
registration process is complete as published in the Schedule of Classes.
This quarterly publication is available in June for the Fall Quarter, in
November for the Winter Quarter, and in February for the Spring Quarter
at the Students' Store, Ackerman Union. It is available by mail and stu-
dents may write to: Attn: Mail out, ASUCLA Students' Store, 306 West-
wood Plaza, Los Angeles, CA 90024; include $1.50 check or money order,
payable to ASUCLA.

Enrollment requests are processed by the Registrar's Office from the
completed Study List Card contained in the "registration packet." The
graduate student files the Study List Card, after obtaining his/her adviser's
signature, with his/her major department. Students are assured enroll-
ment in courses offered in their major department as shown on the Study
List Card. If a major has recently been changed and is not reflected on the
Study List Card, the student must include a copy of the Graduate College
approval. For assured enrollment in restricted capacity (enrollment
capacity reached) courses outside the major department, an ap-
proved "Permission to Enroll Form" must be submitted with the Study List
Card.

The approved Study List Card may be filed with the major department
during the Registration by mail period or by the third day of instruction.
Tentative Study Lists showing the results of the enrollment are mailed at
the end of the pre-enrollment period (10 days before the term begins) end/
or during the first week of classes. Enrollment changes may be made
without fee on the Change in Study List Card through the end of the
second week of classes. The adviser's signature is required on the Study
List Card and on the Change in Study List Card as it signifies department-
al acceptance of the proposed plan of study and assures enrollment in all
departmental courses.

A student's Study List of enrolled courses becomes official on the 10th
day of instruction. A computer-printed Official Study List is mailed to each
registered student by the Registration/Enrollment Office. A student is
responsible for all courses and the grading basis as listed on the Official
Study List. To make changes in the Official Study List or to correct any
errors or omissions, students must obtain a Change in Study List Petition
from the major departmental office. Consult the Calendar for dates and
deadlines for study list changes. The quarterly Schedule of Classes con-
tains complete information concerning the registration and enrollment
process.
Registration Card for Current Quarter

The valid "REG" card is required with the Student Photo I.D. Card for all University services. Students should have both cards available as proof of identity and student status when requesting service.

If a student has lost, misplaced or has not received the "REG" card by the first day of the quarter, a temporary (good for five days) Verification of Registration for the current quarter may be obtained without fee at the Registration/Enrollment Office, 1134 Murphy Hall. Proof of identity must be shown before verification is issued.

Lost, destroyed, or mutilated "REG" cards may be replaced for a $3 fee on or after the first day of the quarter at the Registration/Enrollment Office, 1134 Murphy Hall. Proof of identity must be shown before the replacement card will be issued.

- Any student with an outstanding obligation to the University, whether financial, academic, or administrative "Hold", will not be issued any proof of registration until all obligations are cleared up by the initiating office.

Student Photo Identification Card

This mandatory student identification card with photo is issued in a student's first quarter of registration and is valid with the current "REG" card as long as the student remains in the same status (undergraduate, graduate, linked). Valid current quarter registration card and supportive identification (e.g., driver's license, passport or California DMV I.D. card) is required of all students at issuance. The student I.D. card and the "REG" card are both required for all University services and student activities.

Consult the registration issue of the campus newspaper, the Daily Brains, for card distribution hours and location. Cards are issued without charge to New or Re-entering students from the first day of registration in person through the first week of classes.

Replacement of lost or destroyed I.D. cards is initiated at 140 Kerckhoff Hall, 8:30 a.m. to 4:30 p.m.; there is a $3 fee.

Continuous Registration

Unless granted a formal leave of absence, or unless eligible for the Filing Fee, graduate students are to register in all three quarters of each academic year, including the quarter in which their degree or certificate is to be awarded. A student must be registered in order to take any University examination with the exception of those, stated in the section below, that are permitted by payment of the Filing Fee.

Registration in the Final Quarter for the Award of the Degree

A student completing courses, using faculty time, library facilities, laboratories, or other University resources, is required to register in the final quarter in which he/she expects to receive his/her degree.

When the award of a degree is expected at the end of a given quarter, but special circumstances over which the student has no control prevent the completion of all requirements before the first day of instruction in the next quarter, a student may petition for a waiver of registration for that quarter. Such petitions must be accompanied by a letter from the Graduate Adviser or Department Chair elaborating the exceptional circumstances of the case. Consideration is necessarily limited to situations in which the student delays in reading the thesis or dissertation in conducting the final examination.

If a student was registered for the preceding quarter and has completed all requirements for a degree in the interval between quarters (before the first day of instruction), he/she is not required to register to receive his/her degree at the end of the following quarter. During the interim between completion of requirements and awarding of the degree, the Registrar's Office will issue, upon request, a Certificate of Completion.

The Filing Fee

If a student has completed, as a registered student, all requirements for a degree except the filing of the thesis or dissertation and/or the final examination (master's comprehensive or doctoral final oral examination), he/she may be eligible to pay a $54.00 Filing Fee during the quarter in which his/her degree is to be awarded instead of registering. Four conditions must be satisfied to be eligible for this fee: (1) All formal requirements for the degree, except for filing the thesis/dissertation and/or taking the master's comprehensive/doctoral final oral examination, must be completed before the first day of classes; (2) Since last being registered and up to the first day of classes, the combined use by the student of University facilities and faculty time must not exceed 12 hours; (3) During the quarter in question, the thesis/dissertation committee suggested only stylistic and/or typographical changes in the thesis/dissertation OR, in the case of master's comprehensive examinations, the faculty only administered the comprehensive examination; and (4) The student must not be a participant in the doctoral In-Candidacy Fee Offset Grant Program.

To establish eligibility to pay the Filing Fee, the student submits a Filing Fee Application approved by the departmental Graduate Adviser and the chair of his/her thesis committee or doctoral committee certifying that all the above requirements have been met. Forms for this purpose are available in the Student and Academic Affairs Section of the Graduate Division and should be returned to that office after certification and payment of the fee.

A student who pays the Filing Fee is not eligible for the privileges normally accorded regularly registered students, such as the use of University facilities, other than the attention of the faculty necessary for the final reading of the dissertation or thesis and/or the taking of a doctoral final oral examination or master's comprehensive examination. Students may not use this fee for the purpose of taking coursework of any kind. Students who are fellowship or assistantship holders, aliens with particular visas, or others whose status depends on maintenance of a particular course load are not eligible to use the Filing Fee.

If, after paying the Filing Fee in any one quarter, a candidate should find it necessary to use the educational facilities of the University in any way other than according to the attention of the faculty sufficient for a final reading of the dissertation or thesis or the taking of a doctoral final oral examination or master's comprehensive examination, he/she must resume registration as a student. If this should occur during a quarter in which he/she has already paid the Filing Fee, the amount of that payment will be refunded. A student who pays the Filing Fee and fails to file his/her dissertation or thesis or who is required to repeat the doctoral final oral examination or master's comprehensive examination must either register as a student or pay an additional Filing Fee in the quarter in which the final requirement for the degree is completed. The Filing Fee will not be refunded because the dissertation or thesis was not filed or the examination not taken or passed.

Full-Time Graduate Program/Normal Progress

Full-time enrollment for graduate students (except Teaching Assistants and Research Assistants) consists of at least two full graduate and/or upper division courses per quarter, or the equivalent of 8 units. Whenever possible, students are encouraged to expedite progress toward degrees by taking an optimal program of three courses per academic quarter.

In order to remain eligible for educational assistance benefits from the Veterans Administration or other direct federal and state subsidies, students are required to maintain normal progress toward their degree objective. Students should consult with their Graduate Adviser to determine the department's appropriate standards of progress. Additionally, students may consult the Office of Special Services, located in Murphy Hall A-253, for information concerning regulations of the Veterans Administration and other governmental agencies that may apply to their graduate studies.

Students enrolled for less than a full program may obtain the appropriate forms from the Student and Academic Affairs Section of the Graduate Division, 1225 Murphy Hall.

Programs for Teaching and Research Assistants and University Administered Fellowship Holders

Teaching and Research Assistants are required to take at least one course per quarter, or the equivalent of 4 units, throughout their appointments. This minimum establishes their full-time enrollment status. During the first quarter of their appointment they may not take more than two courses, or the equivalent of 8 units. If a Teaching or Research Assistant finds it necessary to request a leave of absence or to withdraw, his/her appointment is terminated.
Health Evaluation

All new students and those students reentering after an absence of more than one quarter, who are enrolling in the graduate Schools of Dentistry, Education, Medicine, Nursing, or Social Welfare, must complete and return to the Student Health Service the Health Evaluation form provided to them by their respective departments.

All new and reentering foreign graduate 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.

For Information, call (213) 825-4073.

Change of Address

The Registrar should be notified as soon as possible of any change in address that occurs after the return of the student data card from the registration packet. Forms for this purpose are available at the Registrar/Enrollment Office, 1134 Murphy Hall. Veterans receiving benefits must also notify the Office of Special Services.

Change of Name

In case of a name change, a name change form is available at Registrar’s Window A, Murphy Hall. Any student with a name change should inform all instructors, advisers, etc. of the new name as the Registrar’s records will quickly reflect the changed name.

Registration and Other Fees*

All graduate students pay the following fees each quarter at the time of registration, irrespective of the number of courses for which they expect to enroll:

1. A Registration Fee of $168 per quarter, which covers expenses related to use of the library and athletic and gymnasium facilities, as well as such consultations, medical advice, hospital care, or dispensary treatment as can be furnished by the Student Health Service.

2. An Educational Fee of $229 per quarter.

3. An Ackerman Student Union fee of $4 per quarter.

4. A Graduate Students Association membership fee of $2 per quarter.

5. A Wooden Recreation Center fee of $3.25 per quarter.

No part of these fees can be remitted to students who may not desire to use any or all of these privileges, nor is there a reduction for less than full-time enrollment. Refunds on a graduated basis are allowed when students formally withdraw or are approved for leave of absence from the University within the first five weeks of the term. Forms are available in the Student and Academic Affairs Section, Graduate Division, 1225 Murphy Hall. Failure to attend classes, neglect of courses, or stopping payment on checks tendered for registration do not constitute notice of withdrawal. A claim for remission of fees will not be considered unless it is presented during the fiscal year to which the claim is applicable. Information on refunds is published in the quarterly Schedule of Classes.

For graduate students the nonresident tuition is $390 per quarter regardless of the number of courses undertaken.

A limited number of waivers of the nonresident tuition ($2,880/academic year) are available each year. They are awarded to graduate students with distinguished academic records by departmental recommendation, until departmental waiver quotas are filled. Applicants must be enrolled in a full-time program of study and may not be recipients of awards from federal, state, or private foundations that provide tuition coverage. The nonresident tuition may not be waived for students financially sponsored by foreign governments. Note: Continuing students who the Office of the Registrar’s Residence Deputy determines to be eligible for reclassification and who choose not to be so reclassified are not eligible to apply for nonresident tuition waivers.

*Fees are subject to change without notice.

Registration in Absentia

Continuing graduate students who are doing study or research outside the State of California, throughout the quarter, are eligible to register in absentia. Such students will be required to pay only one-half of the $156 Registration Fee, plus all other fees in full. Eligibility for the reduced fee may be requested by petition to the student’s major department and the Fellowship and Assistantship Section of the Graduate Division, 1228 Murphy Hall. Forms for this purpose may be obtained at either place.

Residence for Tuition

All entering graduate students and students returning to the University after a period of absence are required to submit a Statement of Legal Residence upon acceptance of admission or reactivation. The form will be provided by the admitting office and must be returned with the Statement of Intention to Register. Registration materials cannot be prepared until the residence determination is completed.

Nonresident Tuition Fee

Students who are not classified as residents of the State of California for tuition purposes are charged, in addition to all other fees, a quarterly tuition fee of $390 which is payable with other registration fees. (See Calendar, page vi for deadline.)

Residence for Tuition Purposes at the University of California

Tuition Fee for Nonresident Students

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 the Standing Orders for 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 parent 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 his or her presence within this state for one year with objective evidence that such presence is consistent with his or her intent in making California his or her permanent home and, if these steps are delayed, the one-year duration...
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 his or her 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 indicia which can be relied upon to demonstrate one's intent to make California his or her permanent residence include the following: registering to vote and voting in California elections; designating California as his or her permanent address on all school and employment records, including military records if one is in the military service; obtaining a California driver's license or a nondriver, a California Identification Card; obtaining California vehicle registration; paying California income taxes as a resident, including income earned outside California from the date residence established; establishing an abode where one's permanent belongings are kept within California; licensing for professional practice in California; and the absence of these indicia in other states during any period for which residence in California is asserted. Documentary evidence may be required. All relevant indicia will be considered in the classification determination.

Adult Aliens

A student who is an adult alien 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 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.

Exemptions from Nonresident Tuition

6. 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 exempted from the nonresident tuition fees until he or she has resided in the state the minimum time necessary to become a resident. He/she must provide the Residence Deputy with a statement from the commanding officer or personnel officer stating the assignment to active duty in California is not for educational purposes and must include the dates of assignment to the state.

7. 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 continued 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 (1) the member of the military is transferred on military orders to a place outside this state where he or she continues to serve in the armed forces or (2) the member of the military retires from active duty immediately after having served in California on active duty, the student shall retain this exemption under conditions set forth above.

8. Child or Spouse of Faculty Member. The unmarried, dependent child under age 21 of a full-time University employee whose assignment is in California. The burden of proof to establish California residence when both parents are deceased and a legal guardian has not been appointed.

General Rules Applying to Minors

The residence of the parent with whom an unmarried minor (under age 18) child maintains his/her place of abode is the residence of the unmarried minor child. The residence of an unmarried minor who has a parent living cannot be changed by his/her own act, by the appointment of a legal guardian, or by the relinquishment of a parent's right of control. When the minor lives with neither parent, residence is that of the parent with whom the student maintained the last place of abode. 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/Seperated Parent Situations. The student must move to California to live with the California resident parent while the student is still a minor (before his or her 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 his or her legal residence.

9. Parent of Minor Moves from California. A student who remains in the state after his or her parent, who was theretofore domiciled in California, leaves the state at least one year immediately prior to leaving and has, during the minor's minority and within one year immediately prior to the residence determination date established residence elsewhere, shall be entitled to resident classification 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.

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 from the state. The burden
Cancellations/Withdrawals

Cancellation of Registration

Prior to the first day of instruction, a student may cancel his/her registration upon written notice and return of the student photo I.D. card and current Registration card to the Registration/Enrollment Office, 1134 Murphy Hall. A service charge of $10 is deducted from the amount of fees paid.

Withdrawal

A student withdrawing from the University during the course of a quarter must file an acceptable “Notice of Withdrawal” and return the student photo I.D. card and current Registration card. Failure to return the photo I.D. card and current Registration card will result in a $15.25 deduction from any refund. The withdrawal form containing complete instructions is issued at the Student and Academic Affairs Section of the Graduate Division, 1225 Murphy Hall or Registrar’s Information Window “A”, Murphy Hall. Failure to attend classes, neglect of courses, or stopping payment on checks tendered for registration do not constitute notice of withdrawal.

With approval of the Dean of the Graduate Division, a student who is eligible for further registration in the University and who is not under disciplinary disqualification is entitled to a statement of honorable withdrawal. However, the Dean may attach comments to this statement.

A registered student who withdraws from the University before the end of the quarter without authorization duly certified by the Registrar shall receive a grade of “F” or, where appropriate, “Unsatisfactory” in each course in which he/she is enrolled.

A percentage of the registration fees paid is refunded according to the calendar date on which the official notice of withdrawal is submitted to the Registrar. See current Schedule of Classes for refund schedule.

A student who completes a quarter and fails to register or take a leave of absence for the following quarter is presumed to have withdrawn from the University. If such a student wishes to register for a subsequent quarter, he/she will be required to be readmitted to the Graduate Division. (See page 17 for Readmission procedures.)

Refunds

Refund Procedures

The Schedule of Refunds listed below refers to Calendar days, beginning with the first day of instruction (Day 1). Percentages listed (Days 1-35) should be applied respectively to each Tuition, Educational Fee, University Registration Fee, and other student fees. The effective date for determining a refund is the date the student files his/her official notice of withdrawal with the University, and it is presumed that no University services will be provided to the student after that date. Students are required to return their valid Registration card and photo I.D. card or $15.25 will be deducted from any refund.

· No claim for refund will be considered unless presented within the fiscal year to which the claim is applicable.

All Continuing, Readmitted and New Graduate Students (Except Medicine and Dentistry Students)

There is a service charge of $10 for cancellation of registration before the first day of instruction. Beginning with the first day of instruction, the Schedule of Refunds (see below) is applied to the total of fees assessed.

Medicine and Dentistry Students

Prior to the first day of instruction, the fees that have been paid are refunded in full, except for the Deposit.

Day 1 and after the Deposit is withheld from the fees assessed and the Schedule of Refunds (see below) is applied to the balance of the fees assessed.

In the case of continuing students, the Schedule of Refunds is applied to the total of the fees assessed.
Schedule of Refunds*

This schedule applies to the procedures described above.

<table>
<thead>
<tr>
<th>Period</th>
<th>Days</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-14</td>
<td>0-30</td>
<td>80%</td>
</tr>
<tr>
<td>15-21</td>
<td>31-45</td>
<td>60%</td>
</tr>
<tr>
<td>22-28</td>
<td>46-60</td>
<td>40%</td>
</tr>
<tr>
<td>29-35</td>
<td>61-80</td>
<td>20%</td>
</tr>
<tr>
<td>36 days and over</td>
<td>81%</td>
<td></td>
</tr>
</tbody>
</table>

The Schedule of Refunds refers to calendar days, beginning with the first day of instruction. Specific refund dates may be found in the current Schedule of Classes (published each quarter).

Penalty Fees

Late Registration

Students who are not registered (fees paid) before the first day of instruction may register with an additional $50 late fee during the first 10 days of classes. Each registrant reports to the Registrar’s Office, O. 1134 Murphy Hall, for clearance to register. Late registration is processed from 8:30 a.m. to 5:00 p.m., Monday through Friday.

Lapse of Status

Failure on the part of any student to meet certain obligations may result in lapse of his/her status until such time as the obligation has been discharged and his/her status restored. A student’s status may be lapsed for failure to: settle financial obligations when due; or make satisfactory arrangements with the Cashier if payment cannot be made; or respond to official University notices.

If such action becomes necessary, a petition for reinstatement is submitted to the agency recommending lapse of status; if approved, the petition is then submitted to the Registrar’s Office with a $10.00 fee for reinstatement. Reinstatement is not official until the student’s petition has been approved by the lapse agency and filed with the Registrar’s Office.

Late Payment of Fees

All requests which are an exception to a published deadline or retroactive to a previous quarter will be subject to a PENALTY fee of $10.00 in addition to the normal processing fee.

Third Party Fee Payment

The University assumes no contractual or other obligation to any third party who pays any University fees on behalf of a student unless the University has expressly agreed thereto in writing. In this regard, no request for a refund of fees by such a third party will be honored, and if the student withdraws from the University with a refund due, such refund will be paid to the student.

List of Fees for Graduate Students*

<table>
<thead>
<tr>
<th>Fee Description</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application for admission/readmission/leave of absence</td>
<td>$25.00</td>
</tr>
<tr>
<td>First renewal of application for admission</td>
<td>none</td>
</tr>
<tr>
<td>Second renewal of application for admission</td>
<td>$25.00</td>
</tr>
<tr>
<td>Registration fee</td>
<td>$168.00 per quarter</td>
</tr>
<tr>
<td>Educational fee</td>
<td>$229.00 per quarter</td>
</tr>
<tr>
<td>Student Union fee</td>
<td>$4.00 per quarter</td>
</tr>
<tr>
<td>Wooden Recreation Center fee</td>
<td>$3.25 per quarter</td>
</tr>
<tr>
<td>Graduate Student Association fee</td>
<td>$2.00 per quarter</td>
</tr>
<tr>
<td>Nonresident tuition, if applicable</td>
<td>$960.00 per quarter</td>
</tr>
<tr>
<td>Reinstatement after lapse of status</td>
<td>$10.00</td>
</tr>
<tr>
<td>Late Registration, when permitted</td>
<td>$50.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fee Description</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fee for duplicate registration materials (each order)</td>
<td>$3.00</td>
</tr>
<tr>
<td>Fee for duplicate Registration card</td>
<td>$3.00</td>
</tr>
<tr>
<td>Late filing of Study List, when accepted</td>
<td>$50.00</td>
</tr>
<tr>
<td>Petition to ADD Classes to Study List</td>
<td>$3.00</td>
</tr>
<tr>
<td>(Total with penalty fee after 5:00 p.m. of last day)</td>
<td>$13.00</td>
</tr>
<tr>
<td>Petition to Change Credit Detail (Satisfactory/Unsatisfactory or letter grade)</td>
<td>$3.00</td>
</tr>
<tr>
<td>(Total with penalty fee after 4:00 p.m. of last day)</td>
<td>$13.00</td>
</tr>
<tr>
<td>Graduate petition to DROP courses from Study List</td>
<td>$3.00</td>
</tr>
<tr>
<td>(Total with penalty fee after 4:00 p.m. of last day)</td>
<td>$13.00</td>
</tr>
<tr>
<td>Withdrawal without submitting valid Registration Card and Photo I.D. Card (deducted from refund)</td>
<td>$15.25</td>
</tr>
<tr>
<td>Credit by Examination</td>
<td>$5.00 per petition</td>
</tr>
<tr>
<td>Transcript of record, one copy ($1.00 each additional copy ordered at the same time)</td>
<td>$3.00</td>
</tr>
<tr>
<td>Removal of 1 grade, each petition</td>
<td>$5.00</td>
</tr>
<tr>
<td>Foreign language examinations, Educational Testing Service, each examination</td>
<td>$20.00</td>
</tr>
<tr>
<td>Candidacy for doctoral degree (Advancement to Candidacy fee)</td>
<td>$25.00</td>
</tr>
<tr>
<td>Reinstatement of doctoral candidacy, if applicable</td>
<td>$25.00</td>
</tr>
<tr>
<td>Candidacy for master’s degree</td>
<td>none</td>
</tr>
<tr>
<td>**Doctoral dissertation copyright fee, optional</td>
<td>$20.00</td>
</tr>
<tr>
<td>Filing fee, if applicable</td>
<td>$84.00</td>
</tr>
<tr>
<td>Certificate of completion (limit 3)</td>
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</tr>
<tr>
<td>Certificate of resident study, foreign students</td>
<td>none</td>
</tr>
<tr>
<td>**Academic apparel rental fee, for participants in Commencement, plus refundable $5 deposit</td>
<td>none</td>
</tr>
<tr>
<td>Master’s candidates</td>
<td>$16.00</td>
</tr>
<tr>
<td>Doctoral candidates</td>
<td>$18.00</td>
</tr>
<tr>
<td>Refundable deposit on academic apparel</td>
<td>$10.00</td>
</tr>
<tr>
<td>Duplicate diploma (replacement cost upon presentation of evidence original is lost or destroyed)</td>
<td>$38.00</td>
</tr>
<tr>
<td>(Law, Medicine, Dentistry)</td>
<td>none</td>
</tr>
<tr>
<td>(Except Law, Medicine, Dentistry)</td>
<td>$25.00</td>
</tr>
<tr>
<td>Diploma mailing fee, optional</td>
<td>$3.00</td>
</tr>
<tr>
<td>($6.00 abroad)</td>
<td>none</td>
</tr>
<tr>
<td>Returned check collection</td>
<td>$5.00</td>
</tr>
<tr>
<td>Late application for teaching assignment</td>
<td>$1.00</td>
</tr>
<tr>
<td>Failure to empty locker within specified period</td>
<td>$5.00</td>
</tr>
<tr>
<td>***Late return of athletic supplies</td>
<td>$1.00</td>
</tr>
<tr>
<td>(For each 24 hours until full purchase of article is reached)</td>
<td>none</td>
</tr>
</tbody>
</table>

*All fees are subject to change without notice.

**Note: These fees are payable as follows: for copyright of doctoral dissertations, excess words in abstract, abstract reprints and/or positive films (when applicable), to University Microfilm Library Service, Xerox Corporation, Ann Arbor, Michigan; for academic apparel rental to ABUCLA.

***Supplies or equipment not returned before the close of the fiscal year must be paid in full; return after that date is not permitted.

Additional Fees Where Applicable

Candidacy Fee

There is a $25 Advancement to Candidacy Fee for all doctoral degrees. No student can be formally advanced to candidacy without payment of this fee. There is no graduation fee at UCLA.

The Filing Fee

Candidates who have fulfilled all requirements for the degree except for the filing of the dissertation or thesis and/or taking of a doctoral final oral
examination or master’s comprehensive examination may establish eligibility to pay the $84.00 Filing Fee in lieu of the Registration and Educational Fees (and the Nonresident Tuition Fee, where applicable). This fee and the conditions under which it may be used are described more fully on page 24.

Optional Health Service Fee
During an unregistered academic quarter, graduate students who present official written confirmation of current sponsorship and continuing degree candidacy for that quarter from a faculty adviser or department chair, may obtain the benefits of the Student Health Service on either a Fee-for-Service basis, or by pre-payment of the Optional Health Service Fee. During the academic year, this fee must be paid within 30 days of the first day of the quarter. Any continuing student, not registered during the summer sessions, but wishing to use the Student Health Service, may elect to pay the Optional Health Service Fee within 30 days of the first day of the First Summer Session or, if purchasing the Optional Health Plan for the Second Summer Session only, within 14 days of the first day of the Second Summer Session.

In all cases when the SHS Optional Health Plan is purchased, the student’s eligibility for services at Student Health begins either on the date of purchase or on the first day of the appropriate quarter/session, whichever is later.

Rental Fee for Caps, Gowns, and Hoods
Academic regalia for Commencement exercises is reserved in the UCLA Academic Apparel Service, third floor, Ackerman Union. The rental fee is $18.00 for master’s candidates, $19.00 for doctoral candidates. For further information, consult the Commencement Handbook, available free at the Information Desk, Student Union, and at the Campus Studio, 150 Kerckhoff Hall. Graduation announcements may be purchased at the Campus Studio.

Diplomas
Diplomas are not distributed at Commencement. During the period between final checking of degrees and the distribution of diplomas, a Certificate of Completion is sent to every student entitled to receive a diploma. Recipients are notified when their diplomas are available at the Registrar’s Office, Information Window “A,” Murphy Hall. There is no diploma fee. Upon request, diplomas are sent to the student by certified mail, with a mailing charge of $3.00 ($6.00 abroad).

Petitions
There are three kinds of petitions used by graduate students (1) Request for Granting of Incomplete Grade (no fee); (2) Petition for Removal of Grade I (fee, $5 per petition); and (3) Petition for Change in Study List, also known as a “drop-add” petition (fee, $3 per petition). These forms may be obtained from the student’s department.

Transcripts of Record
Transcripts will be issued upon application to the Registrar at a cost of $3.00 each; $1.00 for each additional copy ordered at the same time. Transcripts showing final grades normally cannot be issued earlier than three to six weeks after the end of the quarter. Those showing a degree earned during the quarter cannot be issued earlier than six to eight weeks after the end of the quarter.

Grades
An unofficial copy of a student’s record is available (without charge) quarterly (approximately four weeks after the end of the quarter) at the Registrar’s Information Window “A,” Murphy Hall. This copy of the student grade report may be mailed if a student deposits a stamped, self-addressed envelope in the labeled box near Window “A.”

Students who must have earlier confirmation of grades may leave a postcard with each instructor at the time of the final examination. Students should pick up their grades each quarter (even if postcards are sent) to check for errors or omissions.

Change of Major
A continuing graduate student may petition for a change of major after discussing his/her plans with his/her “new” department. Forms for this purpose are available in the Graduate Division, Student and Academic Affairs Section, 1225 Murphy Hall, and should be returned to that office.

Deadlines for this petition generally are the same as those for the graduate admissions procedures but students should also consult with and be guided by the departments before filing an application.

The student must be coded in the major in which he/she is to receive his/her degree at the time the degree is awarded. Also, enrollment is processed by college/major codes on the registration materials unless a copy of the approved major change is filed with the Study List Card.

Leaves of Absence
Only persons who are registered are entitled to the use of University facilities (an exception is the Library, to which the public-at-large has access if a fee is paid) or faculty time. A student who is anticipated to use as much as 12 or more hours of University facilities and/or faculty time (excluding the Library) in any quarter, is not eligible for a leave of absence or an extension of a leave of absence and must register. A student who has accumulated as much as 12 or more hours of use of University facilities and/or faculty time (excluding the Library) since last being registered is not eligible for an extension of a leave of absence and must register for the next quarter. All usages of faculty time are to be considered, including reading and suggesting revisions to drafts of theses and dissertations.

On recommendation of the student’s department and subject to the conditions stated in the paragraph above, a leave of absence may be granted by the Graduate Division to continuing graduate students in good standing (3.0 g.p.a.), who have completed at least one quarter in graduate status at UCLA. “Request for a Leave of Absence” forms are available at the Student and Academic Affairs Section of the Graduate Division, 1225 Murphy Hall. If registration fees have been paid for the quarter in which the leave is to begin, a percentage of the fees paid is refunded according to the calendar date on which the approved leave request is submitted to the Graduate Division. All leaves must be requested before the end of the second week of class of the quarter in which the leave of absence or extension of leave of absence is to begin. Deadlines are published for each quarter in the Graduate Catalog (see Calendar, page vi) and in the quarterly Schedule of Classes.

A leave is normally granted for periods of one to three quarters. Leaves may be extended for a total of five years (15 quarters) at the request of the student, on the recommendation of the department involved, and with the approval of the Graduate Division. Students wishing to return to their graduate studies after a period of five years must apply for readmission to the Graduate Division. If a student can demonstrate that the process of applying for annual renewals of leave would be exceedingly difficult, the Graduate Division, upon the recommendation of the student’s department, may grant a leave of absence for a period of more than one year.

Chairs of doctoral committees will be asked by the Graduate Division to verify that students applying for leaves or extensions of leaves will not be using University facilities or faculty time while on leave in accordance with the policy in paragraph 1.

A student granted a leave for any period of time may not keep a fellowship, grant, or salaried appointment to any apprentice teaching or research title. Furthermore, the granting of a leave of absence does not relieve a student from meeting the requirements for the degree as they were stated in the catalog published and in effect at the time the student first registered as a graduate student at UCLA.

Application for a leave of absence to accept University employment must be accompanied by a letter from the Department Chair or other employing officer elaborating the reasons for which the leave is requested. In support of such a request, the employing unit is obligated to demonstrate that such employment is essential to its program, that the depart-
mental need results from an unforeseen circumstance, and that employ-
ment is for a specified and limited period of time.

Graduates scheduled to return from a leave of absence will be mailed
preliminary information about registering by the Readmission Clerk, Of-
fice of the Registrar, 1105 Murphy Hall, along with the Statement of
Intention to Register. The intention to register materials must be returned
not less than six weeks before the first day of the quarter or the student
may be assessed a late registration fee.

A student returning before the end of the period of his/her leave should
notify the Registrar at least six weeks prior to the beginning of the quarter
in which he/she plans to register, so that his/her registration packet may
be prepared in advance. Failure to give at least six weeks notice will result
In liability for any and all late registration/late enrollment fees assessed by
the Registrar.

A request for extension of a leave of absence should be addressed in
writing to the Student and Academic Affairs Section, Graduate Division,
which will send the student an extension of leave of absence request form.

Leaves of Absence for Foreign Students
In addition to general Graduate Division regulations cited above, leaves of
absence for foreign students holding J-1 or F-1 visas are allowed only
under the following conditions: if they will be out of the United States
during the term of their leave of absence; if they have just completed an
academic program or degree and wish to gain practical training in their
field before resuming their studies; if they are writing a thesis or disserta-
tion during the period for which the leave is requested; or if serious illness
prevents attendance. All non-immigrant foreign students, including those
who have permanent residence, must have their applications for leave of
absence approved by the Office of International Students and Scholars.

Graduate Student Complaints
Because of the separation of functions within the University, it is some-
times unclear to students where they should direct their complaints. The
following information may be helpful in advising students who wish to do
so: Graduate students with complaints of a scholastic or professional
character involving faculty, should take them up with the faculty member
concerned or, if that is not feasible, with the Chair of the Department. If the
Chair of the Department as a whole is involved, the matter should be
taken to the appropriate Divisional Dean; or to the appropriate dean in the
School concerned.

If the issue is not resolved at that level, the student may appeal to the
Dean of the Graduate Division, 1237 Murphy Hall.

A graduate student or a group of graduate students wishing to lodge a
complaint of a misconduct against another student or group of students,
should go to the Office of the Dean of Students, 2224 Murphy Hall.

Graduate students who wish to make complaints concerning alleged
violation of the policies and regulations governing graduate study, should
see the Dean or Associate Dean of the Graduate Division, 1237 Murphy
Hall.

A student who wishes to complain about a violation of University policy
regulating the individual conduct of a faculty member should contact the
Charges Committee of the Academic Senate, 3125 Murphy Hall.

The Ombudsman
The purpose of the Ombudsman Office is to seek to resolve personal
grievances of members of the University community emerging from policy,
practices, and/or personalities. As an independent agent with investiga-
tory powers, the Ombudsman accepts grievances only after the grievant
has tried to resolve his/her problems through regular channels and when
there is evidence that adverse decisions are questionable.

The Ombudsman also serves on the University Policies Commission
which reviews and recommends policy changes. The office is located in
274 Kinsey Hall (phone 825-7627) and is open to all University-related
persons on a confidential basis.

Certificate of Resident Study for
Foreign Students
In addition to a formal transcript, a Certificate of Resident Study may be
issued to a registered foreign student as evidence of resident study. A
candidate for this certificate must have completed a minimum program of
nine courses, with a grade average of no less than C, or have satisfactorily
completed a research project over a period of nine months or more. The
award of this certificate is recommended by the chair of the student's
major department. Request for the Certificate of Resident Study should
be made to the Registrar at least a week prior to the opening of the final
examination period.

Verification of Progress and
Completion
The Registrar's Office provides official records of a student's academic
progress, completion of requirements, and degree award, for the informa-
tion of prospective employers and loan agencies and for other purposes,
as follows:

On a signed request from the student, transcripts of record are issued at
a cost of $3.00 for all undergraduate and graduate work completed at
UCLA. Transcripts showing final grades cannot be issued earlier than
three to six weeks after the end of the quarter; those showing a degree
earned during the quarter cannot be issued earlier than six to eight weeks
after the end of the quarter.

A Certificate of Completion is issued to all students approximately three
to four weeks after the end of the quarter in which they complete all
degree requirements, certifying their eligibility for the degree. A Certifi-
cate of Graduation, issued only on individual student requests, certifies
award of the degree in lieu of the diploma (which is ordinarily not available
until approximately four to five months after official award of the degree).

If students request the chair of their department or of their thesis or
doctoral committee to supply letters of recommendation and/or informa-
tion on progress in examinations or preparation of the thesis or disserta-
tion, this statement does not serve as official confirmation of completion
of all requirements Such a statement does not take into account the effect
of incomplete grades, lapse of status, or disciplinary actions on students'
eligibility for the degree.

Student requests for degree or Certificates of Graduation should be
submitted at Window A, Registrar's Office, or may be mailed to that office.

The Registrar's Office, Verification Window "E", Murphy Hall, will be
able to verify current quarter registration and full time enrollment status
for loan forms (and various non-campus certifications) beginning with the
12th day of classes. Valid photo identification is required for service.

Requests are answered Monday through Friday, 8:30 a.m. to 5:00 p.m.,
except for holidays.

Temporary verification of current quarter registration for campus use is
available at the Registration/Enrollment Office, 1134 Murphy Hall on or
after the first day of the term. Identification is required for service.

Requests for verification to be issued for prospective employers or
other agencies should be addressed to the Registrar.

Disclosure of Information from
Student Records
Pursuant to the Federal Family Educational Rights and Privacy Act of
1974 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
Act and the University Policies; 2) to have withheld from disclosure,
ab sent their prior consent for release, personally identifiable information
from their student records, except as provided by the Federal Act and the
University Policies; 3) to inspect records maintained by the University of
disclosures of personally identifiable information from their student rec-
ords; 4) to seek correction of their student records through a request to
amend the records and subsequently through a hearing; 5) to file com-
plaints with the Department of Education 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 student data card in the registration packet, 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.

Student records which are the subject of the Federal Act and the University Policies may be maintained in a wide variety of offices. Students are referred to the UCLA Directory, which lists all the offices which may maintain student records, together with their campus address, telephone number and unit head. Students have the right to inspect their student records in any such office subject to the terms of the Federal Act and the University Policies.

A copy of the Federal Act, the University Policies and the UCLA Directory may be inspected in, and information concerning these matters and the students' hearing rights may be obtained from the Office Legal Coordinator, 2135 Murphy Hall.

Degrees and Requirements

The graduate student earns his/her master's or doctoral degree by distinguished achievement in advanced study and research, rather than by merely completing stipulated courses while in academic residence. There are various means of evaluating his/her achievement in study, of which the foremost are qualifying and comprehensive examinations. Assessing the merits of his/her thesis or dissertation is the chief way of evaluating his/her achievement in research.

Preparation

An applicant for any advanced degree must possess a bachelor's degree from an institution of acceptable standing and must have completed the prerequisites for graduate study at UCLA in his/her field. He/she should consult the department in which he/she wishes to study concerning special departmental requirements or other aspects of graduate study in addition to those common to all UCLA graduate programs which are described in this catalog.

Master's Degree

Plan

At the option of his/her major department, the student follows either the Thesis Plan or the Comprehensive Examination Plan. The University minimum standards are the same under either plan, but a department may set higher standards and require additional courses and/or examinations to evaluate the candidate's capability in his/her field. The departmental Graduate Adviser should be consulted concerning such requirements. Information regarding standards and examinations may also be found in the Graduate Programs section of this catalog which lists the individual school and department degree requirements.

University Minimum Standards

Courses *

The program of courses consists of at least nine graduate and upper-division courses completed in graduate status, of which at least five must be graduate. For the M.A., M.S., and M.A.T. (Master of Arts in Teaching), the five graduate courses may be in the 200 series (graduate courses and seminars) and, in limited number, the 500 series (directed individual study or research for graduate students). For other master's degrees, they may be in the 400 series (graduate professional courses) as well as the 200 and 500 series. (See also Individual Study or Research Courses, page 20)

Standard of Scholarship

UCLA requires at least a B (3.00) average in all courses taken in graduate status on any campus of the University of California and in all courses applied toward the master's degree.

Transfer of Credit

Units and grade points for courses completed in graduate status on other University of California campuses may, upon petition, apply to master's programs at UCLA. Such courses may fulfill up to one-half the total course requirement, one-half the graduate course requirement, and one-third the academic residence requirement.

Also by petition, with the approval of the student's major department and the Dean of the Graduate Division, courses completed with a minimum grade of B in graduate status at institutions other than the University of California may apply to UCLA master's programs. A maximum of two such courses (the equivalent of 8 quarter-units or 5 semester-units) may apply, but these courses will not fulfill either the 5-graduate-course requirement or the academic residence requirement. (See also Enrollment in Summer Session Courses, page 17.)
Courses taken for any degree awarded at another institution may not be used to apply toward a degree at UCLA.

*Under the quarter system at UCLA, the term “course” refers to a full course (4 quarter-units). With this as a standard, departments may offer a half course (2 quarter-units), a course and a half (3 quarter-units), or a double course (6 quarter-units). The requisite 9-course minimum for a master’s degree may be fulfilled through combinations of such courses.

Credit for University Extension Courses

University Extension courses (100 series) taken before July 1, 1969 (identified with an asterisk in the University Extension bulletin of the appropriate year), may apply on approval by the department and Dean of the Graduate Division. No more than two such courses (8 units) may apply, and they must have been completed after the student received his/her bachelor’s degree.

Courses in University Extension taken after July 1, 1969, may not apply to the University minimum of nine courses required for master’s degrees, with the following exception. By petition to the Dean of the Graduate Division and with the recommendation of the major department, a maximum of two concurrent* courses (100, 200, or 400 series) completed through the University Extension, (with a grade of B or better, after the student has received his/her bachelor’s degree) may be counted toward the 9-course University minimum requirement and toward the 5-graduate-course requirement for the master’s degree. Therefore, the program for the master’s degree shall include at least three graduate courses in the 200 or 500 series for professional degrees or three graduate courses in the 200, 400, or 500 series for professional degrees, completed after admission to regular graduate status.

Any program which requires more than nine courses for the master’s degree may accept concurrent courses completed through Extension, (with a grade of B or better, after the student has received his/her bachelor’s degree) to meet one-half the course requirements over and above the University minimum of nine.

Grades earned in University Extension are not included in computing grade averages for graduate students nor for the removal of graduate scholarship deficiencies.

Correspondence courses are not applicable to graduate degrees.

Academic Residence

The student is required to complete at least three quarters of academic residence in graduate status at the University of California, including at least two quarters at UCLA. He/she is in academic residence if he/she completes at least one course (4 units) in graduate or upper-division work during a quarter.

Foreign Language

If the degree program includes a foreign language requirement, every effort should be made to fulfill this before the beginning of graduate study or as early as possible thereafter so that the language skill will be of maximum benefit. Additional information and a list of departmental foreign language requirements, including, in certain cases, language requirements for admission, appear on pages 40-43.

Thesis or Comprehensive Examination

Master’s Thesis

The student’s thesis is a report on the results of his/her original investigation. Before beginning work on the thesis, the student obtains approval of the subject and general plan from the faculty members concerned and from his/her thesis committee.

The thesis committee is nominated by the chair of the department or interdepartmental degree committee, after consultation with the student. The “Nomination of Thesis Committee” form is forwarded to the Dean of the Graduate Division who officially appoints the committee. The thesis committee may be appointed before the student is formally advanced to candidacy.

The thesis committee consists of at least three faculty members who hold regular professional appointments in the University of California—professors, associate professors, assistant professors, visiting professors (all ranks), and professors-in-residence (all ranks). Acting assistant professors, adjunct professors (all ranks), and lecturers who teach graduate courses may serve as regular members but not as chairs. Adjunct professors (all ranks) and distinguished lecturers may serve as chairs only on approval by the Dean of the Graduate Division. UCLA graduate students who hold faculty titles may not serve on master’s thesis committees.

For guidance in the final preparation of the manuscript, the student should consult the Manuscript Adviser, Office of the University Archivist, 134 Powell Libary, and the Graduate Division publication, Standards and Procedures for Theses and Dissertations, available in the Student and Academic Affairs Section or at the Archivist’s office. Students planning to submit theses during the current academic year are encouraged to attend one of the orientation meetings on manuscript preparation and filing procedures which are conducted by the Manuscript Adviser and the Graduate Division at the beginning of each quarter. Orientation meeting dates are listed in the Calendar, page vi, and announcements are posted each quarter in departmental offices and libraries. The manuscript may be submitted in the form of either camera-ready copy for microfilming or paper copies for binding, when departmental requirements do not conflict. Sufficient time should be allowed for typing and proofreading the manuscript, drafting charts, maps, and graphs, arranging for photographic work, and making final revisions and corrections. If approved by the thesis committee, reports of research undertaken during graduate study which have been published or accepted for publication in appropriate media may be accepted by the Dean of the Graduate Division as the master’s thesis.

When the student’s thesis has final approval by his/her thesis committee he/she submits the original thesis signature (approval) page and the original title page to the Student and Academic Affairs Section, Graduate Division, for verification of completion of the degree requirements. After final approval by the Dean of the Graduate Division, the student files with the Manuscript Adviser one or more copies of the thesis, in accordance with the number required for the method of manuscript preparation he/she has followed (complete instructions are included in the publication cited above). Students are urged to keep the abstract of the thesis within the 150-word limit. The deadline for filing the thesis is approximately two weeks before the date when the degree is to be awarded (see Calendar, page vi).

See also the section, Registration in the Final Quarter for the Award of the Degree, page 24.

Master’s Comprehensive Examination

The comprehensive examination is administered by a committee consisting of at least three faculty members appointed by the department. Information concerning this examination and its form (written or oral, or both) may be obtained from the departmental Graduate Adviser. In some departments the comprehensive examination may serve as a screening examination for admission to their doctoral programs. (See Registration in the Final Quarter for the Award of the Degree, page 24.)
Master's Degrees Other Than The M.A. and M.S.
For master's degrees other than the M.A. and M.S. there may be specific University minimum requirements in addition to the foregoing. Information on these may be obtained from the departmental Graduate Adviser.

The Master of Arts Degree Is Offered In the Following Fields
African Area Studies
Afro-American Studies
American Indian Studies
Anthropology
Archaeology
Architecture and Urban Planning
Art
Art History
Asian American Studies
Astronomy (M.A.T.)*
Biology
Classics
Comparative Literature
Dance
Economics
Education
English
Folklore and Mythology
French
Geography
German
Greek
History
Islamic Studies
Italian
Latin
Latin American Studies
Linguistics
Luso-Brazilian Language and Literatures
Mathematics
Mathematics (M.A.T.)*
Microbiology
Music
Near Eastern Languages and Cultures
Oriental Languages
Philosophy
Physics (M.A.T.)*
Political Science
Psychology
Romance Linguistics and Literature
Scandinavian
Slavic Languages and Literatures
Sociology
Spanish
Teaching English as a Second Language
Theater Arts

The Master of Science Degree Is Offered In the Following Fields
Anatomy
Astronomy
Atmospheric Sciences
Biochemistry
Biological Chemistry
Biomathematics
Biostatistics
Chemistry
Computer Science
Engineering
Experimental Pathology
Geochemistry
Geology
Geophysics and Space Physics
Kinesiology
Management
Medical Physics
Microbiology and Immunology
Nurse Anesthesia
Oral Biology
Pharmacology
Physics
Physiology
Preventive Medicine and Public Health
Public Health

*Master of Arts in Teaching
†Department admits only applicants whose objective is the Ph.D.

A Professional Master's Degree Is Offered In the Following Fields
Architecture (M.Arch.)
Art (M.F.A.)
Education (M.Ed.)
Engineering (M.Eng.)
Library and Information Science (M.L.S.)
Management (M.B.A.)
Music (Performance Practices) (M.F.A.)
Nursing (M.N.)
Public Health (M.P.H.)
Social Welfare (M.S.W.)
Theater Arts (M.F.A.)

Candidate in Philosophy Degree
In those departments for which the Graduate Council has approved formal proposals for its award, the intermediate degree, Candidate in Philosophy (C.Phil.), may be awarded to qualified students upon advancement to candidacy in existing Ph.D. programs.

The C.Phil. is not a terminal degree. This means that a department cannot recommend a student for advancement to doctoral candidacy and at the same time disqualify him/her for continued registration and further study or research on his/her dissertation. If a student withdraws from the University after advancement to candidacy and award of the C.Phil., then the department must be willing to readmit him/her at some subsequent date, provided the period of absence has not exceeded the maximum time limit which the department has officially set with the Graduate Division
between advancement to candidacy and the award of the Ph.D. Any student, of course, may decide not to proceed beyond the C.Phil. degree. Academic requirements for the C.Phil., like those for advancement to candidacy for the Ph.D., include the departmental program of study, the written, and in some departments oral qualifying examinations, such foreign language (or substitute program) requirements as the department has established as prerequisites to advancement to candidacy, and the oral candidacy examination which is administered by the doctoral committee.

The academic residence requirement consists of four quarters in academic residence, three of which (ordinarily the last three) must be spent in continuous residence at UCLA. (See also academic residence requirements for doctoral programs, page 34.)

Students in departments authorized to offer the C.Phil. may state on the doctoral advancement to candidacy form whether they wish this degree. The C.Phil. may not be conferred after or simultaneously with the award of the Ph.D.

Students in the Ph.D. programs should consult their departmental Graduate Advisers for further information. (See also the section, Registration in the Final Quarter for the Award of Degree, page 24.)

The Candidate in Philosophy Degree Is Offered in the Following Fields

Anatomy
Applied Linguistics
Atmospheric Sciences
Biochemistry
Biology
Chemistry
Classics
Comparative Literature
Economics
English
French
Geochemistry
Geography
Geology
Germanic Languages
Hispanic Languages and Literatures
History
Indo-European Studies
Islamic Studies
Italian
Linguistics
Management
Mathematics
Music
Near Eastern Languages and Cultures
Oriental Languages
Philosophy
Political Science
Psychology
Romance Linguistics and Literature
Slavic Languages and Literatures
Sociology
Theater Arts

Doctoral Degree

The doctorate is awarded candidates who have displayed understanding, in depth of the subject matter of their discipline as well as ability to make original contributions to knowledge in their field. The degree is an affidavit of critical aptitude in scholarship, imaginative enterprise in research, and proficiency and style in communication.

University Minimum Standards

Program of Study

The student's program of study is planned in consultation with his/her adviser and/or departmental guidance committee, who supervise his/her activities until the appointment of his/her doctoral committee. This program, designed with flexibility for individual needs and interests, lies within the scope of the departmental or interdepartmental program which has been approved by the Graduate Council. The student fulfills formal University requirements for scholarship, academic residence, foreign language proficiency, written and, in some departments, oral qualifying examinations, an oral candidacy examination, and the dissertation, as well as any additional departmental requirements. The University does not specify course requirements for doctoral programs, and the doctoral student completes such courses as his/her department may require or recommend for knowledge in his/her field and for preparation for qualifying examinations. The 500 series of directed individual study or research courses is designed for graduate research, preparation for examinations, and preparation of the dissertation.

Standard of Scholarship

UCLA requires at least a B (3.0) average in all courses taken on any campus of the University of California for the entire time the student has been in graduate status.

Academic Residence

The student is required to complete at least two years of academic residence in graduate status at the University of California, including one year, ordinarily the second, in continuous residence at UCLA. In most cases, however, a longer period of academic residence is necessary, and from three to five years is generally considered optimal. A graduate student is in academic residence if he/she completes at least one course (4 units) in graduate or upper-division coursework during a quarter.

Foreign Language

Every effort should be made to complete foreign language requirements before the beginning of graduate study or as early as possible thereafter so that the language skill will be of maximum benefit. In any case, students in doctoral programs requiring one or more languages must complete at least one language before the oral qualifying examination. Additional information and a list of departmental foreign language requirements, including in certain cases language requirements for admission, are on pages 40-43.

Departmental Guidance Committee and Written and Oral Qualifying Examinations

The first phase of the student's program is supervised by a departmental adviser and/or departmental guidance committee. This committee administers the written, and in some departments, oral qualifying examinations after completion of courses and other preparatory work recommended or required by the department. (See requirements for registration for any University examination under Continuous Registration, page 24.)

After completion of all departmental requirements and the appropriate foreign language (if required, see pages 40-43), the chair of the department nominates a doctoral committee.
Doctoral Committee

Membership
A doctoral committee must consist of a minimum of five members, having appointments as professor (any rank), professor or associate professor emeritus, professor-in-residence (any rank), adjunct professor (any rank), or visiting professor or visiting associate professor or acting professor or acting associate professor at the University of California. Three members, the "inside" members, must hold appointments at UCLA in the student's major department and two, the "outside" members, must not. At least three members of the committee must hold an appointment as associate professor or professor (regular and/or in-residence series). Committees of more than five members may be appointed. In such cases, all members of the committee have the same voting rights. (See Section on Duties and Responsibilities.) UCLA graduate students who hold faculty titles may not serve on doctoral committees.

The chair of a doctoral committee must hold an appointment at UCLA in the student's major department or interdepartmental program as professor (any rank), as professor-in-residence (any rank), or as professor or associate professor emeritus. If a committee has co-chairs, at least one must be from the student's major department or interdepartmental program at UCLA.

Individuals permanently approved to chair doctoral committees shall be counted as if their appointment were in the regular professorial series.

For good cause, individuals who do not hold the appointments listed above, but who have equivalent qualifications, by petition may be nominated as one of the minimum five committee members or chair. (See Section on Appointment.)

For good cause, a faculty member resident on another campus of the University, who if appointed at UCLA could be a member of the student's major department, by petition may serve as either an "inside" or "outside" member.

The appointment of non-faculty, such as a person in private industry or on the staff of a museum, as the sixth member of a doctoral committee in situations in which they can provide special expertise to the dissertation project, is acceptable.

Appointment
Doctoral committees are appointed by the Dean of the Graduate Division, acting for the Graduate Council, upon nomination by the chair of the department or interdepartmental program committee, after consultation with the student. The committee must be appointed prior to holding the oral qualifying examination.

Regarding implementation of Membership, paragraph 4, the Dean of The Graduate Division may approve exceptions in individual cases. If permanent approval for appointment to doctoral committees or to serve as chair is requested, certification of qualification is to be made by the Graduate Council Committee on Instruction and Degree Requirements.

Recommendation for reconstitution of a doctoral committee is made jointly by the chair of the department and the chair of the doctoral committee, after consultation with the members of the committee who are in residence and the student. Reconstitution is approved by the Dean of the Graduate Division, acting for the Graduate Council.

Duties and Responsibilities
The Doctoral Committee

a) Conducts an oral qualifying examination, and at its option a written examination, to determine whether the candidate is qualified for advancement to candidacy for a doctoral degree. This examination is open only to the committee members and the student. All members of the committee must be present at the examination. It is the duty of the chair to see that all members of the committee are present. Each member of the committee reports the examination as "passed" or "not passed." A student may not be advanced to candidacy if more than one member votes "not passed" regardless of the size of the committee. Upon majority vote of the doctoral committee, the oral qualifying examination may be repeated once.

b) Approves the subject for the dissertation and provides the guidance required for progress toward the degree.

c) Decides, by unanimous agreement, to waive the final oral examination on the dissertation in cases where it is not required for all students by departmental regulations (but see paragraph f below). If such an examination is required, the entire committee must be in attendance (it is the duty of the chair to see that all members of the committee are present) and each member must record a decision of "passed" or "not passed." A student will not be considered to have passed the final oral examination with more than one "not passed" vote regardless of the size of the committee.

d) Selects from its membership, by unanimous agreement, the certifying members who will read, approve, and certify the dissertation. A minimum of three members must be certifying members, two of whom are from the student's department and one from an "outside" department. The chair of the committee must serve as a certifying member. If a committee has co-chairs, both must serve as certifying members. At least two "inside" and one "outside" certifying members must hold professional appointments at the University of California.

e) The certifying members (whether the entire committee or a subcommittee selected by the entire committee) read, approve, and certify the dissertation.

In cases where fewer than the entire membership has been chosen as certifying members, approval of the dissertation must be unanimous. If the entire committee is acting as certifying members, the dissertation is considered as approved with one negative decision. A negative decision is indicated by a refusal to sign the dissertation approval page and by a letter from the chair of the committee to the Dean of the Graduate Division reporting the fact.

f) Even though the doctoral committee has agreed to its waiver, any member of the subcommittee which has been chosen to certify the dissertation may require that a final oral examination, in defense of the dissertation, be held. If a final oral examination is required, the entire doctoral committee must attend and vote.

g) In addition to the above duties and responsibilities, the "outside" members have the responsibility to see that standards of performance on a campuswide and universitywide basis are maintained.

Doctoral Committees for Interdepartmental Programs

a) The chair of the committee to administer an interdepartmental doctoral program will supply the Graduate Division with a list of individual faculty members who actively participate in the program. The minimum of three "inside" members will be selected from this list; the minimum of two "outside" members will be selected from eligible faculty whose names do not appear on that list. An "outside" member may belong to the same department as one or more of the "inside" members, provided he/she is not one of the "active participants" listed. However, at least three different departments must be represented among the five members of the doctoral committee.

Each interdepartmental committee must establish criteria for the determination of its list of active participants. The list is not necessarily limited to nor inclusive of the complete membership of the interdepartmental committee itself. It may include a larger or smaller number of faculty members.

b) Faculty members from other campuses of the University of California may serve as "outside" members of the committee. They may be from any field, provided that the requirement concerning representation of three different departments on the committee is met, as stipulated above.

c) As with departmental doctoral committees, the chair of the interdepartmental program committee may nominate additional members beyond the minimum of five; such additional members will have full voting responsibilities on the committee.

d) The procedures to be followed in the event of a vacancy or change in the committee membership, or the absence of a committee member at the oral examination, will be the same as in the case of departmental committees.
Advancement to Candidacy

After passing the oral candidacy examination and completing any additional departmental requirements, the student is eligible for advancement to doctoral candidacy. He/she completes the advancement to candidacy form, which is mailed to him/her by the Registrar's Office. This form, bearing the approval signature of his/her doctoral committee chairman and the Cashier's stamp in payment of the $25 advancement to candidacy fee, is then submitted to the Student and Academic Affairs Section, Graduate Division. On approval by the Dean of the Graduate Division, the student receives formal notice of advancement to candidacy. (See also Candidate in Philosophy Degree, page 33.)

Dissertation

The candidate demonstrates his/her ability for independent investigation by completing a dissertation in his/her principal field of study. His/her choice of subject must be approved by his/her doctoral committee which usually reviews and approves the dissertation prospectus at the time of the oral candidacy examination. Subsequently, the doctoral committee guides the candidate's progress toward completion of the dissertation. A minimum of three members of the doctoral committee, including at least two members from the candidate's department, at least one outside member, must read and certify that, in their judgment, the dissertation satisfies the research requirements for the doctoral degree. These members are selected by unanimous agreement of the doctoral committee, usually at the time of the oral qualifying examination. In cases where fewer than the entire membership have been chosen as certifying members, approval of the dissertation must be unanimous. If the entire doctoral committee is acting as certifying members, the dissertation is considered as approved with one negative decision. A negative decision is indicated by a refusal to sign the dissertation approval page and by a letter from the chair of the committee to the Dean of the Graduate Division reporting this fact.

For guidance in the final preparation of the manuscript, the student should consult the Manuscript Adviser, Office of the University Archivist, 134 Powell Library, and the Graduate Division publication, Standards and Procedures for Theses and Dissertations which is available in the Student and Academic Affairs Section or in the Archivist's office. Students planning to submit dissertations during the current academic year are encouraged to attend one of the orientation meetings on manuscript preparation and filing procedures which are conducted by the Manuscript Adviser and the Graduate Division at the beginning of each quarter. Orientation meeting dates are listed in the Calendar, page vi, and announcements are posted each quarter in departmental offices and libraries.

The manuscript may be submitted in the form of either camera-ready copy for microfilming or paper copies for binding, when departmental requirements do not conflict. Sufficient time should be allowed for typing and proofreading the manuscript, drafting charts, maps, and graphs, arranging for photographic work, and making final revisions and corrections. If approved by the doctoral committee, reports of research undertaken during graduate study which have been published or accepted for publication in appropriate media may be accepted by the Dean of the Graduate Division as the doctoral dissertation.

University Microfilms is authorized by UCLA to prepare and store the negatives of dissertations and dissertation abstracts, to publish the abstracts in Dissertation Abstracts International, and to send a positive copy of the dissertation to the Library of Congress. It is also authorized to publish at demand authorized facsimiles by microfilm-xerography when such materials are ordered as a result of their being noticed in Dissertation Abstracts International. The process of authorization will be explained in the next paragraph. Students are urged to keep the dissertation abstract within the 350-word limit.

The student signs a microfilm agreement with University Microfilms concerning the microfilming of the dissertation and the printing of the abstract. If the student wishes to copyright the dissertation, the Student and Academic Affairs Section of the Graduate Division can provide him/her a form that he/she should complete before submitting it to the Office of the University Archivist, 134 Powell Library, with a certified check or money order in the amount of $20, made payable to University Microfilms, to cover the copyright fee.

When the student's dissertation has final approval by his/her doctoral committee he/she submits the original dissertation signature (approved) page and the original title page to the Student and Academic Affairs Section, Graduate Division, for verification of completion of the degree requirements. After final approval by the Dean of the Graduate Division, the student files with the Manuscript Adviser one or more copies of the dissertation, in accordance with the number required for the method of manuscript preparation he/she has followed (complete instructions are included in the publication cited above). Deadlines for filing the dissertation are approximately two weeks before the date the degree is to be awarded (see Calendar, page vi).

See also the section, Registration in the Final Quarter for the Award of the Degree, page 24.

Final Oral Examination

A final oral examination may be required at the option of the doctoral committee, and in some departments it is required of all candidates. The Graduate Division is notified of the committee's decision to require or waive this examination on the Report on the Oral Qualifying Examination form. If a final oral examination is required, all members of the committee must attend and vote. It is the duty of the chair to see that all members of the committee are present. A student may pass with one negative vote. Notification is sent to the Graduate Division on the Report on the Final Oral Examination form. The examination may be held before the candidate has prepared the final copy of the dissertation, but passing the examination does not imply approval of the final copy of the dissertation. In case of failure, the doctoral committee shall determine whether or not the candidate may be reexamined.

Even though the doctoral committee has agreed to the waiver of the final oral examination, any member of the certifying committee may require that a final oral examination, in defense of the dissertation, be held. Students should consult their doctoral committee chair or departmental Graduate Adviser for further information (see also Registration in the Final Quarter for the Award of the Degree, page 24.)

In Candidacy Fee Offset Grant Program

The In-Candidacy Fee Offset Grant Program has been established to provide an incentive for early advancement to candidacy and for completion of degree requirements within the normative time proposed by the department and approved by the Graduate Council. The grant covers the Educational Fee. Students in professional doctorate programs are not included in this program.

All students who begin graduate study at the University of California, Los Angeles, after September 1979 will be covered by this grant program. Those students with graduate standing prior to September 1, 1979 may elect to be included, and in that event, will be subject to all of the provisions. Eligible students may receive the grant from the time of their advancement to candidacy until the department's normative time-to-degree is reached. Students in the program must register for each regular academic session until all degree requirements are completed, unless a formal leave of absence is approved by the Dean of the Graduate Division.

To be eligible for the grant, the student must attain formal candidacy for the Ph.D. prior to the first day of classes of the academic session for which the grant is sought, and remain in good standing with a minimum 3.0 grade point average. The accrued grade point average, which is the time since first enrollment at UCLA, of all graduate students, as determined by the Graduate Dean, must be less than the established normative time for completion of the Ph.D. in that program. A candidate for the Ph.D. whose status lapses will be ineligible for the In-Candidacy Fee Offset Grant until, following readmission and registration, that student is again advanced to candidacy.

The amount of the grant shall be reduced by the amount of financial aid the student may receive from non-University sources to pay all or a portion of the Educational Fee. If the student is being provided with a package of financial aid, any component of which is need-based aid, the total amount of aid given to him/her, including the grant, may not exceed the student's total need, as determined by the Financial Aid Office.

Payment of the grant shall be in the form of an offset of the Educational Fee. In the event that the student has paid the Educational Fee prior to authorization of the grant, the award will be made as a reimbursement.
A Ph.D. candidate, admitted prior to Fall, 1979, must apply for the In-Candidacy Fee Offset Grant on a form provided by the Graduate Division. All information necessary to establish eligibility and the time accrued to that date must be supplied as part of this application.

A student's accrued time, which includes all quarters since first registration as a graduate student at UCLA, may be reduced to take into account formal leaves of absence (up to three quarters), work in a major that is not related to the Ph.D. major, the quarters the student was not registered after the receipt of a degree, and quarters the student was unable to devote full-time study toward the doctorate.

The Dean of the Graduate Division will determine the accrued time to date and certify the student's eligibility for the grant, if all of the relevant criteria are satisfied. The Graduate Division will be responsible for initiating the fee offset transaction(s) and for taking corrective action in the event a student becomes ineligible.

No time will be accrued from graduate study at another institution or UC campus except in the case of a student who enters a graduate program following enrollment at UCLA through the Intercampus Exchange Program.

The student will be notified of the length of time he/she is eligible for the grant when the Graduate Division computes his/her accrued time. Any appeal to correct an alleged error in the determination of eligibility or of accrued time must be submitted by the student to the Graduate Dean promptly, in writing.

If a student in the In-Candidacy Fee Offset Grant Program fails to register for any regular academic session, live in residence or in absentia (those students engaged in research outside the State of California throughout a regular academic session), and has not been granted a formal leave of absence, all status as a graduate student and as a candidate for the Ph.D. degree will lapse. A student whose candidacy lapses, may, after readmission, be required by a department to retake the written qualifying examinations and may also be required by the doctoral committee to retake the oral qualifying examinations. The student will be required to refill an Application for Candidacy and pay the Candidacy Fee.

At least one quarter of registration subsequent to advancement or reinstatement to candidacy will be required before the Ph.D. will be conferred upon a readmitted student. Thus, a student whose candidacy lapses will be required to register for a minimum of two quarters before award of the degree (one quarter of registration to be readvanced to candidacy and an additional quarter in which the degree may be awarded).

A student who completes all requirements for the Ph.D., including the final examination and submission of the dissertation, prior to the beginning of classes in the academic session in which the degree is to be conferred need not register for that quarter provided that: 1) no other University policy requires registration for that session; 2) the continuous registration requirement has been met; and 3) the student was registered in the preceding regular academic session.

For further information, please contact the department concerned or the Student and Academic Affairs Section, Graduate Division, 1225 Murphy Hall.

Individual Ph.D. Program

The Individual Ph.D. Program has been established to allow superior students to pursue well-defined, scholarly, coherent programs that cannot be carried out within any existing doctoral program on any campus of the University of California. To be approved for an Individual Ph.D. Program, a student submits a proposal to the Graduate Council after having been a full-time graduate student at UCLA for at least one year, having proved qualified to pursue a departmental Ph.D. program, and having gained the support of at least three sponsoring members of the faculty. University minimum standards with regard to courses, standards of scholarship, residence, and dissertation apply.

Students should be aware of the fact that individual doctoral degrees may be of less value in the marketplace than standard departmental degrees. As a rule, departments in universities and colleges prefer to appoint individuals whose training is in a traditional field. It is likely that the same preference holds in relation to other opportunities for employment.

Further information regarding this program and the requirements for approval are available from the Graduate Division, 1225 Murphy Hall, University of California, Los Angeles, California 90024.

Doctoral Degrees Other Than The Ph.D.

Requirements for the Ed.D. (Doctor of Education), D.Env. (Doctor of Environmental Science and Engineering), Dr.P.H. (Doctor of Public Health), and D.S.W. (Doctor of Social Welfare) are stated in the announcements of the schools of Education, Public Health, and Social Welfare, and of the interdepartmental program in Environmental Science and Engineering. Further information may be obtained from the respective Graduate Advisers.

The Doctor of Philosophy Degree Is Offered In the Following Fields

- Anatomy
- Anthropology
- Applied Linguistics
- Archaeology
- Art History
- Astronomy
- Atmospheric Sciences
- Biochemistry
- Biological Chemistry
- Biology
- Biomathematics
- Biostatistics
- Chemistry
- Classics
- Comparative Literature
- Computer Science
- Economics
- Education
- Engineering
- English
- Experimental Pathology
- Folklore and Mythology
- French
- Geochemistry
- Geography
- Geology
- Geophysics and Space Physics
- Germanic Languages
- Hispanic Languages and Literatures
- History
- Indo-European Studies
- Islamic Studies
- Italian
- Kinesiology
- Library and Information Science
- Linguistics
- Management
- Mathematics
- Medical Physics
- Microbiology
Microbiology and Immunology
Molecular Biology
Music
Near Eastern Languages and Cultures
Neuroscience
Oriental Languages
Pharmacology
Philosophy
Physics
Physiology
Political Science
Psychology
Public Health
Romance Linguistics and Literature
Slavic Languages and Literatures
Sociology
Special Education*
Theater Arts
Urban Planning

A Professional Doctorate Degree is Offered in the Following Fields

Education (Ed.D.)
Environmental Science and Engineering (D.Env.) (Interdepartmental)
Public Health (Dr.P.H.)
Social Welfare (D.S.W.)

*Joint program with California State University at Los Angeles.

Graduate Foreign Language Requirements

Each department, school, or interdepartmental degree committee determines whether or not it will require a command of foreign languages for a degree. The chart on the following pages is a summary of the foreign language requirements for master's and doctoral degrees. These requirements have been set by the departments, schools, or committees with the approval of the Graduate Council.

A student normally meets the foreign language requirements by completing the Educational Testing Service Graduate School Foreign Language Test, the UCLA foreign language examination, or a departmental foreign language examination. Some departments permit fulfillment either by examination or by completing course(s) (with a minimum grade of C) or the equivalent (five quarters of language study with a minimum grade of C in each course). If a program requires special proficiency in a language, this is fulfilled by a higher than normal ETS score or by a special examination. In addition, some departments have approved substitute programs which may fulfill the language requirement.

For further information on these requirements and for additional departmental requirements for specific programs, students should consult their major departments. Questions concerning the examinations should be addressed to the Student and Academic Affairs Section, Graduate Division.

Educational Testing Service (ETS) Examinations

In French, German, Russian, and Spanish, the student takes the Educational Testing Service (ETS) Graduate School Foreign Language Test in which the UCLA minimum passing score is 500. The fee for each ETS examination is $20, and each student registers for the examination at the University Extension Cashier's Office (10995 Le Conte Avenue). Information regarding registration procedures may be obtained from the Student and Academic Affairs Section of the Graduate Division, 1225 Murphy Hall.

To take ETS examinations, enrollment as a UCLA student is not required. When language requirements are to be fulfilled by ETS examinations, prospective graduate students are normally encouraged to take these examinations while still juniors or seniors, if possible, and their scores, if sufficiently high, will satisfy foreign language requirements for UCLA graduate degrees.

Educational Testing Service examination dates for 1982-83 are as follows: October 23, 1982; February 5, April 9, and June 18, 1983. ETS registration dates are included in the Calendar, page vi).

UCLA Examinations

Examinations in languages other than French, German, Russian, and Spanish are offered by UCLA language departments to registered UCLA students only. Information regarding these examinations may be obtained from the Graduate Division, 1225 Murphy Hall.

UCLA Departmental Language Examinations

Some departments have obtained Graduate Council approval to administer language examinations to students in their programs. These examinations are administered by faculty committees in the departments. Students must be registered when they take departmental language examinations. For further information, students should contact the Graduate Adviser in their departments.

English as a Foreign Language

With the approval of his/her major department and the Dean of the Graduate Division, a foreign student whose native language is other than English may offer either English or his/her native language to fulfill the foreign language requirement. He/she may offer only one of these in fulfilling a 2-language requirement. Proficiency in English is evaluated by performance on the UCLA entrance examination in English for foreign students, together with achievement in graduate work. The Department Chair's signature on the student's petition is certification of sufficient competence in English. This form also serves as certification that the department approves the use of a native language.

Substitute Programs

In departments for which the Graduate Council has approved the use of substitute programs, a special program of coursework may be offered in place of a foreign language. The student should consult the departmental Graduate Adviser for advance planning of such a program. The program is formulated within the department which notifies the Graduate Division after its completion.

Timing

Students in master's programs must complete the language requirement before advancement to candidacy. Students in doctoral programs requiring one or more foreign languages must complete at least one language before the oral candidacy examination. If a substitute program is offered in place of one language, the language must be completed before the oral candidacy examination.

The following requirements are those formally administered by the Graduate Division and include the principal languages which departments normally require or recommend. Departments should be consulted as they may accept other languages or may require additional languages, special competence, or special procedures for fulfillment, depending upon the student's program.

Articulated and Concurrent Degree Programs

Articulated and concurrent degree programs have the advantage of allowing the student to acquire two degrees in less time than normally required...
if the courses of instruction are taken in sequence. The aim of these programs is to provide an integrated curriculum or greater breadth between the two disciplines. Inquiries should be directed to the departments or schools involved.

Programs leading to concurrent degrees (specified amount of credit applied toward both degrees) have been approved 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. — Architecture and Urban Planning, M.A.
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.

Programs leading to articulated degrees (no credit overlap) are offered in the following disciplines:

African Area Studies, Interdepartmental M.A. — Public Health, M.P.H.
Latin American Studies, Interdepartmental M.A. — Architecture and Urban Planning, M.A.
Latin American Studies, Interdepartmental M.A. — Education, M.Ed. (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. — Any Graduate Division major, Ph.D.
Oral Biology, M.S. — Dentistry, D.D.S. or Certificate

4 If you would like further information, please contact the Chair or Graduate Adviser of the Interdepartmental Degree Program.

**Interdepartmental Degree Programs**

In addition to graduate degree programs offered in schools and departments, interdisciplinary graduate programs, involving two or more participating departments, are also offered. These programs are administered by interdepartmental faculty committees appointed by the Dean of the Graduate Division, acting for the Graduate Council.

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.)

If you would like further information, please contact the Chair or Graduate Adviser of the Interdepartmental Degree Program.

*Joint program with California State University at Los Angeles.*
## List of Graduate Foreign Language Requirements

<table>
<thead>
<tr>
<th>Department</th>
<th>Degree Program and Specialization</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Area Studies</td>
<td>M.A.</td>
<td>1 language (African)</td>
</tr>
<tr>
<td>Afro-American Studies</td>
<td>M.A.</td>
<td>1 language</td>
</tr>
<tr>
<td>American Indian Studies</td>
<td>M.A.</td>
<td>Completion of Linguistics 114A or 114B.</td>
</tr>
<tr>
<td>Anatomy</td>
<td>M.S.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>None</td>
</tr>
<tr>
<td>Anesthesiology (Nurse Anesthesia)</td>
<td>M.S.</td>
<td>None</td>
</tr>
<tr>
<td>Anthropology</td>
<td>M.A.</td>
<td>1 language (French, German, Russian, Spanish)</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>1 language, special proficiency (French, German, Russian, Spanish)</td>
</tr>
<tr>
<td>Applied Linguistics</td>
<td>Ph.D.</td>
<td>2 languages or 1 language, special proficiency</td>
</tr>
<tr>
<td>Archaeology</td>
<td>M.A.</td>
<td>1 language*</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>2 languages*</td>
</tr>
<tr>
<td>Architecture and Urban Planning</td>
<td>M.Arch.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>M.A. (Architecture and Urban Planning)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D. (Urban Planning)</td>
<td>None</td>
</tr>
<tr>
<td>Art, Design, and Art History</td>
<td>M.A.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>M.A. (Art History)</td>
<td>2 languages (French and German unless otherwise specified)*</td>
</tr>
<tr>
<td></td>
<td>M.F.A. (Master of Fine Arts)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D. (Art History)</td>
<td>2 languages (French and German unless otherwise specified), with additional language needs to be determined by student's committee</td>
</tr>
<tr>
<td>Asian American Studies</td>
<td>M.A.</td>
<td>1 language (2 years Asian at University level or equivalent)</td>
</tr>
<tr>
<td>Astronomy</td>
<td>M.S.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>M.A.T. (Master of Arts in Teaching)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>None</td>
</tr>
<tr>
<td>Atmospheric Sciences</td>
<td>M.S.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>None</td>
</tr>
<tr>
<td>Biological Chemistry</td>
<td>M.S.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>None</td>
</tr>
<tr>
<td>Biology</td>
<td>M.A.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>None</td>
</tr>
<tr>
<td>Biomathematics</td>
<td>M.S.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>None</td>
</tr>
<tr>
<td>Chemistry</td>
<td>M.S. (Biochemistry)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>M.S. (Chemistry)</td>
<td>1 language (French, German)</td>
</tr>
<tr>
<td></td>
<td>Ph.D. (Biochemistry)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D. (Chemistry)*</td>
<td>1 language (French, German)*†</td>
</tr>
<tr>
<td>Classics</td>
<td>M.A. (Classics, Greek, or Latin)</td>
<td>1 language (French or German or Italian by petition), or completion through Course 5 with minimum grade of C.</td>
</tr>
<tr>
<td></td>
<td>Ph.D. (Classics)</td>
<td>2 languages (French or Italian and German) or completion through Course 5 with minimum grade of C.</td>
</tr>
<tr>
<td>Comparative Literature</td>
<td>M.A.</td>
<td>2 languages, special proficiency*</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>2 languages, special proficiency*</td>
</tr>
<tr>
<td>Dentistry</td>
<td>M.A.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>M.S. (Oral Biology)</td>
<td>None</td>
</tr>
</tbody>
</table>

*Counsel the department concerning any additional foreign languages which may be required or recommended.

†With Departmental approval, a program of courses or other work may be substituted for a language.
<table>
<thead>
<tr>
<th>Department Interdepartmental Degree Committee</th>
<th>Degree Program and Specialization</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth and Space Sciences</td>
<td>M.S. (Geochemistry)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>M.S. (Geology)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>M.S. (Geology with specialization in, Non-Renewable Natural Resources)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>M.S. (Geophysics and Space Physics)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D. (Geochemistry)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D. (Geology)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D. (Geophysics and Space Physics)</td>
<td>None</td>
</tr>
<tr>
<td>Economics</td>
<td>M.A.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>1 language (French, German, Russian, Spanish)†</td>
</tr>
<tr>
<td>Education</td>
<td>M.A.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>M.Ed.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D. (Special Education-Joint Program with *California State University at Los Angeles)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ed.D.</td>
<td>None</td>
</tr>
<tr>
<td>Engineering and Applied Science</td>
<td>M.S. (Engineering or Computer Science)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>M.Engr.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D. (Engineering or Computer Science)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Engineer Degree</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>M.A.</td>
<td>Undergraduate foreign language study§</td>
</tr>
<tr>
<td></td>
<td>M.A. (Teaching English as a Second Language)</td>
<td>1 language</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>For students whose native language is English, program of language courses.</td>
</tr>
<tr>
<td></td>
<td>Certificate (Teaching of English as a Second Language)</td>
<td>Undergraduate foreign language study§</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 languages; or 1 language, special proficiency</td>
</tr>
<tr>
<td></td>
<td>Environmental Science and Engineering</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>M.A.</td>
<td>1 language (French, German)</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>2 languages (French and German)*</td>
</tr>
<tr>
<td></td>
<td>M.A.</td>
<td>1 language (German, Italian, Latin, Spanish)*</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>2 languages, level 5 and 6 (German, Latin, Spanish, or Russian)*</td>
</tr>
<tr>
<td></td>
<td>Geography</td>
<td>Research Tool</td>
</tr>
<tr>
<td></td>
<td>M.A.</td>
<td>Research Tool</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>Germanic Languages</td>
</tr>
<tr>
<td></td>
<td>M.A. (German)</td>
<td>1 language (French)*</td>
</tr>
<tr>
<td></td>
<td>M.A. (Scandinavian)</td>
<td>1 language (French or German) (and Old Icelandic)</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>1 language (French)*</td>
</tr>
<tr>
<td></td>
<td>History</td>
<td>1 language</td>
</tr>
<tr>
<td></td>
<td>M.A.</td>
<td>Minimum of 2 languages (except U.S. History which requires 1 language)*</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>Indo-European Studies</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>3 languages (French, German, and Russian)</td>
</tr>
<tr>
<td></td>
<td>Islamic Studies</td>
<td>M.A.</td>
</tr>
<tr>
<td></td>
<td>M.A.</td>
<td>1 language (French, German)*</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>2 languages (French, German)*</td>
</tr>
<tr>
<td></td>
<td>Italian</td>
<td>M.A.</td>
</tr>
<tr>
<td></td>
<td>M.A.</td>
<td>1 language (French, German)*</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>2 languages (French, German, Latin, Spanish)*</td>
</tr>
</tbody>
</table>

*Consult the department concerning any additional foreign languages which may be required or recommended.
†With departmental approval, a program of courses or other work may be substituted for a language.
§Required for admission to the graduate program.
<table>
<thead>
<tr>
<th>Department Interdepartmental Degree Committee</th>
<th>Degree Program and Specialization</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinesiology</td>
<td>M.S.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>None</td>
</tr>
<tr>
<td>Latin American Studies</td>
<td>M.A.</td>
<td>2 languages (Spanish, Portuguese)*</td>
</tr>
<tr>
<td>Library and Information Science</td>
<td>M.L.S.</td>
<td>1 or 2 languages†</td>
</tr>
<tr>
<td></td>
<td>Ph.D. Certificate (Specialization in Library and Information Science)</td>
<td>None</td>
</tr>
<tr>
<td>Linguistics</td>
<td>M.A.</td>
<td>1 language (French, German, Italian, Russian, Spanish)</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>3 years study in 1 language, or 2 years study in each of 2 languages§</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 languages; or 1 language, special proficiency (French, German, Italian, Russian, Spanish)</td>
</tr>
<tr>
<td>Management</td>
<td>M.S.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>M.B.A.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>None</td>
</tr>
<tr>
<td>Mathematics</td>
<td>M.A.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>M.A.T. (Master of Arts in Teaching)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>2 languages (French, German, Russian)†</td>
</tr>
<tr>
<td>Microbiology</td>
<td>M.A.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>None</td>
</tr>
<tr>
<td>Microbiology and Immunology</td>
<td>M.S.</td>
<td>None</td>
</tr>
<tr>
<td>Molecular Biology</td>
<td>Ph.D.</td>
<td>None</td>
</tr>
<tr>
<td>Music</td>
<td>M.A.</td>
<td>1 language (French, German, Italian, Spanish)*</td>
</tr>
<tr>
<td></td>
<td>M.F.A. (Performance Practices)</td>
<td>1 language (French, German, or Italian)</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>2 languages (French, German, Italian, Latin, Russian)*</td>
</tr>
<tr>
<td>Near Eastern Languages and Cultures</td>
<td>M.A.</td>
<td>1 major Western foreign language (English may be offered by foreign students)*</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>2 major Western foreign languages (English may not be offered by foreign students)*</td>
</tr>
<tr>
<td>Neuroscience</td>
<td>Ph.D.</td>
<td>None</td>
</tr>
<tr>
<td>Nursing</td>
<td>M.N.</td>
<td>None</td>
</tr>
<tr>
<td>Oriental Languages</td>
<td>M.A.</td>
<td>1 year Japanese for Chinese majors; 1 year Chinese for Japanese majors</td>
</tr>
<tr>
<td>Pathology</td>
<td>Ph.D.</td>
<td>2 languages (French, German)*</td>
</tr>
<tr>
<td></td>
<td>M.S. (Experimental Pathology)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D. (Experimental Pathology)</td>
<td>None</td>
</tr>
<tr>
<td>Pharmacology</td>
<td>M.S.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>None</td>
</tr>
<tr>
<td>Philosophy</td>
<td>M.A.</td>
<td>1 language (French, German, Greek, Latin)†</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>1 language (French, German, Greek, Latin) Spec. Prof.‡</td>
</tr>
<tr>
<td>Physics</td>
<td>M.S.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>M.A.T. (Master of Arts in Teaching)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>None</td>
</tr>
<tr>
<td>Physiology</td>
<td>M.S.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>None</td>
</tr>
<tr>
<td>Political Science</td>
<td>M.A.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>M.P.A. (Public Administration)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>1 language, score of 500 or more on ETS or other examination arranged by Graduate Division; or substitute program of proficiency in a research methodology.</td>
</tr>
<tr>
<td>Psychiatry and Biobehavioral Sciences</td>
<td>M.S.P. (Social Psychiatry)</td>
<td>None</td>
</tr>
</tbody>
</table>

*Consult the department concerning any additional foreign languages which may be required or recommended.
†With departmental approval, a program of courses or other work may be substituted for a language.
‡Required for admission to the graduate program.
<table>
<thead>
<tr>
<th>Department and Specialization</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>None (except in Measurement and Psychometrics. A foreign language or substitute program may be required for certain students in other areas or specializations).*</td>
</tr>
<tr>
<td>Public Health</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Radiological Sciences</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Romance Linguistics and Literature</td>
<td>2 romance languages*§</td>
</tr>
<tr>
<td></td>
<td>1 language*</td>
</tr>
<tr>
<td>Slavic Languages and Literatures</td>
<td>1 language (French, German)*</td>
</tr>
<tr>
<td></td>
<td>2 languages (French, German)§</td>
</tr>
<tr>
<td>Social Welfare</td>
<td>None</td>
</tr>
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<td></td>
<td>None</td>
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<tr>
<td>Sociology</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>1 language (French, German, Italian, Russian, Spanish)</td>
</tr>
<tr>
<td>Spanish and Portuguese</td>
<td>1 language</td>
</tr>
<tr>
<td></td>
<td>1 language</td>
</tr>
<tr>
<td></td>
<td>2 languages</td>
</tr>
<tr>
<td>Theater Arts</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>1 language</td>
</tr>
</tbody>
</table>

*Consult the department concerning any additional foreign languages which may be required or recommended.
§Required for admission to the graduate program.
Courses

The following symbols are used in the departmental faculty rosters and course listings.

**Faculty Roster Symbols**
1. In Residence summer only.
2. In Residence fall only.
3. In Residence winter only.
4. In Residence spring only.
5. On leave summer.
6. On leave fall.
7. On leave winter.
8. On leave spring.
9. On leave summer and fall.
10. On leave fall and winter.
11. On leave winter and spring.
12. On leave spring and summer.
14. Recalled to active service.
15. Member of Brain Research Institute.
17. Joint Appointment.

**Course Listing Symbols**
3. Offered as schedule and staff allow.
4. Not offered every year.
5. Given alternate years; offered 1981-1982.
6. Offered Fall 1981 only.
7. Offered Winter 1982 only.
8. Offered Spring 1982 only.
9. Offered on request depending upon enrollment.
10. Consult department for details.
11. Not applicable to M.A. degree.
12. Native speakers not normally eligible.
13. A and B offered in alternate years.
15. Determined on basis of change in course content.
16. Only course C to be offered.
17. Courses A and B to be offered.
18. Open only to Engineering Executive Program students.
22. This course may not be applied toward the requirements of any graduate degree offered by SEAS in the School of Engineering and Applied Science.

**Graduate Courses**

Graduate courses (numbered 200-299, 400-499, 500-599) are normally open only to students admitted in graduate status. Under special circumstances some courses in the 200-299 series are open to undergraduate enrollment with proper departmental and instructor consent.

**Professional Courses**

Teacher-training course (numbered 300-399) are highly specialized courses dealing with methods of teaching, and are acceptable toward the bachelor’s degrees only with the limitations prescribed by the various colleges or schools.

**Cross-Listed Courses**

Concurrently Scheduled Courses: Concurrent scheduling is defined as pairs of courses, usually within a single department or program, which are offered at the same time and place with the same instructor, but for which credit is given at two levels—usually graduate and undergraduate.

For concurrently scheduled courses, suitably separate activities and/or standards for performance and evaluation will be applied for graduates and undergraduates.

A capital “C” before the initial number of a course indicates that the course has been approved for concurrent scheduling. Course descriptions above and below will be found in the Graduate Catalog, and 199 and below in the Undergraduate Catalog.

Multiple-listed courses: A capital “M” before the initial number identifies courses, ordinarily at the same level, but listed as offerings in two or more different departments. These courses will be taught at the same time and place, with the same instructor, but students will receive credit from the department or program in which they choose to enroll.

**Course Listings**

Each course in the following listings by departments, as in the samples that follow, has the credit value of a full course unless otherwise noted. Thus, a listing, Mathematics 210A-210B-210C, Algebra indicates three full courses, 210A, 210B, and 210C; while a listing, Dance, 114A-114F, Advanced Contemporary Dance, (½ course each), indicates six half courses, 114A, 114B, 114C, 114D, 114E, and 114F.

Where noted, credit for specific course is dependent upon completion of a subsequent course.

**African Area Studies**

(Office, 10244 Bunche Hall)

Edward Alpers, Ph.D., Associate Professor of African History.
James S. Coleman, Ph.D., Professor of Political Science.
Christopher Ehret, Ph.D., Professor of African History.
Hassen El Nouty, Ph.D., Professor of African Literature of French Expression.
Teshome Gabriel, Ph.D., Assistant Professor of Theater Arts and Assistant Director of the African Studies Center.
John Galbraith, Ph.D., Professor of History.
Walter Goldschmidt, Ph.D., Professor of Anthropology and Psychology.
Gary A. Hale, Ph.D., Associate Professor of Geography.
Peter Hammond, Ph.D., Professor of Applied Anthropology.
Richard Hawkins, M.A., Professor of Motion Picture/Television.
Robert A. Hill, M.Sc., Assistant Professor of History.
Thomas Hinnebusch, Ph.D., Assistant Professor of Linguistics.
Derrick B. Jelliffe, M.D., Professor of Public Health and Pediatrics.
Patrice E.F. Jelliffe, M.P.H., Associate Researcher/Lecturer in Public Health.
Frederick C. Kinzer, Ed.D., Professor of Education.
Maziul Kunene, M.A., Professor of African Languages and Literature.
Hilda Kuper, Ph.D., Professor Emeritus of Anthropology.
Leo Kuper, Ph.D., Professor Emeritus of Anthropology.
Wolf Leslau, Ph.D., Professor Emeritus of Hebrew and Semitic Linguistics.
Michael F. Lofchie, Ph.D., Professor of Political Science and Director of the African Studies Center.
Jacques Maquet, Ph.D., Professor of Anthropology.
Dan F. McLaughlin, M.A., Associate Professor of Theater Arts/Animation.
Peter Morris, B.A., Professor of Architecture and Urban Planning.
Eugene L. Mendonca, Ph.D., Assistant Professor of Anthropology.
Alfred K. Neumann, M.D., Professor of Public Health.
Charlotte G. Neumann, M.D., Associate Professor of Public Health and Pediatrics.
David Nicholas, M.D., Lecturer in the School of Public Health.
Boniface Obiche, Ph.D., Professor of African History.
Anthony Orme, Ph.D., Professor of Geography.
Merrick Poansky, Ph.D., Professor of History.
John Poyey, Professor of English and Chair of TESL.
Ronald Rubin, Ph.D., Associate Professor of African History.
John F. Schacher, Ph.D., Professor of Public Health.
Russel G. Schuh, Ph.D., Associate Professor of Linguistics.
Edward W. Soja, Ph.D., Professor of Urban and Regional Planning.
Walter Hartmut, Ph.D., Associate Professor of Geography.
William E. Welmers, Ph.D., Professor of Linguistics and African Languages.
Advising. The Master of Arts in African Area Studies is supervised by an interdepartmental faculty committee appointed by the Dean of the Graduate Division. The Chair of this committee and Graduate Adviser is Professor Teeshome H. Gabriel. The Assistant to the Graduate Adviser for the M.A. in African Area Studies is Ms. Maxine Driggers, African Studies Center, 10250 Bunche Hall. Students are expected to remain in continuous contact with Ms. Driggers about their programs and their academic progress.

Major Fields or Subdisciplines. Students concentrate their studies in a major and minor discipline in the social sciences, arts and humanities, or professional school. For more information prospective students should contact the Assistant to the Graduate Adviser, 10250 Bunche, African Studies Center.

Foreign Language Requirement. The student is required to satisfy the language requirement in one of the following ways: (a) take three quarter-length courses (12 units) in an African language, with an average grade of B, or better. These courses will not count toward the nine courses required for the degree; (b) pass a Linguistics Department examination in an African language not regularly offered; (c) prove that the student is a native speaker of an African language; (d) prove that the student has an African language, with an average grade of B, or above in an African language.

Course Requirements. A minimum of nine courses are required for the M.A. At least five courses must be at the graduate level. The courses must be distributed between disciplines as follows: (a) Major discipline: a minimum of four courses, of which two 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; (b) Minor discipline: a minimum of two courses of which one must be at the graduate level; (c) Third discipline: the student must take a course on Africa, preferably of the survey type, in a third discipline, e.g. African Languages 190.

Thesis or Comprehensive Examination Plan: Thesis Plan: Plans are currently underway to introduce an M.A. thesis option into the Program. Interested students should confer with the Graduate Adviser. Currently, our program requires a comprehensive examination.

The Comprehensive Examination Plan: There is no Thesis Plan. Each candidate for the master's degree in African Area Studies will be required to take a written examination administered by a 3-person committee. This committee will normally consist of two faculty members from the candidate's major field and one faculty member from the candidate's minor field. It is the student's responsibility to make arrangements for this examination with faculty members in the appropriate departments. Exceptions will be granted only by consent of the Graduate Adviser. The examination will normally be four hours in length, with major and minor fields being given equal time. For grading purposes the major field will count for 60 percent, the minor field, 40 percent. An oral examination may be held at the discretion of the examining committee after it has read the candidate's written examination. A student who fails the Comprehensive Examination may be permitted to retake it only with the approval of the Graduate Adviser. No student will be allowed to retake the examination more than once.

Time to Degree. Normal progress from graduate admission to award of the degree: five quarters.

500 Series Course Limitation. One course in the 500 series shall apply toward the minimum of nine courses required for a master's degree. That one course may be counted toward the minimum of five graduate courses required for the degree. By permission of the Graduate Adviser, another 500 level course may be allowed, but may not be applied toward the minimum of five graduate courses required for the degree.

Disqualification and Appeal of Disqualification: The recommendation of disqualification is made by the Graduate Adviser and will be approved by the Interdepartmental Committee. Students may appeal the case to the Committee. Disqualification may be recommended for failure to maintain a minimum grade point average of 3.0, failure of the master's examination, insufficient progress toward the degree and infractions of academic standards such as plagiarism.

Articulated Degree Program: African Area Studies (M.A.) and Public Health (M.P.H.). The School of Public Health and the Interdepartmental Degree Program in African Area Studies have now created an arrangement whereby a student can work sequentially for the master's degree in African Area Studies (M.A.) and a master's degree in Public Health (M.P.H.). By planning a major field emphasis in Public Health while working toward the M.A. degree 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 working for these two degrees should be aware that this is not a concurrent degree program. The articulated degree program operates in a sequential manner. The normal pattern of graduate study for a student working in this articulated degree program will begin with admission to the M.A. program in African Area Studies. While enrolled in this program, a student will consult with a faculty member in the School of Public Health and, on their advice, take a specified series of courses in the field of Public Health. This coursework will enable students to establish a solid basis upon which they may build their academic credibility for subsequent application to the M.P.H. degree.
Admission for the M.A. in African Area Studies does not automatically confer admission into the M.P.H. program since each of these degree programs retain complete jurisdiction over its own admissions. Admission to the M.P.H. program will normally occur in the following manner. While continuing in the M.A. in African Area Studies program, the student will file a petition for a change of major to Public Health. This will ordinarily occur during the quarter in which the student anticipates completion of the M.A. degree in African Area Studies. If this petition is approved by the School of Public Health, the student will enter the M.P.H. program the following quarter.

Students should be aware that 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 counted toward the M.P.H. in Public Health.

Students interested in the articulated program should write to Ms. Macon Diggers, Assistant to the Graduate Adviser, M.A. Program in African Area Studies, African Studies Center, UCLA, Los Angeles, CA 90024.

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 with the Graduate Adviser.

Other Relevant Information. a) Application of S/U graded courses to the M.A. in African Area Studies: No more than one course graded on an S/U basis may be counted toward the minimum of nine courses required for the M.A. degree, except by permission of the Graduate Adviser; b) Students are expected to complete the M.A. degree by the close of their seventh quarter of full-time enrollment. A brochure describing the graduate African Area Studies Program is available to interested students in the Assistant to the Graduate Adviser's office, 10250 Bunche Hall.

African Area Course List: All courses are not offered every academic year. Students should verify courses with respective departments.

472A. Maternal and Child Health in Developing Areas.
472B. Recent Advances in Maternal Health.
472D. Overseas Refugee Health.
Sociology 130. Social Processes in Africa.
140. Political Sociology.
213A-213B. Techniques of Demographic and Ecological Analysis.
265. Demography.
274. Selected Problems in the Sociology of Africa.
Theater Arts 102E. Theater of the Non-European World.
106F. History of African, Asian and Latin American Film.
108. History of Documentary Film.
112. Film and Social Change.
184A. Community TV Programming and Management.
M209C. Ethnographic Film.
M265B. Ethnographic Film Direction.
276. Seminar in Non-Western Films.

Afro-American Studies

(Interdepartmental)

(Office, 3111 Campbell Hall)

Alden Ashforth, Ph.D., Associate Professor of Music
Margaret Credel, Ph.D., Assistant Professor of History
Jacqueline Cogdell Dje Dje, Ph.D., Acting Assistant Professor of Music
Halford Fairchild, Ph.D., Assistant Professor of Psychology
Pierre-Michel Fontaine, Ph.D., Acting Associate Professor of Political Science
Rodrick Harrison, Ph.D., Assistant Professor of Sociology
Robert Hill, M.Sc., Assistant Professor of History
Romey Keys, Ph.D., Assistant Professor of English
Vicke Myers, Ph.D., Assistant Professor of Psychology
Claudia Mitchell-Kerner, Ph.D., Associate Professor of Anthropology
Hector Myers, Ph.D., Associate Professor of Psychology
J. H. Kwate Ntwia, B.A., Professor of Music
Melvin Oliver, Ph.D., Assistant Professor of Sociology
Warren Pinkney, Ph.D., Acting Assistant Professor of Music
Richard Yarbrough, Ph.D., Assistant Professor of English.

The Master of Arts Degree

Admission Requirements: Applicants for admission must possess a baccalaureate degree in the Social Sciences or the Humanities and show an interest in Afro-American studies either through their previous course of study or their future plans. Students are selected on the basis of the following criteria:

(1) Three academic letters of recommendation.
(2) A minimum of 3.00 or "B" average in the junior-senior years of college.
(3) A statement of purpose describing the applicant's background in Afro-American studies, proposed program of study, and future career plans.
(4) The results of the applicant's scores on the Verbal and Quantitative sections of the Graduate Record Examination.
(5) An original term paper or research paper which best expresses the applicant's interests and abilities.
(6) Other evidence of promise deemed relevant by the applicant such as work experience, accomplishments, or community and public service.

Admission to the program is limited to the Fall Quarter. Prospective students may write for brochures to the Interdepartmental Committee to Administer the M.A. Degree in Afro-American Studies, Center for Afro-American Studies, 3111 Campbell Hall, UCLA, Los Angeles, California 90024.

Advising: The Master of Arts Program in Afro-American Studies is supervised by an interdepartmental faculty committee appointed by the Dean of the Graduate Division. Upon admission, each student is assigned a faculty advisor from his/her major areas of concentration. It is with this advisor that the student formulates his/her program of study for the first year.

Students are expected to meet at least quarterly with their academic advisors, usually at the beginning to review their progress and to have their class program approved.

At the beginning of the second year in residence, students are expected to nominate a 3-person guidance committee which is subject to approval by the Interdepartmental Committee to Administer the M.A. Degree in Afro-American Studies. The guidance committee, which is usually chaired by the student's academic advisor, is responsible for supervision, review, and the final recommendation for acceptance of the candidate's thesis as partial fulfillment of the M.A. requirements.

Major Fields: The Afro-American Studies M.A. is interdepartmental, with formal support linkages to nine disciplinary departments: Anthropology, English, History, Linguistics, Music, Philosophy, Political Science, Psychology, and Sociology. Related courses are also offered in the following departments, programs, and professional schools: Art, Dance, Economics, Geography, Psychiatry and Biobehavioral Sciences, Theater Arts, Folklore and Mythology, Latin American Studies, African Studies, Education, Library and Information Science, Management, Public Health and Social Welfare.

Foreign Language Requirement: M.A. candidates are required to satisfy the language requirement in one of the following ways: a) presentation of evidence of satisfactory completion of two year's coursework in a foreign language at the college level, b) passing a foreign language proficiency examination approved by the candidate's guidance committee and deemed appropriate by the Interdepartmental Committee to Administer the M.A. Degree in Afro-American Studies, or c) the demonstration of competence in the use of the computer as an aid in social research.

Course Requirements: A total of 14 upper division graduate courses are required for the degree. Of that number, only two can be selected from upper-division listings. The program has a structured core of seven required courses. The student is required to take Afro-American Studies 200A (Afro-American History) and two courses from the Afro-American Studies 200B through 200E series. These courses should normally be taken in the first year of study. The second year is devoted to the acquisition of disciplinary competence in the student's chosen cognate field. Afro-American Studies 200A-B is required of all students, and in addition, Afro-American Studies 270A-B, a two quarter research seminar, is to be taken in conjunction with work in the discipline of each student's choice. This seminar is expected to facilitate completion of the student's thesis.

Thesis Plan: The guidance committee, constituted at the beginning of the second year of residence, supervises and reviews the students' progress on the thesis. When the thesis meets the standards of the guidance committee, the committee will recommend to the Interdepartmental Committee to Administer the M.A. in Afro-American Studies that the paper be accepted in fulfillment of the thesis requirement for the degree.

Time to Degree: It is estimated that six quarters in residence are required from the time of admission to award of degree. This presumes full-time student status and normal progression through coursework.

Disqualification and Appeal of Disqualification

Students enrolled in the M.A. Program in Afro-American Studies are required to meet a 3.0 grade point average. Anyone falling below that standard will be placed on academic probation and be subject to dismissal if the GPA is not brought up to acceptable standards the following quarter. Each quarter, students meet with their adviser and at the end of the first year in the program an evaluation meeting for all students is held. This serves as an official review of the students' progress towards completion of the requirements of the degree. Students who demonstrate problems in their academic work are generally required to take some remedial course of action. In cases where there is no improvement or where the students are unable to meet the requirements of the Program or the Graduate Division, the M.A. Committee will recommend their dismissal. Students who wish to do so may appeal this decision following the procedures established by the Graduate Division.
Interdisciplinary Courses

Graduate Courses

M280A. Advanced Historiography — Afro-American. (Same as History M280W.) Advanced Historiography, Afro-American History. May be repeated for credit.

Ms. Creel

200B. Seminar in Political Economy. Seminar. Prerequisite: consent of instructor. This is a seminar in political economy with special reference to black political economy. The focus will be the dynamics of allocation of wealth and power resources among the social classes and racial and ethnic groups in the United States, this will be done in a context that is at once historical and international. Thus, the seminar will emphasize internationalism and transnationalism as well as the uniqueness of the Afro-American condition. It will attempt to relate the black condition in the United States to the socioeconomic system of this country, and also to compare it to the political, social, and economic conditions of African peoples elsewhere.

Mr. Fontaine

M280C. Selected Problems in Urban Sociology (Same as Sociology M2629.) Seminar. Prerequisite: consent of instructors. Mr. Harrison, Mr. Oliver

M290D. Afro-American Sociolinguistics: Black English. (Same as Anthropology M243G.) Prerequisite: consent of instructor. This seminar aims to provide basic information on Black American English, an important minority dialect in this United States. The social, linguistic, and political aspects will be examined from the perspectives of their genesis, maintenance and social functions. Students will be acquainted with general problems and issues in the field of sociolinguistics. These issues will be examined through a case study approach. Students will be required to conduct research in consultation with the instructor, as well as participate in group discussion.

Mr. Mitchell-Kernan

M290E. Studies in Afro-American Literature (Same as English M273.) Seminar. Prerequisite: consent of instructors. 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 Black American writing.

Mr. Yarborough, Mr. Keys

220A. Research Methods. Seminar. Prerequisite: consent of instructor. An introduction to a variety of research methods, including experimental, quasi-experimental, survey, and observational research designs. The course will cover the following topics: the functions of research, research proposal writing, theory development and hypothesis testing, sampling theory, data collection, data processing and analysis and interpretation. Also included are the ethics of research and preparing the research report.

Mr. Hatfield, Mr. Harrison

228B. African-American Psychology. Seminar. Prerequisite: student of instructors. Survey of the psychological literature as it pertains to persons of African-American descent. The course provides a critical review of the implications of "mainstream" research of African-Americans. This approach includes a discussion of research on the family, academic achievement and psychological assessment (testing). A second focus is concerned with theoretical approaches advanced by African-American scholars: African philosophy, perspectives on racism in psychology, and research in the black community.

270A-270B. Research Seminar. Seminar. Prerequisite: consent of instructors. Designed to provide students with an opportunity to put their research skills into practical application. During the first quarter of the semester, all of the students will meet under the direction of a faculty member and engage in a colloquium in which they will share conceptual schemata and research design. Students will spend the second quarter actually completing their projects.

596. Directed Readings and Tutorials. Directed readings. This course seeks to provide students with an umbrella under which they can pursue specialized interests from which there is insufficient demand to warrant offering a formal course.

Mr. Oliver

American Indian Studies

(Interdepartmental)

(Office, 3220 Campbell Hall)

William Bright, Ph.D., Professor of Linguistics.
Robert Georges, Ph.D., Professor of English.
Carole Goldberg-Ambruso, J.D., Professor of Law.
Charlotte M. Math, Associate Professor of Music.
Paul Kroekrity, Ph.D., Assistant Professor of Anthropology.
Thomas J. La Belle, Ph.D., Professor of Education.
Gary Neech, Ph.D., Professor of History (Chair of the Program).
Arnold Rubin, Ph.D., Associate Professor of Art History.
Melvin Seeman, Ph.D., Professor of Sociology.

The Master of Arts Degree

Admission Requirements. A bachelor's degree from an accredited undergraduate institution is required for admission to the M.A. Program in American Indian Studies. Prospective applicants must demonstrate interest in American Indian Studies either by formal coursework, independent study, or practical experience. As part of the application, applicants are required to submit a detailed account of their 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.

Enterings students will be required to 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 is not required but all applicants are encouraged to take the examination and submit test results as part of the documents supporting their enrollment application. At least three faculty letters of recommendation must be submitted by each applicant. Admission to the Program is limited to the Fall Quarter. Prospective students may obtain application forms and further information by writing to the Committee to Administer the M.A. Degree in American Indian Studies, M200A, 3220 Campbell Hall, UCLA, Los Angeles, CA 90024, or by calling (213) 825-7315.

Advising. The M.A. Degree Program in American Indian Studies is supervised by an interdisciplinary faculty committee. Upon admission, the Committee assigns each student a faculty adviser from his or her major area of concentration. Together, the student and adviser formulate the student's program of study for the first year. Students are expected to meet with their academic advisers at the beginning of each quarter to have their class program approved, and as often as necessary to have their progress reviewed.

At the beginning of the second year in residence, students are expected to select a guidance committee, which is subject to approval by the Committee to Administer the M.A. in American Indian Studies. The guidance committee, which should be chosen from disciplines within the student's area of concentration, will be responsible for the supervision, review, and the final recommendation for acceptance of the candidate's comprehensive examination or thesis as partial fulfillment of the M.A. requirements.

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 (American Indian Linguistics) or Linguistics 114B (American Indian Language Structures). 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.

(a) A minimum of ten courses will be required, at least seven of which must be chosen in the 200 series. Four courses are required: American Indian Studies M200A, 200B, 200C 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.

(b) All M.A. candidates in American Indian Studies will select one of the following areas of concentration: (1) History and Law, (2) Expressive Arts, (3) Social Relations, (4) Language, Literature, and Folklore. In addition to the four required courses, the student must complete a minimum of four courses in an 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 chosen from an approved list maintained by the Committee to Administer the M.A. Program.
Thesis Plan or Comprehensive Examination Plan. The candidate 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 shall be selected by the candidate with the approval of the Committee to administer the Program. Two members of the thesis committee, including the chair, should be chosen from disciplines with the candidate’s area of concentration. Copies of the thesis must be submitted to each member of the candidate’s committee by the fifth week of the quarter in which the candidate wishes to graduate. Students choosing the Comprehensive Examination Plan must demonstrate in written or oral examination their competency in the major and minor areas of study.

Time to Degree. The student is required to be in residence for a minimum of four quarters and should normally complete the program in two years.

500 Series Course Limitation. Two courses in the 500 series can be applied toward the 10-course requirement. However, only one 506 course may be applied toward meeting the Program requirement of seven graduate courses. Because the Program is interdepartmental, students must enroll in the 500 series through departments and must comply with departmental policy as to grading and units.

Interdisciplinary Courses

Required Upper Division Courses

Linguistics 114A. American Indian Linguistics. Survey of genetic, areal, and typological classification of American Indian languages stressing representative features of phonology, morphology, and syntax; writing systems for American Indian languages; American Indian languages in social and historical context.

Linguistics 114B. American Indian Language Structures. Detailed introduction to the linguistic structure of three different American Indian languages, representing at least two separate genetic groupings.

Graduate Courses

M200A. Advanced Historiography—American Indian Peoples. (Same as History M200W). Mr. Morrison

200B. Cultural World Views of Native America. The course will explore written literary tests drawn from oral cultures and expressive cultural forms—dance, art, song, religious and medicinal ritual—in selected Native American societies. The instructors will introduce and review methodological approaches to the study of native cultures, from structural anthropology through ethnomusicology and folklore to modern literary analyses and direct field work. Mr. Lincoln, Mr. Draper

200C. Contemporary Issues of the American Indian. This seminar is designed to introduce students to the most important issues facing American Indians as individuals, communities, tribes, and organizations in the contemporary world. It builds upon the historical background presented in American Indian Studies M200A and the cultural and expressive experience of American Indians presented in American Indian Studies 200B. Ms. Heth, Ms. Joe

Anatomy

(Office, 73-235 Health Sciences Center)

George W. Bernard, D.D.S., Ph.D., Professor of Dentistry (Oral Biology) and Anatomy; P. Dean Bok, Ph.D., Professor of Anatomy; Nathaniel A. Buchwald, Ph.D., Professor of Biobehavioral Sciences and Anatomy in Residence; Carmine D. Clemente, Ph.D., Professor of Anatomy and Director, Brain Research Institute; Edwin L. Cooper, Ph.D., Professor of Anatomy; Jean S. de Wallis, Ph.D., Professor of Anatomy; Earl Eldred, M.D., Professor of Anatomy (Vice Chair, Gross Anatomical Teaching Resources); Jerome Engel, M.D., Ph.D., Professor of Neurology and Anatomy; Lothar Sollberg, D.D.S., Ph.D., Professor of Dentistry (Oral Biology) and Anatomy; Roger A. Gorski, Ph.D., Professor of Anatomy (Chair of the Department); Lawrence Kruger, Ph.D., Professor of Anatomy and Anatomocellology; Richard N. Lolley, Ph.D., Professor of Anatomy in Residence; David S. Maxwell, Ph.D., Professor of Anatomy and Biobehavioral Sciences; Daniel C. Pease, Ph.D., Professor of Anatomy; Charles H. Sawyer, Ph.D., Professor of Anatomy; Arnold B. Scheibel, M.D., Professor of Anatomy and Psychiatry; John D. Schlag, M.D., Professor of Anatomy; José P. Segundo, M.D., Professor of Anatomy; G. Douglas Silver, F.D.S., M.R.C.S., Professor of Dentistry and Medicine; M.B. Sterman, Ph.D., Professor of Anatomy and Biobehavioral Sciences in Residence; Anna N. Taylor, Professor of Anatomy in Residence. Bernard Towers, M.B., Ch.B., (Liv.), M.R.C.S., L.R.C.P., Professor of Pediatrics and Anatomy; Jaime R. Villablanca, M.D., Professor of Biobehavioral Sciences and Anatomy in Residence; Charles D. Woody, M.D., Professor of Psychiatry and Anatomy in Residence; Richard W. Young, Ph.D., Professor of Anatomy; Mary A.B. Brazier, Ph.D., Emeritus Professor of Anatomy and Physiology in Residence; John D. French, M.D., Emeritus Professor of Anatomy; H.W. Magoun, Ph.D., Emeritus Professor of Anatomy; Richard E. Ottoman, M.D., Emeritus Professor of Radiology and Anatomy; Reider F. Sognnaes, Ph.D., Emeritus Professor of Dentistry (Oral Biology) and Anatomy; Anthony M. Adinolfi, Ph.D., Associate Professor of Anatomy and Biobehavioral Sciences; John H. Campbell, Ph.D., Associate Professor of Anatomy; Emilio E. Decima, M.D., Associate Professor of Anatomy; Ellen R. Dirksen, Ph.D., Associate Professor of Anatomy; Ronald M. Harper, Ph.D., Associate Professor of Anatomy; Guido A. Zampighi, D.D.S., Ph.D., Associate Professor of Anatomy; Emery G. Zimmermann, M.D., Ph.D.—Associate Professor of Anatomy; John K. Lu, Ph.D., Assistant Professor of Obstetrics and Gynecology and Anatomy; Michael Chase, Ph.D., Professor of Physiology in Residence, and Research Anatomist; Earle E. Grondahl, M.D., Ph.D., F.A.C.S., Assistant Clinical Professor of Anatomy; Thelma Estrin, Ph.D., E.E., Professor of Computer Sciences in Residence and Research Engineer in Anatomy; James D. Grant, M.D., Assistant Research Anatomist; Stanley J. Gross, M.D., Adjunct Professor of Anatomy; Frances S. Grover, Ph.D., Adjunct Professor of Anatomy; Norio Koduka, Ph.D., Assistant Research Pharmacologist in Anatomy; Raymond J. Last, M.D., F.R.C.S., Visiting Professor of Anatomy; Bessie H. Lee, Ph.D., Assistant Research Anatomist; Carlos A.E. Lemmi, Ph.D., Adjunct Associate Professor of Anatomy and Adjunct Research Immunochromat in Surgery; Rafael Lorente de No, M.D., Visiting Professor of Anatomy and Surgery; James F. McGinnis, Ph.D., Adjunct Associate Professor of Anatomy; Dennis J. McGinity, Ph.D., Adjunct Associate Professor of Psychology and Associate Research Anatomist; William T. O’Day, Ph.D., Associate Research Anatomist; Anselmo R. Pineda, M.D., Associate Clinical Professor of Anatomy; Madeleine L.H. Schlag-Ray, Ph.D., Associate Research Anatomist; Sari E. Sehkin, Ph.D., Associate Research Anatomist; Margaret N. Shouss, Ph.D., Adjunct Assistant Professor of Anatomy; James R. Soares, Ph.D., Assistant Research Anatomist; Elizabeth A. Stein, Ph.D., Assistant Research Anatomist; Alfred Weinstock, D.D.S., Ph.D., Clinical Professor of Dentistry and Anatomy; David I. Whitmoyer, Ph.D., Adjunct Lecturer and Associate Research Anatomist; Aristotle Woljani, Ph.D., Assistant Research Anatomist; Richard K. Wright, Ph.D., Associate Research Anatomist; Wenda Wynicka, Ph.D., Research Anatomist.

Admission Requirements. Applicants must have a bachelor’s degree in a physical or biological science or in a premedical curriculum. Introductory courses in zoology and vertebrate embryology are required, as well as one year of general and organic chemistry and one year of college physics. Deficiencies in these courses must be made up before the student is admitted. Courses in comparative anatomy, cell biology, genetics, elementary statistics and the philosophy of science are recommended. Applicants must submit the results of the Graduate Record Examination including the Advanced Test in Biology or in their undergraduate major. We require three letters of recommendation from professors evaluating potential for successful completion of graduate studies and independent research. Students seeking to enter the program of anatomy must apply themselves directly to the Department. The Department offers the M.S. degree only to individuals whose major interest and training lies in allied paramedical fields, postgraduate medicine or dentistry.
Further information and brochures can be obtained by writing to the Graduate and Program Secretary, Department of Anatomy, UCLA School of Medicine, Los Angeles, CA 90024.

Advising. Initially, members of the Graduate Student Affairs Committee advise students in selection of courses and other matters. Students are expected to affiliate by the end of the first year with a staff member with similar research interests and obtain more selective guidance.

Major Fields or Subdisciplinary. The major fields in which graduate research may be undertaken in the Anatomy Department include a) neuroanatomy and neurophysiology, b) neuroendocrinology, and c) cell and development biology.

Disqualification. A student may be disqualified for (a) failure to maintain a grade point average of at least 3.0, (b) failure to comply with the graduate program requirements of the Department of Anatomy, or (c) violation of the standards of conduct as specified in the Student Conduct Code.

Appeals. The student may present an appeal of disqualification in writing to the Graduate Student Affairs Committee of the Department of Anatomy.

The Master of Science Degree

Course Requirements. A total of 36 units of coursework are required, 8 of which can be in the 500 series, and 20 of which must be in graduate courses. The following are required of all master's degree candidates: two of the major anatomy courses chosen from Anatomy 101, 206A-206B, and 207A-207B; one departmental graduate seminar; other courses as necessary to the candidate's particular program.

Thesis or Comprehensive Examination Plan. Candidates may elect either the thesis or examination plan. For the thesis plan, a committee of the student's adviser and two department members approves the thesis proposal after all coursework is completed (usually at the start of the second academic year). For the examination plan, the candidate must demonstrate a knowledge of general principles of anatomy, as well as competence in a restricted area of science. A committee of three members, appointed by the Chair for each candidate, administers a written examination, restricted to basic anatomical science. If a student fails this examination, the opportunity for re-examination will be decided by the Graduate Student Affairs Committee.

Time to Degree. The time to degree is normally six quarters or two academic years.

900-Series Course Limitations. Eight units of Anatomy 586 (2-12 units, S/U grading) may be applied toward the total course requirement, and only 4 toward the minimum graduate course requirement.

The 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 the following three major courses: a) human gross anatomy, b) human microscopic anatomy, c) neuroscience, d) mammalian physiology, and e) biological chemistry. Students with advanced training who have already passed courses similar to (a), (b), or (c) may be asked to assist in their instruction.

2. Participation in at least two departmental seminars.

3. Completion of such other courses as are essential or supportive to the student's research interests.

4. Completion of a "Research Tool Requirement" which consists of the equivalent of 6 units of work selected by the student and his/her adviser to augment the dissertation project. This may be satisfied by a foreign language examination.

If the student elects the foreign language option, ability to read a foreign language must be shown by passing either (a) the Graduate School Foreign Language Test or (b) an intradepartmental exam.

5. If the student elects to take coursework to complete the Research Tool Requirement, a cohesive program of courses in a distinct discipline is selected which is in the student's general field of research. The program must be approved in writing by the faculty adviser and the Graduate Student Affairs Committee. Approval will not be given to courses which one would be expected to take to prepare for a major field of interest, nor to a program which appears to demand less preparation than that required for the equivalent of two courses (8 units) of upper division work.

Teaching Experience. Students are required to assist in the teaching of gross anatomy and one other major departmental course. Teaching activities occupy a limited portion of the student's time over a period of three quarters.

Written and Oral Qualifying Examinations. The program must be approved in writing by the student's adviser and the Graduate Student Affairs Committee. Approval will not be given to courses which one would be expected to take to prepare for a major field of interest, nor to a program which appears to demand less preparation than that required for the equivalent of two courses (8 units) of upper division work.

Successful completion of the qualifying examination is expected. Part I is a written examination administered by an ad hoc committee appointed by the Chair, and is intended to evaluate the candidate's knowledge of the general field of anatomy. Part II is a necessary prerequisite for taking Part II, an oral examination conducted by the doctoral committee. The oral examination follows in two weeks to six months and often probes the student's dissertation proposal as well as an understanding of the field of specialization, the philosophy of science and the history of anatomy.

The Graduate 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 capable, excellent guidance, or is for other reasons not adaptable to the Department's program.

Final Oral Examination Following Completion of the Dissertation. A dissertation must be completed and successfully defended in a final examination. Only exceptionally will approval be given to a dissertation problem on a subject unrelated to the general fields of research followed by the various faculty members.

Time to Degree. Normal progress toward the Ph.D. is as follows:

Year 1. The three major Anatomy courses and Physiology.

Year 2. Biochemistry; departmental seminars, Research Tool; other courses relevant to the student's program; participation in teaching; completion of qualifying examinations.

Year 3. Successful completion of the qualifying examinations; research and completion of activities of Year 2.

Year 4. Research and preparation and defense of dissertation.

Upper Division Courses

101. Microscopic Anatomy. (2 courses) Four three-hour sessions per week in the fall quarter. Prerequisite: enrollment in School of Medicine or consent of instructor. Microscopic study of the tissues and organs of the human body. Ms. Dirksen and the Staff 102A-102B. Gross Anatomy of the Human Body. (4 courses, 2 courses) Formerly numbered 100 and 102.) One hour of lecture and four hours of lab per week in the winter quarter; four hours of lecture and twelve hours of lab per week in the spring. Prerequisite: enrollment in School of Dentistry or consent of instructor. Lecture, laboratory, and three two-hour seminars a week. Mr. Schlag and the Staff 103A-103B. Classical Anatomy. (3 courses) Three three-hour sessions per week in the fall quarter. Prerequisite: concurrent enrollment in School of Dentistry or consent of instructor. Three three-hour sessions per week in the spring quarter. Ms. Schleg and the Staff 104A-104B. Gross Anatomy. See 207A-207B. Gross Anatomy. Mr. Campbell and the Staff 105A-105B. Microscopic Anatomy. (4 courses) Three three-hour sessions per week in the fall quarter. Prerequisite: concurrent enrollment in School of Dentistry or consent of instructor. Ms. Ensley and the Staff 106. Mammalian Neurology. One four-hour session and one four-hour session per week in the winter quarter. Prerequisite: enrollment in Medical School and consent of instructor. Ms. Schleg and the Staff 107. Formation of an anatomy group in the manner of the National Academy of Sciences, and the history of anatomy.
Graduate Courses

201. Structure and Function of Cells and Tissues. (1½ courses) One hour of lecture and one discussion per week in the fall quarter, ½ hour per week in the winter and spring quarters. Prerequisite: consent of instructor. Current topics on structural and functional aspects of microscopic anatomy. Graded on an S/U basis only. May be repeated for credit.

202. Oral Embryology. (Same as Oral Biology M202C.) Four hours per quarter. Lectures and laboratory instruction in the developmental and histological structure of the facial region and the oral and peri-oral organs and tissues.

205A-205B. Neurosciences: The Introductory Course for Graduate Students. (1½ courses, 1½ courses) (Same as Neuroscience M205A-M205B.) Three hours of lecture and two hours of lab per week in the fall quarter; five hours of lecture and six hours of lab per week in the spring quarter. Prerequisite: consent of instructor. Current topics on structural and functional aspects of microscopic anatomy. Graded on an S/U basis only. May be repeated for credit.

214. Anatomy of the Head and Neck. Two hours of lecture and one hour of discussion per week in the fall and winter quarters. Prerequisite: consent of instructor. Current topics on structural and functional aspects of microscopic anatomy. Graded on an S/U basis only. May be repeated for credit.

217. Electron Microscopy. Two hours of lecture and one hour of discussion per week in the fall and winter quarters. Prerequisite: consent of instructor. Current topics on structural and functional aspects of microscopic anatomy. Graded on an S/U basis only. May be repeated for credit.

220. Systematic and Clinical Neuroscience. Four hours of lecture and two hours of discussion per week in the fall quarter. Prerequisite: consent of instructor. Current topics on structural and functional aspects of microscopic anatomy. Graded on an S/U basis only. May be repeated for credit.

221. Gross Anatomy of the Head and Neck. Two hours of lecture and one hour of discussion per week in the fall and winter quarters. Prerequisite: consent of instructor. Current topics on structural and functional aspects of microscopic anatomy. Graded on an S/U basis only. May be repeated for credit.
Individual Study and Research

588. Directed Individual Study or Research. (1/2 courses to 3 courses)
597. Preparation for the Master's Comprehensive Examination or the Doctoral Qualifying Examination. (1/2 course to 3 courses)
598. Thesis Research for Master's Candidates. (1/2 course to 3 courses)
599. Dissertation Research for Ph.D. Candidates. (1/2 course to 3 courses)

Medical History Division

(Department of Anatomy)

Franklin D. Murphy, M.D., Sc.D., Professor of Medical History.
Mary A.B. Brazier, Ph.D., Emeritus Professor of Anatomy and Physiology in Residence.
John Field, M.D., Emeritus Professor of Medical History and Physiology.
L.R.C. Agnew, M.D., Associate Professor of Medical History.
Robert G. Frank, Jr., Ph.D., Associate Professor of Medical History and History.
Ynez V. O'Neill, Ph.D., Associate Professor of Medical History in Residence.
Elizabeth R. Lomax, M.D., Ph.D., Adjunct Lecturer and Associate Research Medical Historian.
Frances Keddie O'Malley, M.D., Research Medical Historian.

Upper Division Courses

187A-107B. Historical Development of Medical Sciences.
Mr. Agnew, Ms. O'Neill
191A-101B. History of Biological Sciences. (Same as History M195F-M195G)
Mr. Frank
Mr. Frank

Graduate Courses

246A-246B. History of Medical Sciences. (1/2 course each) One hour of lecture per week in the fall and winter quarters. Survey of the development of scientific and medical thought from ancient times to the present.
247A-247B. History of Clinical Sciences. (1/2 course each) One hour of lecture per week in the fall and winter quarters. Survey of development of the clinical specialties and comparison of medical practice in western civilization with that developed in other parts of the world.
242. History of Pathology. (1/2 course) One hour per week in the fall quarter. 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.
243. History of Surgery. (1/2 course) One hour per week in the winter quarter. Survey of the history of surgery and related sciences from antiquity to the 20th century, tracing the development of surgical theory, practice, organization and education and comparing them to current practice.
244. History of American Medicine. (1/2 course) One hour per week in the spring quarter. Survey of the history of medicine in the United States from the colonial period to the present.

262. History of American Medicine. (1/2 course) One hour per week in the spring quarter. Survey of the history of medicine in the United States from the colonial period to the present.
263. History of American Medicine. (1/2 course) One hour per week in the spring quarter. Survey of the history of medicine in the United States from the colonial period to the present.
264. History of American Medicine. (1/2 course) One hour per week in the spring quarter. Survey of the history of medicine in the United States from the colonial period to the present.

265. History of American Medicine. (1/2 course) One hour per week in the spring quarter. Survey of the history of medicine in the United States from the colonial period to the present.
266. History of American Medicine. (1/2 course) One hour per week in the spring quarter. Survey of the history of medicine in the United States from the colonial period to the present.
267. History of American Medicine. (1/2 course) One hour per week in the spring quarter. Survey of the history of medicine in the United States from the colonial period to the present.
268. History of American Medicine. (1/2 course) One hour per week in the spring quarter. Survey of the history of medicine in the United States from the colonial period to the present.
269. History of American Medicine. (1/2 course) One hour per week in the spring quarter. Survey of the history of medicine in the United States from the colonial period to the present.

Individual Study and Research

588. Directed Individual Study or Research. (1/2 courses to 3 courses)
597. Preparation for the Master's Comprehensive Examination or the Doctoral Qualifying Examination. (1/2 course to 3 courses)
598. Thesis Research for Master's Candidates. (1/2 course to 3 courses)
599. Dissertation Research for Ph.D. Candidates. (1/2 course to 3 courses)

Anesthesiology

(Office, 56-125 Health Sciences Center)

Robert O. Bauer, M.D., Professor of Anesthesiology and Pharmacology.
J. Welton Bellville, M.D., Professor of Anesthesiology.
Walter Comer, M.D., Adjunct Professor of Anesthesiology.
Edward Deland, Ph.D., Adjunct Professor of Anesthesiology.
Werner E. Flacke, M.D., Professor of Anesthesiology in Residence.
Ronald L. Katz, M.D., Professor of Anesthesiology (Chair of the Department).
Lawrence Kruger, Ph.D., Professor of Anesthesiology and Anatomy.
Richard Patterson, M.D., Professor of Anesthesiology.
Eduardo Rubinstein, M.D., Ph.D., Professor of Anesthesiology and Physiology in Residence.
Stuart F. Sullivan, M.D., Professor of Anesthesiology (Executive Vice Chair of the Department).
Leonard C. Wais, M.D., Professor of Anesthesiology.
John B. Dillon, M.D., Emeritus Professor of Anesthesiology.
Joan W. Flacke, M.D., Adjunct Associate Professor of Anesthesiology.
Ching-Muh Lee, M.D., Associate Professor of Anesthesiology.
Jordan D. Miller, M.D., Associate Professor of Anesthesiology.
Robert C. Reynolds, M.D., Ph.D., Associate Professor of Anesthesiology.
Joseph Cadran, M.D., Assistant Clinical Professor of Anesthesiology.
Salma H. Calma, M.D., Assistant Professor of Anesthesiology in Residence.
Kenneth A. Conklin, M.D., Ph.D., Assistant Professor of Anesthesiology.
Theresa Ferrer-Brechner, M.D., Adjunct Associate Professor of Anesthesiology.

George P. Herr, M.D., Adjunct Associate Professor of Anesthesiology.
Kumiko Iwamoto, M.D., Assistant Professor of Anesthesiology.
Robert D. Kaufman, M.D., Assistant Professor of Anesthesiology.
Richard J. Kroening, M.D., Adjunct Associate Professor of Anesthesiology and Dentistry.
Arnold Lea, Adjunct Assistant Professor of Anesthesiology.
Stanley Schneider, M.D., Assistant Clinical Professor of Anesthesiology.
Janice Silverton, M.D., Adjunct Assistant Professor of Anesthesiology.
Young-Zin Sohn, M.D., Adjunct Assistant Professor of Anesthesiology.
Susan Ward, Ph.D., Assistant Professor of Anesthesiology in Residence.

John DeAngelis, M.D., Clinical Instructor of Anesthesiology.
Vladimir Golovitch, M.D., Assistant Researcher in Anesthesiology.
Emil Hackow, M.D., Clinical Instructor of Anesthesiology.
Leon E. Katz, GRNA, B.S.N., M.A., Adjunct Associate Professor of Anesthesiology.
Felice Miller, Ph.D., Clinical Instructor of Anesthesiology.
Ronald Wender, M.D., Clinical Instructor of Anesthesiology.

The Master of Science Degree (Nurse Anesthesia)

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 anesthesia and the teaching of nurse anesthesia with the opportunity for participating in research in the area.

Admission Requirements

1. Graduation from an accredited nursing program satisfactory to the Program of Nurse Anesthesia and the UCLA Graduate Division. Students may be required to enroll in certain additional undergraduate courses prior to final consideration of the application by the Program.
2. 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.
3. Completion of a minimum of one year experience as a graduate nurse in an acute care area of nursing, preferably an intensive care unit.
4. Professional and academic competence attested through three letters of recommendation.
5. Graduate record examination aptitude test results submitted to the Program of Nurse Anesthesia.
Course Requirements.

Total courses required for the degree: 13¼
Total graduate courses required for the degree: 13¼


Thesis or Comprehensive Examination Plan

Written Qualifying Examination: A student may elect either an oral comprehensive examination or a prepared thesis option for degree completion. Each student shall take a written comprehensive examination for course completion, regardless of his/her choice of options. Thesis Plan: The 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 the second year. The thesis committee consists of a minimum of three Department members.

Oral Qualifying Examination: Students electing this option will have demonstrated didactic and clinical competence in the field, and completed selected Physiology or Pharmacology and Education courses. The Graduate Division will be notified of the readiness for the examination and the Committee for Examination will consist of: Chair, Department of Anesthesiology and two additional faculty members, at least one representing a related field such as physiology, anatomy or pharmacology.

Students electing the oral examination option 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. Examinations are offered quarterly.

Time to Degree. Eight quarters

500 Series Course Limitations. Completion of 587, Preparation for the Comprehensive Examination, or 588A and 588B, Research in Anesthesia, are required for program completion. 588A may be repeated two times but only two of the courses will count toward the degree. Letter grading is utilized in 500 series courses.

Disqualification and Appeal of Disqualification: The Program reserves the right to dismiss any student who appears academically, clinically and/or personally unable to carry out the professional responsibility of the nurse anesthetist. The didactic portion of the curriculum follows UCLA academic requirements and conditions under which students are subject to academic dismissal are those found in the UCLA Graduate Catalog. For the clinical portion of the program, courses (400A, B, C, D, E, F, G) the clinical evaluation committee of the Department recommends dismissal to the Program Director and Department Chair. They will review the recommendation with the student and determine subsequent action which may include dismissal. The Department maintains documentation of all clinical and didactic work. Each student is evaluated on a trimestly basis in written form. An appeal process is available within the Department and terminates in a due process committee which includes outside representation. All students must maintain a GPA of 3.0 in order to remain in good academic standing.

Other relevant information.

1. It is necessary that students complete all didactic and clinical work to earn the Master of Science degree.

2. The Program does not discriminate on the basis of race, color, national origin, religion, sex or handicap unless the handicap is determined by the Select Committee to be of such nature as to preclude the safe clinical practice of anesthesia.

3. All students must complete a minimum of 550 cases as the primary anesthetist for program completion.

4. All students 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. (½ course) Lecture, two hours; discussion, one hour. A study of the principles of chemistry and physics as applied specifically to the practice of anesthesia.

Mr. Katz

210B. Chemistry and Physics of Nurse Anesthesia II. (½ course) Lecture, two hours; discussion, one hour. Prerequisite: Chemistry and Physics of Nurse Anesthesia I. A continuation of the study of the principles of chemistry and physics as applied specifically to the practice of anesthesia.

Mr. Katz

210C. Chemistry and Physics of Nurse Anesthesia III. (½ course) Lecture, two hours; discussion, one hour. Prerequisite: Chemistry and Physics of Nurse Anesthesia II. 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.

Mr. Katz

215A. Pharmacology of Nurse Anesthesia I. (½ course) 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 toxicity as related to anesthetic agents.

Mr. Fleck

220A. Respiratory Anatomy and Physiology for Nurse Anesthetists I. (½ course) 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.

Mr. Ward

220B. Respiratory Anatomy and Physiology for Nurse Anesthetists II. (½ course) 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.

Mr. Ward

220C. Respiratory Anatomy and Physiology for Nurse Anesthetists III (½ course) Lecture, two hours; discussion, one hour. A continuation of the study of respiratory anatomy and physiology as related to anesthesia administration and relevant problems.

Mr. Ward
221. Cardiovascular Anatomy and Physiology for Nurse Anesthetists. (1/4 course) Lecture, four hours; laboratory, one hour. An integrated study of the anatomy and physiology of the C.V. system as related to the management of anesthesia administration. Mr. Katz

5222. Biological Control Systems. (Same as System Science M2222) Lecture, four hours. Prerequisite: Engineering 1222A 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 respiratory, cardiovascular, and excretory systems on scientific research and the management of current interest in biomedicine. Mr. Wilberg (Sp)

223. Anatomy and Physiology of the Endocrine and Excretory System for Nurse Anesthetists. Lecture, four hours; laboratory, one to two hours. An integrated study of the endocrine and excretory systems as related to the management of anesthesia administration. Mr. Katz

225. Anatomy and Physiology of the Nervous System for Nurse Anesthetists. Lecture, four hours; discussion, one to two hours. An integrated study of the anatomy and physiology of the nervous system as it relates to the management of anesthesia administration. Mr. Skolnick

597. Preparation for the Master's Oral Qualifying Examination. (1/4 course) Prerequisite: consent of instructor. Opportunity to present comprehensive study in anesthesia and related areas on an individual basis with the opportunity for discussion of the material with the instructor. Mr. Katz

598A. Research in Anesthesia I. (1/4 course) Prerequisite: consent of instructor. Opportunity is presented to pursue anesthetics research projects 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 Master's Program. Mr. Katz

598B. Research in Anesthesia II. (1/4 course) Prerequisite: Research in Anesthesia I. Opportunity is presented to pursue anesthetics research projects 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 Master's Program. May be repeated two times with credit. Mr. Katz

Anthropology

(Office, 341 Haines Hall)

Christopher Donnan, Ph.D., Professor of Anthropology

Walter R. Goldschmidt, Ph.D., Professor of Anthropology

Paul Hammond, Ph.D., Professor of Anthropology

James N. Hill, Ph.D., Professor of Anthropology

Allen W. Johnson, Ph.D., Professor of Anthropology

Jacques Maquet, Ph.D., Professor of Anthropology (Chair of the Department)

Clement W. McGuire, Ph.D., Professor of Anthropology

Michael Moerman, Ph.D., Professor of Anthropology

Harry B. Nicholson, Ph.D., Professor of Anthropology

Wendell H. Oswalt, Ph.D., Professor of Anthropology

James R. Sackett, Ph.D., Professor of Anthropology

Johanne Wilbert, Ph.D., Professor of Anthropology

Bobby J. Williams, Ph.D., Professor of Anthropology

Ralph L. Wolfe, Ph.D., Emeritus Professor of Anthropology

Joseph B. Birdsell, Ph.D., Emeritus Professor of Anthropology

Hilda Langer, Ph.D., Emeritus Professor of Anthropology

William A. Lessa, Ph.D., Emeritus Professor of Anthropology

Timothy Earle, Ph.D., Associate Professor of Anthropology

Claudia Mitchell-Kernan, Ph.D., Associate Professor of Anthropology

Philip L. Newman, Ph.D., Associate Professor of Anthropology

Dwight Reed, Ph.D., Associate Professor of Anthropology

Jennie Joe, Ph.D., Assistant Professor of Anthropology

Gail E. Kennedy, Ph.D., Assistant Professor of Anthropology

Paul Krasky, Ph.D., Assistant Professor of Anthropology

Nance L. Levine, Ph.D., Assistant Professor of Anthropology

Eugene L. Mendonsa, Ph.D., Assistant Professor of Anthropology

Robert H. Marshall, Ph.D., Assistant Professor of Anthropology

Dorothy Cheney Seyfarth, Ph.D., Assistant Professor of Anthropology

Robert M. Seyfarth, Ph.D., Assistant Professor of Anthropology

Carlos G. Velazquez, Ph.D., Assistant Professor of Anthropology

Nicholas Blurton Jones, Ph.D., Professor of Anthropology and Education

C. Rainer Berger, Ph.D., Professor of Anthropology, Geography, and Geophysics

William O. Bright, Ph.D., Professor of Linguistics and Anthropology

Pamela J. Birk, Ph.D., Associate Professor, School of Nursing and Anthropology

Bernard G. Campbell, Ph.D., Adjunct Professor of Anthropology

Brian Dillon, Ph.D., Lecturer in Anthropology

Robert B. Edgerton, Ph.D., Professor of Anthropology and Psychiatry

John G. Kennedy, Ph.D., Professor of Psychiatry

L. L. Langeme, Ph.D., Professor of Anthropology and Psychiatry

Donald G. Lindburg, Ph.D., Adjunct Associate Professor of Anthropology

Larry Mai, Ph.D., Adjunct Assistant Professor of Anthropology and Surgery Orthopedics

Merrick Ponsa, Ph.D., Professor of History and Anthropology

Douglas Price-Williams, Ph.D., Professor of Anthropology

Gerardo Reichel-Dolmatoff, Ph.D., Adjunct Professor of Anthropology

Susan Scrimshaw, Ph.D., Associate Professor of Anthropology and Public Health

Hiroshi Watanabe, Ph.D., Adjunct Professor of Anthropology

Thomas S. Weilander, Ph.D., Associate Professor of Anthropology and Psychiatry

Major Fields. Anthropology is unusual in the modern scholarly world in its breadth of interest, ranging from the strictly biological through the social sciences to humanistic studies. The Department recognizes five fields as follows:

1) Archaeological studies the cultures of the past on the basis of the material evidence left in the ground; 2) Biological Anthropology studies the evolution of man, the biological background to human behavior and the genetic diversity of mankind; 3) Cultural Anthropology studies ideational systems such as religious beliefs, philosophical conceptions, world views, arts and technologies, as transmitted from generation to generation; psychological anthropology and symbolic studies are especially emphasized; 4) Linguistic Anthropology examines the diversity of languages and other communicative systems, the sociocultural patterning of their use, and the role of language and linguistics in anthropological theory and method; and 5) Social Anthropology studies the structure of human communities and institutionalized social interaction systems.

Students taking advanced degrees in Anthropology are expected to have a basic background in these five fields (see M.A. requirements).

Four other categories of course offerings are recognized by the Department, courses which are not limited to one field.

Program for Psycho-Cultural Studies is an interdisciplinary approach blending psychological anthropology and cross cultural psychology.
Regional Cultures includes courses which describe the contemporary cultures and civilizations of major areas of the world.

The Anthropology of Social Action includes those courses that direct attention to the anthropological understanding of diverse matters pertaining to critical issues in the contemporary world and program of change. The following topics are included: development in Third World countries, health issues, ethnic relations, and the roles of women in society.

History and Theory are courses that deal in depth with the history of anthropological thought and problems of anthropological methods of research (as distinct from courses in fieldwork or laboratory methods special to the several fields).

Admission Requirements. Admission to the graduate program in Anthropology is ordinarily restricted to the Fall Quarter. In the event you wish to make application and be considered 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 the student’s 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 students who have a record showing such completion 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:

Fall Quarter 1983 — December 30, 1982
Winter Quarter 1984 — October 1, 1983
Spring Quarter 1984 — December 30, 1983

The following documents must be received by Graduate Admissions, Graduate Division, 1247 Murphy Hall, UCLA, Los Angeles, California, 90024:

1. Official Application.
2. Official transcripts of record, in duplicate, from each college or university at which work has been completed.
3. Statement of Purpose.

In addition to the documents required by the University, students must submit directly to the Graduate Counselor, Department of Anthropology, 341 Haines Hall, Los Angeles, California, 90024:

1. Three letters of recommendation (preferably from Anthropologists).
2. GRE Scores.
3. Research of Term Paper.

Once the applicant’s file is complete it is submitted to the Departmental Admissions Committee. This committee reviews the file and forwards it to faculty members with related intellectual interests for sponsorship into the graduate program. The Department requires the sponsorship of two faculty members before a student is accepted. Upon departmental acceptance into our program, the recommendation is forwarded to the Graduate Admissions Office and the applicant will be officially notified by the Dean of the Graduate Division.

For further information on the departmental program, in general, a graduate syllabus is available which may be obtained without charge by writing to the above departmental address.

Disqualification and Appeal of Disqualification. A graduate student failing to maintain the University scholarship requirements, or the Departmental degree requirements will be recommended for termination from graduate status to the Dean of the Graduate Division. This recommendation will be made by the Chair of the Department after a vote of the faculty at the quarterly student review. Before the recommendation is sent to the Dean of the Graduate Division, the student will be notified and given two weeks (upon receipt of the notification) to respond to the decision in writing to the Chair. The matter will be reviewed by the Departmental Executive Committee which will make the final Departmental recommendation to the Dean.

The Master of Arts Degree

Advising. All questions regarding graduate admissions and graduate student procedures are handled by the Graduate Counselor (Department of Anthropology, 341 Haines Hall, (213) 825-2511).

The student is expected to contact his or her sponsors upon arrival to the Department to consult with them on guidance and formulating a program of courses. One of the sponsors will serve as chair of the M.A. Guidance Committee, and must thereafter be consulted at least once each quarter for evaluation of progress and approval of the Study List. The Committee chair (or if unavailable, the other sponsor or alternate committee member) must sign the official Study List Card to signify approval of the student’s program at the beginning of each quarter. By the second quarter of residence, the student is expected to have selected a committee of three faculty members, at least one of whom must have the rank of Associate or Full Professor, to serve on the M.A. Guidance Committee.

This Guidance Committee is responsible for assisting the student in his or her progress toward the M.A. degree. It advises the student with respect to course program, evaluates the M.A. Examination, helps in the formulation of the student’s M.A. paper and evaluates it, and finally recommends to the Department Faculty whether the student should be awarded the M.A., be admitted to the Ph.D. program, or be terminated. The Department, at the quarterly student review, makes the decision on these matters. The student will be notified of the departmental action by mail.

Students may at any time request changes in the membership of their Guidance Committee by formal written request. Approval of such a request requires written consent of both the newly added and the replaced committee member.

The Graduate Counselor maintains a file on each student which includes the materials submitted in the application, course grades and individual evaluations submitted by faculty members and all actions taken that fulfill requirements for the degree.

It is the student’s responsibility to ensure that the materials listed below have been submitted to the Graduate Counselor:

1. The current composition of the M.A. Guidance Committee;
2. The departmental form indicating how the M.A. language requirement was fulfilled;
3. Advancement to Candidacy form indicating coursework completed;
4. The M.A. research paper and signature page.

The file will be open to students on written request to the Chair of the Department.

Foreign Language Requirement. M.A. language requirements for foreign language competency may be met by:

1. Passing the Educational Testing Services (ETS) examination in a foreign language with a score of 500 or better (may be taken at any time including undergraduate years);
2. Other demonstrations of proficiency in a foreign language by petition to the Chair, Department of Anthropology. Such demonstrations may require examination by examiners within or outside the Department of Anthropology. Bases for acceptable petitions include language training in the National Defense Institute, State Department, or Peace Corps, successful work in foreign universities in which the teaching is in another language, or other evidence that the student has foreign language proficiency.

Students whose native language is not English may petition to have the requirement waived. They are in effect credited with English as a second language. Formal written application for such waiver should be submitted to the student’s Guidance Committee.

Core Course Requirements. Students may demonstrate their basic knowledge in the five fields by: 1) taking (either as undergraduates or graduates) the core course with a passing grade of B or better, 2) by petition that work taken elsewhere constitutes the equivalent of such courses, or 3) by passing a special examination in each, in the spring quarter of their first year in residence. Courses taken while in graduate status 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 two courses (8 units) per quarter, but it is highly recommended that students take
three courses a quarter (12 units). An M.A. degree requires nine courses (36 units) with at least a 3.0 grade point average. All of the nine courses for the M.A. must be taken for a letter grade.

1. Four courses may be upper division (100 series);
2. At least five must be graduate seminars (200 series);
3. Three courses may be outside the major with the approval of the student's Guidance Committee;
4. Two courses may be anthropology independent studies (see Department for course numbers) with the approval of the student's committee.

Master's Examination and Research Paper. The Department Master's Degree Program is on the Comprehensive Examination Plan. The examination consists of two parts: 1) a written one-day examination and 2) a master's paper. The Written Examination. Each M.A. candidate must pass an examination in one of the five Fields to demonstrate competence and intellectual promise in the field of the student's specialization. This examination is to be taken in the third quarter of residence and may be taken a second time the following year, if a student fails to pass on the first attempt. The M.A. examination for each Field will be written by those faculty members identified with the Field; but each student's examination will be evaluated by his or her M.A. Guidance Committee.

The Master's Paper. Each student is to submit the original paper based on field, laboratory or library research. This paper is due by the end of the student's fifth quarter of residence. The paper is intended to demonstrate the student's ability to generate or assemble a body of data, analyze it and indicate its relevance to established anthropological thought, and to demonstrate the student's ability to write lucid prose. The final paper should not exceed 40 pages in length and shall be presented in a form suitable for journal publication. The student's Guidance Committee is responsible for assisting the student in formulating a research paper, monitoring its progress, and evaluating the paper when submitted. In this assignment, students are urged to work closely with their advisor, within the constraints in time and resources available to them.

Time to Degree. Normal progress toward the degree is as follows:

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Expected by end of</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.A. Examination</td>
<td>3rd quarter</td>
</tr>
<tr>
<td>Core Course Requirements</td>
<td>3rd quarter</td>
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<tr>
<td>(if needed)</td>
<td></td>
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<tr>
<td>M.A. Language</td>
<td>5th quarter</td>
</tr>
<tr>
<td>M.A. Research Paper</td>
<td>5th quarter</td>
</tr>
<tr>
<td>36 units coursework</td>
<td>6th quarter</td>
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</tbody>
</table>

*must be completed before advancement to candidacy to the M.A. Degree.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Unit Value</th>
<th>Type of Grading</th>
</tr>
</thead>
<tbody>
<tr>
<td>596</td>
<td>4-8</td>
<td>grade or S/U</td>
</tr>
<tr>
<td>598</td>
<td>4-8</td>
<td>S/U only</td>
</tr>
</tbody>
</table>

Eight units of 596 taken for a letter grade may apply toward the total course requirement for the M.A. with 4 of these units applicable to the minimum graduate course requirement.

Students Entering with M.A. Degree. Students entering the Department with an M.A. in Anthropology from another university or in a field other than anthropology will be expected to demonstrate their competence in the five Fields, take the M.A. examination, establish their competence in a foreign language and submit a master's paper, but have no course responsibilities with respect to the M.A. degree. Such students may submit their prior master's thesis or a research paper written as a graduate student (member of the anthropology) to fulfill this requirement, for evaluation by their M.A. Guidance Committee. Only after satisfying these requirements will a student be admitted into the Ph.D. program.

The Ph.D. Degree

Advising. All questions regarding graduate admissions and graduate student procedures are handled by the Graduate Counselor (Department of Anthropology, 341 Haines Hall, (213) 825-2511).

Students who have completed the M.A. requirements and have been recommended for the Ph.D. program will nominate the three members of the Departmental Doctoral Committee (at least one of whom must have the rank of Associate or Full Professor). This new committee may, but need not, consist of the same faculty members as the M.A. Guidance Committee. This committee supervises the Ph.D. language requirement and administers the Written Qualifying Examinations. A student may change the membership of the Departmental Doctoral Committee by formal written request, providing that both the faculty members leaving and joining the committee approve the change in writing.

Each student's program must be approved by the chair of the student's Departmental Committee (or if unavailable, by another member of the Committee), who must sign the student's official Study List Card.

After fulfilling the Ph.D. level foreign language requirement (preferably by the third quarter of post M.A. residency), the student nominates the 5-person Ph.D. Doctoral Committee consisting of the three departmental members and two members from other departments. This must first be done informally on a departmental form and submitted to the faculty for approval, after which the committee is formally nominated to the Dean of the Graduate Division, who officially appoints it. The Committee assesses the student's overall progress, administers the Ph.D. Oral Qualifying Examination, supervises the student's dissertation research, and administers the Final Oral Examination upon completion of the dissertation.

Foreign Language Requirement. The student must satisfy the Ph.D. language requirement before formally nominating the 5-member Ph.D. Committee and before taking the Qualifying Examinations. Any language useful for field study and/or library research is acceptable, and the format of the examination is determined by the student's Departmental Doctoral Committee. The student must submit to his or her committee a comprehensive annotated bibliography, constituting a corpus of works relevant to his or her field of specialization and must demonstrate familiarity with the content of the bibliography by taking a written or oral examination. Students who speak English as a second language may waive the language requirement by petition with the approval of their Departmental Doctoral Committee. Under unusual circumstances, the Department will consider alternate means of fulfilling the requirement by petition to the Departmental Doctoral Committee, the Department Chair, and the Dean of the Graduate Division. The annotated bibliography and examination must be placed in the student's file.

Course Requirements. The student must be in residence for one year between receipt of the M.A. degree and advancement to candidacy. During this time, coursework must be done with at least three different members of the faculty. Students must be enrolled in a minimum of 8 units at all times unless on an official leave of absence.

Written and Oral Examinations. The timing of the qualifying examinations will be set by the student in consultation with members of the Doctoral Committee. It may not take place earlier than the third quarter after receiving the M.A. degree. The Written Qualifying Examination is conducted by the 3-member Anthropology Doctoral Committee who will examine the student in three subfields of his or her choice. Two of these three subfields will be drawn from a list of subfields available in the Department; the third will be specific to the needs and interests of the student and the dissertation plans that have been formulated. All students will be expected to have competence in general anthropological theory. The Department does not require this to be a closed book examination. The format of the examination is to be determined by the Departmental Doctoral Committee and might consist of sets of timed examinations administered in the Department, take home examinations, or sets of questions selected from a list previously known to the student. Written examinations must be completed at least four weeks prior to the last day of instruction in a quarter, and taken no less than two weeks prior to the Oral Qualifying Examinations. Students must submit the original and three copies of the written examinations to the Department Counselor who will distribute
them to the student's committee. Each committee member must read and evaluate the entire examination, not just the questions in his or her own field, and this must be done within one week after receiving them. After consultation, the committee members for the written examination must make a unanimous decision as to whether the examination is to be graded pass or not pass. This decision will be reported on the departmental Written Qualifying Examination report. Upon successful completion of this examination, the student's Doctoral Committee (including outside members) administers the Oral Qualifying Examination to the student. The committee determines the conditions for reexamination should the student fail either examination.

Final Oral Examination Following Completion of the Dissertation. This examination is required of all candidates and is administered by the Doctoral Committee. It focuses on the student's dissertation. The examination shall be open to faculty and students. The Final Oral Examination may be waived by petition to the Graduate Division with the approval of the student's Doctoral Committee.

Time to Degree. For a full-time student admitted without deficiencies, normal progress after receiving an M.A. degree is considered to be:

- Required: 1 1/2 year
- Degree: 1 year

- Other Relevant Information. Graduate students are encouraged to participate in the Graduate Student Association which plays an important part in curriculum planning, speakers programs and departmental administration. The graduate students of Anthropology also publish Anthropology UCLA, a journal and Crossroads, a graduate student newsletter. The Department has a typing room and reading room with a large selection of anthropological journals. Participation in the Institute of Archaeology and the Museum of Cultural History is also encouraged.

*Graduate Courses

Admission to all graduate courses is subject to the instructor's approval and completion of appropriate course requirements (when so indicated). Graduate courses are normally non-repetitive in content and may be repeated for credit with the consent of instructor and approval of the Graduate Counselor.

210-219. Archaeology

210. Analytical Methods in Archaeological Studies. (Formerly numbered 210A.) Prerequisite: one quarter of statistics and consent of instructor. This course will cover data analysis procedures in archaeology. The emphasis will be on the conceptual framework for the analysis of archaeological data. It will begin at the level of the attribute and end at the level of the region. Mr. Read

211. Regional Analysis in Archaeology. (Formerly numbered 210B.) Prerequisite: consent of instructor. Anthropology 210P (formerly numbered 210A) is not a prerequisite for this course. This course surveys the existing analytical geography models to prehistoric settlement systems. Specific issues addressed include settlement distribution with respect to natural resources, settlement hierarchy and patterns of exchange. Mr. Feurdean

212P. Selected Topics in Hunter-Gatherer Archaeology. (Formerly numbered 214E.) Prerequisite: consent of instructor. Regional studies in the development of early human culture. This course may be repeated for credit. Mr. Meighan

212Q. Problems in Southwestern Archaeology. (Formerly numbered 206.) 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 will vary with each course offering. This course may be repeated for credit. Mr. Hill

213. Selected Topics in Problems in Old World Archaeology. (Formerly numbered 214F.) Prerequisite: consent of instructor. This course may be repeated for credit. Mr. Sackett

214. Selected Topics in Prehistoric Civilizations of the New World. (Formerly numbered 214G.) Prerequisite: consent of instructor. The Mesoamerican and Andean civilizations will normally constitute the major focus of the seminar. This course may be repeated for credit. Mr. Donnan, Mr. Nicholson

215. Field Training in Archaeology. (1 to 2 courses) (Formerly numbered 214J.) Prerequisite: previous experience in archaeology. Advanced training in archaeological excavation techniques, including organization of projects, supervision of field crews, methodology of field recording and preliminary analysis of field data. This course may be repeated for credit. Mr. Meighan

216. Dating Techniques in Environmental Sciences and Archaeology. (Formerly numbered 214I.) (Same as Geography M278.) Lecture, three hours. Prerequisite: consent of instructor. A course devoted to topics in dating techniques in environmental sciences, archaeology, and biological anthropology as well as laboratory instruction and experimental work. This course may be repeated for credit. Mr. Berge

217. Explanation of Societal Changes. (Formerly numbered 234.) 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 sources. Specific research questions will vary with each course offering. This course may be repeated for credit. Mr. Hill

218. Historical Reconstruction and Archaeology. (Formerly numbered 214H.) Prerequisite: consent of instructor. Development and interpretation of historical archaeology through archaeological research. Application of ethnohistory to archaeological problems. This course may be repeated for credit. Mr. Meighan, Mr. Nicholson

M219A-M219B. Graduate Core Seminar in Archaeology. (Same as Anthropology 210A-210B.) Seminar discussions based on a carefully selected list of 30-40 major archaeological works. These core courses provide the student with a foundation in the breadth of knowledge required by a professional archaeologist. The course comprises archaeological historiography, a survey of world archaeology and archaeological techniques. Emphasis will be placed on an understanding of the major background of modern archaeology and of the relevant interpretative strategies. This course is required of all Archaeology graduate students in Anthropology.

220-226. Biological Anthropology

220. Current Problems in Biological Anthropology. Prerequisite: consent of instructor. A detailed examination of current research in Biological Anthropology. Topics will vary with the interests and expertise of the instructor. Mr. Kennedy

*222A. Population Genetics II. (Formerly numbered M222A.) Prerequisite: consent of instructor. An introductory course in statistics. The study of population concepts, probability, the conditions of gene frequency equilibrium and factoring causing gene frequency change. Mr. Williams

*M2220. Probability Models and Statistical Methods in Genetics. (Formerly numbered M222B.) (Same as Biometrics M426.) Lecture, three hours. Prerequisites: Graduate Standing, two quarters of statistics, Mathematics 3A, Anthropology 222P (formerly numbered 222A). An introduction to probability models and statistical methods in genetics. Maximum likelihood methods for estimating genetic parameters will be introduced and discussed in detail. This course is a prerequisite for Anthropology 222R, (formerly numbered 222C). Mr. Read

*M222R. Modeling in Genetic Analysis. (Formerly numbered M222C.) Lecture, three hours. Prerequisites: Graduate Standing, Anthropology M222Q (formerly numbered M222B) 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. Mr. Spence

2225. Population Genetics. (Formerly numbered 229E.) Prerequisite: consent of instructor. A consideration of some of the special methods of the genetics of human populations and their current applications in research. This course may be repeated for credit. Mr. Williams

223. The Roots of Human Behavior. (Formerly numbered 281.) Prerequisite: consent of instructor. An examination of the behavior of living non-human primates and of the evolution and biological basis of human behavior. This course may be repeated for credit. Mr. Williams

*M224. Selected Topics in Field Training in Biological Anthropology. Prerequisite: consent of instructor. Examination of current techniques and courses offered in student and faculty field research. Emphasis upon new approaches to field and field-oriented laboratory investigations of primate ecology, behavior, anatomy, physiology and evolution. Specific topics to be announced. This course may be repeated for credit. Mr. Russell
246. Research Design and Field Training in Linguistic Anthropology. (Formerly numbered 204A.) Prerequisite: consent of instructor. Students will spend full time in the field for most of the period. Graded S/U or letter grade. This course may be repeated for credit.

247. Analysis of Linguistic Field Data. Prerequisite: course 246 (formerly number 204A), 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. Students will work with their own as well as general project data in the preparation of articles for professional journals. Graded S/U or letter grade. This course may be repeated for credit.

M247A. Ethnographic Films, (Same as Theater Arts M240C). Prerequisite: consent of instructor. The ethnographic film as a form of realism cinema and its relations to cultural anthropology. Offered in the Fall Quarter.

Mr. Hawkins, Mr. Moerman

248. Practicum in a Field Language (1 to 2 courses). (Formerly numbered 266.) Prerequisite: consent of instructor. Intensive training in an indigenous language as preparation for work in the field.

250-258. Social Anthropology

250. Social Anthropology. (Formerly numbered 231.) Prerequisite: consent of instructor. Intensive examination of current theoretical views and literature. Mr. Merdonsa

251P. Cultural Ecology. (Formerly numbered 258H-F.) Prerequisite: consent of instructor. This course may be repeated for credit. Mr. Johnsen

251Q. Cultural Ecology of Lowland South America. (Formerly numbered 251.) Prerequisite: consent of instructor. Seminar on traditional adaptations to the tropical environment, with special emphasis on 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. (Formerly numbered 237.) 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. Prerequisites to be selected in consultation with the instructor. Graded S/U or letter grade. This course may be repeated for credit.

253. Economic Anthropology. (Formerly numbered 205L.) Prerequisite: consent of instructor. This course may be repeated for credit. Ms. Levine, Mr. Mandonsa

254. Comparative Political Institutions. (Formerly numbered 260L.) Prerequisite: consent of instructor. This course may be repeated for credit. Mr. Mandonsa

257. Social Interaction. (Formerly numbered 270F.) Prerequisite: consent of instructor. The course will focus 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. This course may be repeated for credit. Mr. Moerman

258. Comparative Studies of Intentional Communities. (Formerly numbered 268S.) Prerequisite: Anthropology 157 or consent of instructor. Questions concerning the social and cultural significance of intentional communities will be selected and discussed in depth with reference to particular collectivities. This course may be repeated for credit. Mr. Maquet

260-270. Anthropology for Social Action

260. Urban Anthropology. (Formerly numbered 236.) Prerequisite: Anthropology 167 (formerly numbered 160) or consent of instructor. An intensive anthropological examination of the urban setting as a human environment.

261. Comparative Minority Relations. (Formerly numbered 259H.) Prerequisite: consent of instructor. An analysis of the major theoretical and methodological issues in the study of minority relations from a comparative perspective. Consensus, conflict and pluralistic constructs will be analyzed and their strengths as explanatory devices investigated as they pertain to dependent populations in North America, Latin America, South Africa, and to asylum-seekers from the Euro-Scandinavian continent. This course may be repeated for credit.

Mr. Velez-I

262. The Cultural Context of Health Care. (Formerly numbered 241.) Prerequisite: consent of instructor. Concepts and theories of illness and disease in cross-cultural perspectives, with an emphasis on research problems and methods. The course introduces the anthropological approach to health-related research, then explores the interactions of anthropology and problem areas in public health and psychiatry (such as epidemiology, fertility regulation, socialization, and developmental disabilities).

Mr. Johnson

263. Medical Anthropology. (Formerly numbered 259M-N.) (Same as Nursing M217.) Prerequisite: course M158 (formerly M156) or consent of instructor. Any of the topics covered in upper division course M158 will be selected each quarter, for intensive literature review and independent projects. This course may be repeated for credit. Ms. Brink

264. Ethnography of the Mexican/Chicano People in North America. (Formerly numbered 269Z.) Prerequisite: Graduate Standing or consent of instructor. Prerequisite: Anthropology 172T (formerly numbered 106G) but it is not imperative. A graduate research course on topics in the ethnography of the Mexican/Chicano people in North America. Topics may include the following: social organization, economic and political systems, belief and value system, linguistic and expressive adaptations, and individuals and their cultural contexts. Topics will vary according to interest and the instructor. This course may be repeated for credit. Mr. Velez-I

265. Public Archaeology. Prerequisite: consent of instructor. Archaeology as part of the national heritage, both in the U.S. and other countries. Legal, ethical, cultural, and scholarly aspects of salvage and non-consent archaeology. Designed for researchers and managers of cultural resources. Mr. Melgham

M267B-M267C. Ethnographic Film Direction. (1 to 2 courses) (Formerly numbered M248B-M249C.) [Space available for repeated courses] Prerequisite: course M248C, Graduate Standing and consent of instructor. Advanced study of problems in the production of ethnographic films. M267B is offered in the Winter Quarter and M267C is offered in the Spring Quarter.

Mr. Hawkins, Mr. Moerman

270E. Legal Anthropology. (Same as Law M252.) Prerequisites: Anthropology M222 (Law M152) Anthropological Approaches to Law or consent of instructor. An intensive examination of a particular aspect of law. Mr. Moore

271-274. Regional Cultures

271. African Cultures. (Formerly numbered 254.) Prerequisite: consent of instructor. Survey of literature and problems of African culture. Mr. Mandonsa

M272. Indians of South America. (Formerly numbered 250A.) (Same as Latin-American Studies M250A.) Lecture, three hours. Prerequisite: consent of instructor. Survey of the literature and current topics related to Indian cultures of South America. This course may be repeated for credit. Mr. Mitber

273. Cultures of the Middle East. (Formerly numbered 255.) Prerequisite: course 176 (formerly numbered 110) or consent of instructor. Survey literature and problems of the various cultures of the Middle East.

Mr. Newman

274. Cultures of the Pacific Islands. (Formerly numbered 269Y.) Prerequisite: consent of instructor. Topics in the contemporary sociocultural anthropology, and classic ethnography for Melanesia, Polynesia, and Micronesia. This course may be repeated for credit.

Mr. Newman

280-283. History and Theory

280. Anthropology Theory. (Formerly numbered 230A-230B.) Prerequisite: Anthropology Graduate Standing or consent of instructor. This 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 will be explored. Emphasis will be placed on understanding examples of different theoretical perspectives. Major perspectives to be considered include the following: Evolutionism, Cultural Ecology, British Functionalism, French Functionalism, Socialism, Cultural and Personality, Psychology, Ethnology, Anthropology (Freudian, Neo-Freudian, non-Freudian), Behavioral Anthropology, Cognitive Anthropology and Ethnomasculism.

Mr. Johnson

281. Selected Topics in the History of Anthropology. Prerequisite: consent of instructor. This seminar will be devoted to specific topics in the history of anthropology as dictated by the interests of students and faculty. This course may be repeated for credit.

282. Research Design in Cultural Anthropology. (Formerly numbered 269E.) Prerequisite: consent of instructor. Primarily intended for graduate students preparing for fieldwork. The unique position of anthropology among the sciences and the research problems and scientific research design are discussed. Lectures are devoted to specific reseach problems and appropriate methods. Students prepare their own research designs and present them for class discussion.

Mr. Johnson

283. Mathematical Models in Anthropology. (Formerly numbered 292.) Prerequisite: consent of instructor. The course will be organized around current topics and issues in mathematical anthropology. An overview of a variety of mathematical approaches related to theory, systems theory, decision theory, Markov processes, etc., will be presented and discussed.

Mr. Read

291. The Roots of Human Behavior. (Formerly numbered 299.) Prerequisite: consent of instructors. An examination of the behavior of living non-human primates and of the evolution and biological basis of human behavior.

501-599. Individual Studies/Research Courses

501. Cooperative Program. (1/2 to 2 courses) Prerequisite: approval of UCLA Adviser and Graduate Dean Approval of host campus instructor. Department Chair and Graduate Dean. The course is used to record courses taken at host campus. A student may take courses taken under cooperative arrangements with neighboring institutions. To be graded S/U.

596. Individual Studies for Graduate Students. (1/2 to 2 courses) Prerequisite: consent of instructor. Directed individual studies. May be taken for a letter grade.

597. Preparation for the Doctoral Qualifying Examination. (1 to 3 courses)

598. Research for Preparation of the Master's Thesis. (1 to 2 courses) Prerequisite: consent of instructor (faculty adviser). Preparation of research data and writing of master's thesis. To be graded S/U.

599. Research for Dissertation. (1 to 3 courses) Prerequisite: consent of instructor, Ph.D. dissertation research or writing. Student will have completed qualifying examination and ordinarily will take no other coursework.
Admissions Requirements. The basic requirement for admission is the completion of the UCLA master's degree in Teaching English as a Second Language or in Linguistics, or the equivalent of one of these. Applicants with a graduate degree in TESL, Linguistics, Applied Linguistics, Psychology or Sociology 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 (e.g., as a foreign language, English, education, psychology, sociology, or anthropology) would probably have quite a number of courses to make up. Unless most of their previous work can be shown to be particularly applicable to one of the four areas of specialization, it will be advisable for them 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 the students' academic background;
2. As definite a statement as possible 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. Applicants whose native language is English should take the Aptitude Test of the Graduate Record Examinations (GRE). Applications for admission for the Fall Quarter in September should reach the Graduate Admissions Office by the preceding December 30 and the supporting materials should reach the Program Office no later than February 15.

Criteria that will be taken into consideration in admitting students include their graduate and undergraduate grade point averages, their relevant professional experience, their command of foreign language, the quality of their M.A. thesis, and any language-related publications they may have written.

Admission is almost always for the Fall Quarter beginning in September. To insure their admission, Ph.D. aspirants must enroll in the quarter for which they were admitted. If they cannot do so, it will be necessary for them to reapply for a subsequent quarter, and there is no assurance that they will be given preference at that time over other applicants who may be judged more qualified.

Advising. Program Office, Ph.D. in Applied Linguistics 3306 Rolfe Hall, UCLA.

All students entering the doctoral program must discuss their proposed course of study and research at an early date with the Ph.D. Program Adviser and with other interested faculty members in ESL and in Linguistics. Study Lists for each quarter must be signed by the Program Adviser. At the beginning of each quarter the Adviser reviews each student's record and advises him or her of the progress in the program and the remaining requirements that must be met.

Major Fields and Specializations. Four areas of specialization are available: language analysis, language education, language acquisition, and language use. The specialization in language analysis is designed to prepare researchers to present to students significant data on language the researchers know well; to construct school grammars, dialect atlases, descriptive phonologies, contrastive analyses, etc. and to carry out similar empirically-oriented pursuits. The specialization in language education concerns various forms of language instruction: English as a second or foreign language, the teaching of other languages, and language in bilingual/bicultural or bidialectal education. It is designed to prepare graduates competent to serve in the areas of curriculum development, language consultation, language testing, materials preparation, and teacher training. The specialization in language acquisition involves psycholinguistics. It refers to both child-language acquisition and second-language acquisition. It is intended to equip students to conduct research on language learning in clinics, laboratories, classrooms, and also in informal natural settings. The specialization in language use relates generally to sociolinguistics, and specifically to language planning, language policy in the United States and abroad, as well as to the analysis of discourse. It is aimed at the development of competence in such areas as educational consultation, program planning and evaluation, language surveys, and literacy campaigns.

Foreign Language Requirement. Before advancement to candidacy, students must demonstrate a knowledge of two foreign languages at the effective level. For one language, an effective reading knowledge is required. For the other language, effective oral proficiency may, at the option of the student, be demonstrated instead of a reading knowledge. The language chosen should be especially relevant to the student's intended dissertation topic or professional plans. A student whose native language is a language other than English is exempted from this foreign language requirement. Language-proficiency examinations for the Ph.D. in Applied Linguistics are administered by a special ad hoc committee. Information regarding the nature and administration of the examinations is available from the Program Office.

Required Courses. In addition to fulfilling the general University requirements for the doctorate, 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: Linguistics 120A (Linguistic Analysis: Phonology); 120B (Linguistic Analysis: Grammar); 165A (Linguistic Theory: Phonology); and 165B (Linguistic Theory: Grammar); English 370K (The Teaching of English as a Second Language); 250K (Contrastive Analysis and Error Analysis in the ESL Context); and 360K (Supervised Teaching: English as a Second Language or Dialect). English 370K, which is organized as a general orientation to the ESL, Section, must be taken at UCLA. If a student can establish that he/she has taken courses equivalent to any of the remaining courses at another institution, he/she is not required to take them at UCLA. If he/she has at least one year of experience in teaching a second language, he/she can be exempted from English 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 the M.A. courses listed above as basic preparation, Linguistics 275, English 400K, or Applied Linguistics 597 or 599. No more than 8 of the 32 units may be in 596 individual study 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 individual study courses taken in departments other than Linguistics or English). An additional two courses are required in the specialization in which the candidate chooses to do his/her dissertation research. 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 counted toward fulfillment of the 8-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 course, Applied Linguistics 501.

Within the limits imposed by the Graduate Division, undergraduate courses taken as prerequisites to needed graduate courses, required undergraduate courses, reading courses in a foreign language, graduate courses taken in addition to the required 32 units, Applied Linguistics 501 and 597-599.
Other courses must be taken for letter grades. Written and Oral Qualifying Examinations. In lieu of a Written Qualifying Examination, the student will submit two original research papers of publishable quality in different areas of specialization. These may be revised or extended seminar papers but must be prepared after admission to the Ph.D. program. (If the student at the time of his/her admission has already published papers of the required quality, he/she may petition to have one of these accepted in partial fulfillment of this requirement.) The topics of these papers are to be chosen by the student, in consultation with appropriate faculty members and with the approval of the Ph.D. Program Adviser (Chair of the Interdepartmental Committee that administers the program). Each of the finished papers is evaluated by two faculty members chosen by the student in consultation with the Program Adviser. Any paper or papers judged unsatisfactory by either of the two readers must be revised to that reader’s satisfaction. For each paper, one of the two readers may be from outside Linguistics and ESL, and one of the two must be willing to serve on the student’s doctoral committee. Doctoral Committee. The doctoral committee for the student is nominated by the Ph.D. Program Adviser after consultation with the student, and is then appointed by the Dean of the Graduate Division. The doctoral committee will include a minimum of five members, two of whom hold no appointment in Linguistics or ESL. Upon appointment, the chair of the doctoral committee becomes the student’s chief source of guidance. The doctoral committee administers to the student an Oral Candidacy Examination, the focus of which will be a prospectus of his/her dissertation which the student must submit to the committee prior to the examination. The committee also has the responsibility for determining the adequacy of the student’s preparation for writing the dissertation. If prospectus and preparation are judged adequate, the choice of the dissertation topic is thereby approved and the student becomes eligible for advancement to doctoral candidacy. In case of failure, the doctoral committee determines whether or not the candidate may be reexamined and if further courses must be taken before the reexamination. Dissertation. 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. A minimum of three members of the doctoral committee, suggested by the committee chair and approved by all committee members at the time of the Oral Candidacy Examination, must read each dissertation and certify that it satisfies the research requirements of the Ph.D. These three readers must include at least two faculty members from ESL or Linguistics and at least one member from another department. Final Oral Examination Following Completion of the Dissertation. As the dissertation nears completion, all candidates must make a public report on the results of their research. This may be done, at the candidate’s choice, at a meeting of the colloquium of either the Department of Linguistics or the ESL Section. Each candidate must, therefore, enroll in either English 400K or Linguistics 275 during the appropriate quarter. All members of the doctoral committee who will read the dissertation will attend the colloquium session at which the public report is made and will then determine whether or not the candidate will be required to pass a Final Oral Examination. Only by a unanimous vote of the readers can the Final Oral Examination be waived. The Graduate Division requires that, if a Final Oral Examination is held, all members of the doctoral committee must attend to vote. Even if no Final Oral Examination is held, the readers of the dissertation must still determine in the usual way whether or not the dissertation is finally approved after it has been completed. Time to Degree. From first enrollment in the doctoral program to advancement to candidacy: two to three years. From first enrollment to completion of degree: three to five years. The outside limit for the Ph.D. from start to finish, including leave or interruptions of any kind, is seven calendar years from first enrollment. The approved normative time-to-degree for the Ph.D. is 15 quarters (five years). Candidate in Philosophy Degree. Upon application, this degree is conferred upon any student who has been advanced to candidacy. Disqualification. If a student has not been awarded the degree by the end of seven years, it will be the responsibility of the Program Adviser to request that the Dean of the Graduate Division disqualify that student from further participation in the program. The disqualification of a student for other reasons may be requested if a majority of his/her doctoral committee so votes. Appeals. Disqualification for any reason may be appealed to the Interdepartmental Committee which administers the program. Other Relevant Information. An informational brochure giving more detailed information is available from the Program Office, 3306 Rotte Hall.

Language Analysis
241. Studies in the Structure of the English Language.
Linguistics 201A-201B. Phonological Theory.
205A-205B. Syntactic Theory.
210A-210B. Field Methods.
220. Linguistic Areas.
225. Linguistic Structures.
251. Topics in Phonetics of Phonology.
252. Topics in Syntax and Semantics.
253. Topics in Linguistic Variation.
Graduate Courses

591. Cooperative Program. (1/2 to 2 courses) Prerequisite: approval of Ph.D. Program Adviser and Graduate Dean. Approval of 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. To be graded S/U.

598. Directed Individual Study. (1 to 2 courses) Prerequisite: admission to doctoral program. Independent study in an area of Applied Linguistics. May be repeated for credit. Up to eight units of 598 credit applicable to course requirements for Ph.D. in Applied Linguistics.

597. Preparation for Doctoral Candidacy Examination. (1 to 2 courses) Prerequisite: completion of at least six courses of the 32-unit requirement for the Ph.D. in Applied Linguistics. May not be applied toward fulfillment of the 32-unit requirement. May be repeated for credit. Graded S/U.

596. Research for and Preparation of the Doctoral Dissertation. (1 to 4 courses) Prerequisite: advancement to candidacy for the Ph.D. degree. Required of all doctoral candidates each quarter they are registered and engaged in dissertation preparation. May not be repeated for credit, but may not be applied to fulfillment of Ph.D. course requirements. To be graded S/U.

Archaeology

(Interdepartmental)

Rainer Berger, Ph.D., Professor of Anthropology, Geography and Geophysics; Chair, Archaeology Interdepartmental Program.

Glorio Buccellati, Ph.D., Professor of Ancient Near East (Department of Near Eastern Languages and Cultures) and History.

Christopher B. Donnan, Ph.D., Professor of Anthropology; Director, Museum of Cultural History.

Susan B. Downey, Ph.D., Professor of Art History.

Mejla Gimbutas, Ph.D., Professor of European Ar- chaeology (Department of Slavic Languages).

James N. Hill, Ph.D., Professor of Anthropology.

Leona Libby, Ph.D., Adjunct Professor of Environmental and Archaeological Sciences.

Clement W. Meighan, Ph.D., Professor of Archa- eology.

Henry B. Nicholson, Ph.D., Professor of Anthropology.

Wendell H. Oswalt, Ph.D., Professor of Anthropology.

Merrick Posnansky, Professor of History and Anthro- pology.

James R. Sackett, Ph.D., Professor of Anthropology.

Elizabeth Carter, Ph.D., Associate Professor of Near East (Department of Near Eastern Languages and Cultures).

Hsing-hsiang Chou, Ph.D., Associate Professor of Oriental Languages.

Timothy Earle, Ph.D., Associate Professor of Anthropology.

Cecelia F. Klein, Ph.D., Associate Professor of Art History.

William Klemert, Jr., Ph.D., Associate Professor of Engineering, Applied Science and Archaeological Sciences.

Steven Lattimore, Ph.D., Associate Professor of Classics.

Dwight Read, Ph.D., Associate Professor of Anthro- pology.

Michael DeNiro, Ph.D., Assistant Professor of Geo- chemistry and Archaeological Sciences.

Gail Kennedy, Ph.D., Assistant Professor of Anthro- pology.

Deborah Klimburg-Salter, Ph.D., Assistant Professor of Art History.

Alexander Badawy, Ph.D., Emeritus Professor of Art, Paul A. Clément, Ph.D., Emeritus Professor of Classics and Classical Archaeology.

Bernard D. Fischer, Ph.D., Assistant Professor of Classics.

Ken Lao, Academician, Emeritus Professor of Oriental Languages.

Katharina Otto-Dorn, Ph.D., Emeritus Professor of History.

Martin Powers, Ph.D., Assistant Professor of Art History.

Arnold Rubin, Ph.D., Associate Professor of Art History.

Richard C. Rudolph, Ph.D., Emeritus Professor of Oriental Languages.

Stanislav Segert, Ph.D., Professor of Biblical Studies and Northwest Semitics (Department of Near Eastern Languages and Cultures).

The interdisciplinary program in Archaeology brings together interests and specialties represented by those departments offering courses in archaeology as well as others offering courses which may be relevant to archaeology. Its primary purpose is to train scholars in archaeology for university-level teaching and research and other professional aims. Its resources are intended for those archaeology students whose academic goals cannot be met within any single department and who, consequently, require an individually designed plan of study combining academic preparation in two or more departments. Applications are especially encouraged from students whose interests may form bridges with disciplines and departments not offering archaeology (e.g., botany, geology, mathematics, statistics, zoology, etc.) Counseling will be provided to ensure that each applicant selects the degree objective best suited to his/her interests.

Active archaeological research is underway in various parts of the world, and field training in archaeology is offered. There are opportunities for participation in a variety of laboratory and field researches on a world-wide scale.

Admission Requirements. For general requirements, see the University minimum standards. Any undergraduate major may be considered for admission to the Archaeology Program although those applicants who have had little previous archaeological education may be admitted under probationary status and required to take a series of courses to make up deficiencies. A Graduate Record Examination (Apptitude Test) Report is required. The following application materials should be submitted directly to the Chair of the Archaeology Program: (1) Acceptable Plan of Study (including a statement of the applicant's 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 for the Fall Quarter only. The Archaeology Program's "Study Guidelines" brochure will be sent to applicants upon request to the Chair, Professor Rainer Berger, Archaeology Program, UCLA, Los Angeles 90024.

Advising. Mrs. Ilene Alexander Swartz, 288 Kinsey Hall, (213) 825-4169, serves as the Graduate Adviser of the Archaeology Program. Each student has a committee chair, determined by mutual agreement, who acts as principal adviser. The student's progress toward his/her degree is discussed every academic quarter by the members of the Executive Committee. In addition, the student receives a written checklist of his/her progress quarterly, a copy of which is sent to his/her adviser.

Major Fields or Subdisciplines

Africa

Analysis of Archaeological Materials

Ancient Near East

Andean South America

Caribbean

China and the Far East

Classical Greece and Rome

Dating Techniques in Archaeological Sciences

Europe

India and Central Asia

Meso-America

Pacific

Palaeoenvironmental Studies

Western North America

Other areas of specialization are also available.

Field Work

No graduate degree will be awarded until the candidate for the degree has worked in the field and has demonstrated his/her 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 the student 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 his/her 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 Archaeology Program.
The Master of Arts Degree

The structure of the M.A. Program includes the successful completion within seven academic quarters of:

1. Field work (see above)
2. Foreign language proficiency (see below)
3. Nine 4- or 6-unit upper division and graduate courses (see below)
4. Comprehensive core examination (see below)
5. M.A. paper (see below)

Foreign Language Requirement. The ability to read at least one modern foreign language, relevant to the student's field of interest and approved by his/her adviser, is required for the M.A. There are three options:

a) A student may pass (or have recently passed) an examination administered by ETS with a score of 500 or better.
b) A student may complete the third course in an introductory, regular sequence of the selected language at UCLA with a minimum grade of A.
c) With the consent of his/her committee, a student may take a reading examination (in Spanish, French or German) administered by the Archaeology Program.

The foreign language requirement must be completed by the end of the sixth quarter in residence, unless an earlier deadline is imposed by the student's adviser. A student who does not meet this deadline will apply to the Chair of the Program for a leave of absence of one quarter during which the requirement should be fulfilled. If the examination is still not passed, the student will be terminated from the Program and asked to apply for readmission after the language requirement has been fulfilled.

Course Requirements. A minimum of 42 units, (distributed among a minimum of nine courses), taken for a letter grade, are required to be distributed as follows:

Graduate Courses 200 and 500 series (five courses) (minimum of 26 units)
(1) Archaeology 200, Archaeology Colloquium, (six units), required of all students.
(2) Archaeology 201A, 201B, Graduate Core Seminars in Archaeology, (6 units each), required of all students.
*2) Elective Graduate Courses, one of which may be Archaeology 596, Individual Studies for Graduate Students.
Upper Division Courses (100 series)**
*4) Elective Upper Division Courses (excluding 199's) (a minimum of 16 units).

Comprehensive Examination Plan. Students will take a comprehensive core examination during the third quarter of 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 201A and 201B. The examination will be graded as "high pass," "pass," or "not pass." The examination may be repeated one time.

M.A. Paper. A master's level research paper, normally no longer than 20-35 pages, graded by the three members of the student's committee, is to be submitted by the end of the third week of the seventh quarter to the Chair of the Archaeology Program.

Time to Degree. There is a ceiling of seven quarters for the completion of the M.A. degree.

500 Series Course Limitations. Archaeology 500 (Individual Studies for Graduate Students) may be taken twice for a maximum of 12 units, but only 6 units may be counted toward the minimum graduate course requirement. A letter grade is given for the course.

Disqualification. The Executive Committee may recommend disqualification of a student under one or more of the following conditions:

a) If normal progress toward the degree is not manifested;
b) G.P.A. below 3.0;
**Total number of courses in the two groups must equal nine.
c) Failure (twice) of core examination;
d) Failure to fulfill foreign language requirement;
e) Unsatisfactory M.A. paper.

Appeal. A student who wishes to appeal the decision may request a hearing by the Executive Committee to state his/her case.

The Ph.D. Degree

Admission Requirements. Completion of a master's program is required. Applicants who are not finishing the M.A. in the Archaeology Program should refer to "Admission Requirements" described on page 63. Admission to the doctoral program for an Archaeology Program student completing an M.A. is decided by the Chair of the Program upon:

1) written recommendation by all three members of the student's M.A. committee.
2) submission by the student of a Plan of Studies, including projected coursework, choice of foreign language(s), description of qualifying examination components, and dissertation topics; and
3) quality of M.A. Core Exam results.

Doctoral students entering the Archaeology Program with an M.A. from another university will be required to pass the Comprehensive Core Examination (see Master's 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 the student's interests, is normally required. Competence may be demonstrated in the ways outlined for the master's degree. Foreign Language Requirement, omitting item b. When proficiency in two foreign languages is not mandated by a student's interest, a petition for waiving the second language may be prepared. After the petition has been unanimously endorsed by the student's committee members, it is presented to the Executive Committee for approval.

Course Requirements. Students must be enrolled in a minimum of 8 units per quarter. Archaeology 200 is required. There are no other restrictions or requirements concerning the courses a student may take.

Written and Oral Examinations. Written Qualifying Examination: By the end of the fourth quarter of the doctoral program, after the foreign language requirement has been fulfilled, the student will take a Written Qualifying Examination in the following three areas:

a) Topical Specialization: Detailed knowledge of a particular topic or research question.
b) Analytical Theory, Method and Technique: All candidates must have knowledge of the diversity of theoretical orientations, general methods, and techniques employed by archaeologists today.
c) Regional Culture History: Candidates must have detailed knowledge of the regional culture histories of one or more areas of the world. These areas must be relevant to the student's topical specialization.

At least three of the student's committee members must contribute questions to the examination as well as read and evaluate the answers. If the Chair agrees that the examination comprises a "pass," the student may then proceed to make arrangements to take the oral examination. If the written examination or any portion thereof is failed, the student may make one further attempt if his/her committee deems it appropriate.

A maximum of two weeks will be permitted for taking and passing all segments of the written examination. The scope of the material to be prepared, the nature of the examinations, and the intervals between the various written segments and the oral examination will be determined by the student's adviser and other members of his/her committee.

Oral Qualifying Examination: The Ph.D. Oral Qualifying Examination must be taken by the end of the sixth quarter of the doctoral program. The candidate will be required to submit to the doctoral committee a formal dissertation proposal (of about 10 pages) including the particular research problem on which the student will be examined during the Oral Qualifying Examination.
Doctoral Committee. A Ph.D. committee must be selected before the end of the first year of doctoral work. The signatures of the members of the Ph.D. committee must be filed with the Chair of the Archaeology Program.

The Ph.D. Committee consists of:

a) Three eligible faculty members selected from those names in the first section of this entry. (One of the three must also be a member of the Executive Committee of the Archaeology Program.)

b) Two additional eligible faculty members who are not listed in the first section referred to above. They may be members of other relevant departments in the systemwide University of California.

At least three different academic departments must be represented among the five (or more) members of the doctoral committee. The Chair of the Ph.D. Committee will serve as a special adviser to the student.

Final Oral Examination Following Completion of the Dissertation. The Final Oral Examination may be waived by the candidate's Doctoral Committee.

Time to Degree. The normative time for the completion of the Ph.D. degree is 21 academic quarters; however, if an entrant already holds an M.A., he/she is to complete all work for the Ph.D. degree within 14 quarters.

Disqualification. The Executive Committee may recommend disqualification of a student under one or more of the following conditions:

a) If normal progress toward the degree is not manifest;

b) G.P.A. below 3.0;

c) Failure (twice) of Written Qualifying Examination;

d) Incompetent performance on Oral Qualifying Examination, so as to be denied a second chance by doctoral committee;

e) Second failure of Oral Qualifying Examination;

f) Unsatisfactory dissertation.

Appeal. A student who wishes to appeal the decision may request a hearing by the Executive Committee to state his/her case.

Other Relevant Information.

Plan of Study: Before the end of the third quarter of the doctoral program, after selecting his/her Ph.D. Committee, each student must submit a Reassessed Plan of Study. (See Study Guidelines, obtainable from the Graduate Adviser, 268 Kinsey Hall, for details.)

Related Courses in Other Departments. The following is a list of archaeology-related courses, by topic and department. No attempt is made to list all relevant courses in other disciplines.

Graduate Courses

Prerequisite for all courses: consent of the instructor. All courses may be repeated for credit upon recommendation of adviser. Of the following graduate courses only Archaeology 200 is required.

200. Archaeological Colloquium. (6 units) (Required of all students.) Seminar, two hours. Prerequisite: Archaeology major or consent of instructor. 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 taken repeatedly for credit; however, M.A. candidates may apply this course only twice toward the fulfillment of the departmental M.A. requirements.

210A-210B. Graduate Core Seminar in Archaeology. (6 units each) (Required of all M.A. students.) Prerequisites: consent of instructor. Seminar discussions based on a carefully selected list of 30-40 major archaeological works. These compulsory core courses provide the student with a foundation in the breadth of knowledge required by a professional archaeologist. The courses comprise archaeological historiography, a survey of world archaeology and archaeological techniques. Emphasis will be placed on an appreciation of the multidisciplinary background of modern archaeology and of the relevant interpretative strategies.


217. Explanation of Societal Change. Application of theoretical and methodological ideas to archaeological populations. Mr. F. W. DeGrassi.

256. Field Work in Archaeology. (2-3 units) Participation in archaeological field excavations or museum research under the supervision of staff archaeologists. A minimum of one month of field time away from the campus is required.

Individual Study and Research

596. Individual Studies for Graduate Students. (1 to 3 courses) Hours to be arranged. Prerequisite: consent of instructor.

597. Preparation for Doctoral Qualifying Examination. (1 to 3 courses) Prerequisite: completion of formal course work and passing of language examinations. Graded S/U.

598. M.A. Paper Preparation. (1 to 3 courses) Prerequisite: consent of instructor. Graded S/U.

599. Dissertation Research and Preparation. (1 to 3 courses) Prerequisite: consent of instructor. Graded S/U.

Related Courses in Other Departments

Most archaeology courses are taught in the following departments. The following is a listing of such courses, by topic and department. Students should consult the departmental course lists for full descriptions and prerequisites. No attempt is made to list relevant courses in other disciplines.

METHODOLOGY AND HISTORY

Anthropology 115. Archaeological Field Training.

115Q. Archaeological Research Techniques.

115R. Strategy of Archaeology.

M115S. Historical Archaeology.

116P. Laboratory Analysis in Archaeology.

M116Q. Dating Techniques in Environmental Sciences and Archaeology (same as Geography M178).


121A. Fossil Man and His Culture.

121B. Australopithecines.

121C. Evolution of the Genus Homo.

129P. Laboratory Methods in Biological Anthropology: Skeletal.

132. Technology and Environment.

138. Methods and Techniques of Ethnography.

158. Hunting and Gathering Societies.

183. History of Archaeology.

186A-186B. Quantitative Methods Models in Anthropology.


211. Regional Analysis in Archaeology.

218. Reconstruction and Archaeology.

M218. Dating Techniques in Environmental Sciences and Archaeology (same as Geography M278).

221A-221B. The Fossil Evidence for Human Evolution.

217. Explanation of Societal Change.

283. Mathematical Models in Anthropology.

Art 203. Museum Studies.

265. Field Work in Archaeology.

Engineering 149C. Properties of Art Ceramic Materials.


NEW WORLD

Anthropology 107P. North American Indian Cultures.

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.

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 117A. Advanced Studies of Pre-Columbian Art: Mexico.

117B. Advanced Studies in Pre-Columbian Art: Central America.

117C. Advanced Studies in Pre-Columbian Art: The Andes.

118A. The Arts of Oceania.

118B. The Arts of Pre-Columbian America.

118D. The Arts of Native North America.


220. The Arts of Africa, Oceania and Pre-Columbian America.

OLD WORLD— EUROPE

Anthropology 112. Old Stone Age Archaeology.

213. Selected Topics in Problems in Old World Archaeology.

Art 103A. Greek Art.

103B. Hellenistic Art.

103C. Roman Art.

103D. Etruscan Art.

103E. Late Roman Art.

221. Topics in Classical Art.

223. Classical Art.
Classics 151A. Classical Archaeology: Aegean Bronze Age.
151B. Classical Archaeology: Graeco-Roman Architecture
151C. Classical Archaeology: Graeco-Roman Sculpture
151D. Classical Archaeology: Graeco-Roman Painting.
251A-251D. Seminar in Classical Archaeology.
252. Topography and Monuments of Athens.
Indo-European Studies 131. European Archaeology:
From the Neolithic to the Bronze Age.
132. European Archaeology: The Bronze Age.
250A-250B. European Archaeology.
OLD WORLD — NEAR EAST
Anthropology 110. World Archaeology.
102. Art of the Ancient Near East.
210. Egyptian Art.
History 105. History of Ancient Mesopotamia and Syria.
190D. Religions of the Ancient Near East.
200A-200T. Advanced Historiography.
201A-201T. Topics in History.
Near Eastern Languages and Cultures: Ancient Near East
161A-161B-161C. Archaeology of Mesopotamia.
162. Archaeology of Palestine.
163A-163B. Archaeology of Iran.
164A-164B-164C. Archaeology of the Historic Periods in Mesopotamia.
220. Seminar in Ancient Egypt.
M250. Seminar in Ancient Mesopotamia.
250X. Seminar in Ancient Mesopotamia.
260. Seminar in Ancient Near Eastern Archaeology.
282. Seminar in Object Archaeology.
OLD WORLD — ISLAM
Art 104B-104C-104D. Architecture and the Minor Arts of Islam in the Middle Ages.
213. Problems in Islamic Art.
OLD WORLD — AFRICA
Art 118C. The Arts of Sub-Saharan Africa.
119B. Advanced Studies in African Art: Central Africa.
220. The Arts of Africa, Oceania, and Pre-Columbian America.
History
175A. Prehistoric Africa — Technological and Cultural Traditions.
197. Undergraduate Seminar.
276. African Archaeology-Field Techniques.
277. African Archaeology-Data Analysis.
OLD WORLD — INDIA AND THE FAR EAST
Art 114A. The Early Art of India.
114B. Chinese Art.
114C. Japanese Art.
115A. Advanced Indian Art.
115B. Advanced Chinese Art.
115C. Advanced Japanese Art.
259. Topics in Asian Art.
280. Asian Art.
Oriental Languages 170A-170B. Archaeology in Early and Modern China.
270. Seminar: Selected Topics in Chinese Archaeology.
OTHER RELATED PROGRAMS
Related courses (not listed individually) include regional geography, ancient and regional history, ethnography, folklore, and history of technology and the earth sciences. Also recommended are the appropriate modern and ancient languages for the student's area of study. Students are encouraged to examine the course listings of any and all departments whose offerings may contribute to a truly interdisciplinary course of study.
Qualified undergraduates may enroll in the following courses,' provided they receive permission from the instructor.

Architecture and Urban Planning

(Office, 1317 Architecture Building)
Marvin Adelson, Ph.D., Professor of Architecture/Urban Design.
Samuel Aron, Ph.D., Professor of Architecture/Urban Design.
Leland S. Burns, Ph.D., Professor of Planning.
John Friedmann, Ph.D., Professor of Planning.
Baruch Givoni, Ph.D., Professor of Architecture/Urban Design.
Pete Kamnitzer, M.F.P., M.Arch., Professor of Planning.
Pete Morris, B.A., Professor of Planning.
Murray A. Milne, M.Arch., Professor of Architecture/Urban Design.
Charles Moore, Ph.D., Professor of Architecture/Urban Design.
Barton Myers, M.Arch., Professor of Architecture/Urban Design.
Harvey S. Perlott, Ph.D., Professor of Planning (Dean).
Helmut Schultz, M.Arch., Professor of Architecture/Urban Design.
Edward W. Soja, Ph.D., Professor of Planning.
Thomas R. Vreeeland, Jr., M.Arch., Professor of Architecture/Urban Design.
Martin Wachs, Ph.D., Professor of Planning (Program Head, Urban Planning).
Lae Estrada, Ph.D., Associate Professor of Planning.
J. Eugene Griggey, III, Ph.D., Associate Professor of Planning.
Dorothy Hayden, M.Arch., Associate Professor of Planning.
F. Eugene Kupper, M.Arch., Associate Professor of Architecture/Urban Design.
Jurg Lang, Dipl. Arch., ETH, Associate Professor of Architecture/Urban Design.
George Rand, Ph.D., Associate Professor of Architecture/Urban Design (Associate Dean).
Richard Schoen, M.Arch., Associate Professor of Architecture/Urban Design.
Donald Shoup, Ph.D., Associate Professor of Planning.
Burt Areendam, B.Arch., Assistant Professor of Architecture/Urban Design.
Margaret Fitzsimmons, Ph.D., Assistant Professor of Planning.
Robin Liggett, Ph.D., Assistant Professor of Architecture/Urban Design and Planning.
George Stiny, Ph.D., Assistant Professor of Architecture/Urban Design.
Michael Storper, Ph.D., Assistant Professor of Planning.

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 and Urban Planning, 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. In order to relate closely to public affairs and practitioners in the field, the School has established the Urban Innovations Group. The Urban Innovations Group (UIG) undertakes "real-world" projects to provide graduate students with opportunities to gain practical experience. It also affords faculty opportunities for professional service. Reflecting the nature of the problems and the opportunities associated with the creation and maintenance of environments of the future, the projects are ongoing and programmatic. They range from pure research, applied research, development and prototype testing to full scale implementation. UIG provides a bridge between pure academic pursuits and professional practice.

Architecture/Urban Design Program
The program in Architecture/Urban Design is organized around areas of study which represent major current directions within the fields of architecture and urban design.
Admissions Requirements

Master of Architecture I.

The M.Arch. I program is open to students holding a baccalaureate degree, or its equivalent, comparable in standards and content to a bachelor's degree from the University of California. Applicants 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.

Master of Architecture II.

The M.Arch. II program emphasizes advanced studies in architecture and requires that applicants have completed a 5-year professional degree in architecture, and hold a B.Arch. degree.

Master of Arts in Architecture/Urban Planning.

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 baccalaureate degree, or its equivalent, comparable in standards and content to a bachelor's degree from the University of California. Applicants 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.

Certificate of Specialization in Architecture/Urban Design

This one-year post-professional Certificate program is designed to enable the qualified and experienced professional to pursue in depth a particular area of specialization. Applicants are required to hold a B.Arch. or M.Arch. degree from an accredited school.

Applicants to all programs are required to submit three letters of recommendation, academic transcripts, a statement of purpose and a “creative” portfolio. In accordance with the policy followed by the University's Office of Graduate Admissions, the Department generally requires that applicants have maintained a grade point average of at least 3.0 in their upper division and graduate work. No admissions tests are required. In addition to the Application to Graduate Status, applicants should submit the “Departmental Supplement” that is contained within the program description. These brochures may be obtained from: Admissions Office, Architecture/Urban Design, Graduate School of Architecture and Urban Planning, UCLA, 405 Hilgard Avenue, Los Angeles, CA 90024.

Individuals who have further questions should contact the departmental Graduate Adviser at (213) 825-0525 or 825-7857.

Advising

Graduate Adviser: Deborah Hathaway, Graduate School of Architecture and Urban Planning, Room B-302, Phone: (213) 825-0525.

M.Arch. I students select a faculty adviser at the beginning of their second year in the 3-year program. This faculty member discusses the curriculum, approves selection of courses, authorizes program cards each quarter and is available for special counselling as needed. Students in the Advanced Graduate Studies program (M.Arch. II and M.A. students) are assigned a temporary adviser when they enter the School, and select a permanent faculty adviser as soon as they are ready to do so. Students wishing to change advisers should obtain the consent of the new faculty adviser and discuss this change with the Graduate Adviser. The faculty advisers and the Graduate Adviser work together in explaining curricular requirements and in dealing with any personal or academic difficulties that may occur.

At the end of the first year in the M.Arch.I program, each student's work is reviewed by the faculty to determine whether it merits its entrance into second year courses. Thereafter, the student's progress is continuously monitored, and any problems are discussed if and when they arise.

There is currently no formal review process established for students in the Advanced Graduate Studies program. Individual faculty advisers make final determinations regarding which courses a student is permitted to take, and also approve each student's decision to begin thesis work.

All students meet with their faculty adviser (with the exception of first year M.Arch. I students who do not have a faculty adviser) and with the Graduate Adviser at least once a quarter. Records are not usually kept in regard to these meetings, unless the end product of a meeting is a written petition or document.

Major Fields or Subdisciplines

No indepth specialization is required within the context of the M.Arch. I program. However, students are required to concentrate several of their 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.

M.Arch.II students are required to choose both a primary and secondary field of specialization, while M.A. and Certificate students are required to focus their work on a specific academic area or professional issue. Specializations are currently available in the following areas:

- Design Methods
- Urban Design
- Energy Conserving Design
- Housing
- Social Building
- Computer Aided Design
- Systems Building
- Energy Conserving Design
- Housing
- Social Building
- Computer Aided Design
- Systems Building
1. M.Arch II students are expected to be in residence at UCLA for at least two years and undertake six quarters of study.

2. A thesis or a comprehensive project is required. Three faculty members (at least two from the School) will serve as members of the Thesis Project Committee. When all three have signed the thesis proposal, the student may sign up for Preparation for Thesis course (598A) and may begin work on the thesis itself. This course should be taken at some point during the last year of study.

3. Students working towards a professional degree, M.Arch II (Master of Architecture), are required to complete a minimum of 18 courses, of which at least 15 must be taken at the graduate level. A total of at least 72 units are required. The courses must be distributed in the following way:

   One core sequence (three courses) should be chosen from the area of Theory and Methods.

   One core sequence (three courses) should be chosen from the area of Professional Application.

   One of the above sequences should be taken as a primary area of specialization and the other one as a secondary area. The students are advised to take all the recommended courses in their primary area of specialization. The secondary area may be taken as a sequence of core courses only.

4. Eleven courses are to be electives. Among these are the recommended courses in the area of primary specialization. Three electives may be taken at large from upper division or graduate courses offered campuswide. For students requiring greater interdisciplinary study, permission may be granted by the Advanced Graduate Studies Curriculum Committee to increase this number.

   5. At least five of the above courses must be numbered in the 400 professional series. Three of these must be studios.

5. Thesis Preparation course (598A) must be taken at least once.

Certificate of Specialization in Architecture/Urban Design

1. A course of study in an approved field of specialization.

2. The course of study must include 36 units (9 courses) in the 200-500 series.

3. The minimum residence requirement is three quarters as a full-time student.

4. No work completed for another graduate degree or certificate will be applied to the work required for this Certificate.

5. Each Certificate student will be required to adhere to the standards set by the Graduate Division.

6. The candidate must be recommended for the Certificate by the Head of the Architecture/Urban Design Program and the Dean of the School.

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 3-year course of study. Occasionally, students who have already demonstrated superior design skills will elect to do more research-oriented work in place of this design presentation. These final projects are presented to a team of instructors, selected by the Department, who evaluate the work. Because of the format required by the nature of an architectural presentation, the projects are all classified as "Comprehensive Examinations."

Students should obtain faculty approval of project topics at least three months, and preferably six months, before their presentation dates.

M.Arch II and M.A. students can choose to present a design project (Comprehensive Examination Plan) or to do a research thesis. They should make this determination at least three months prior to their anticipated date of graduation.

Regardless of the format they select, students in the Advanced Graduate Studies program each have an advisory committee composed of three faculty members, one of whom may be from an outside field. Selection of these committee members is confirmed at the time the
student files an Advancement to Candidacy petition (at least three months prior to graduation). These committees approve theses and comprehensive design projects at their discretion. Aside from the thesis or final design project, no other written or oral examination is required.

**Time to Degree**
The normal length of time for completion of the M.Arch. I degree is nine academic quarters (three years). The average length of study for the M.Arch. II and M.A. degrees is six academic quarters (two years). The Certificate of Specialization in Architecture/Urban Design is a one-year program, requiring three academic quarters of study. There is no summer program offered by the Graduate School of Architecture and Urban Planning.

**500 Series Course Requirements**
All students in the M.Arch. I, M.Arch. II and M.A. programs must enroll in at least 4 and no more than 8 units of 506, Thesis Preparation. Students may also apply a limited amount of 506 elective coursework toward the unit requirements for graduation.

Students who wish to enroll in a 506 course must first obtain the permission of their adviser. A student in the M.Arch. I program who wishes to apply more than 8 units must first obtain the permission of the M.Arch. I Curriculum Committee. A student in the M.A. program or in the M.Arch. II program who wishes to apply more than 12 units must first obtain the permission of the Advanced Graduate Studies Curriculum Committee. A student in any program who wishes to apply more than 16 units must petition the Graduate Division for permission to exceed the limitation. No more than 8 units of the total 506 coursework taken outside the Graduate School of Architecture and Urban Planning may be applied toward graduation.

All independent work must be undertaken with the guideline and approval of an Architecture/Urban Design faculty member and will be evaluated on a Satisfactory/Unsatisfactory basis.

**Disqualification and Appeal of Disqualification**
The progress of students enrolled in the M.Arch. I program is regularly reviewed, in addition to the major review at the end of the first year. Students who demonstrate real problems in their academic work are generally required to take some remedial course of action. In rare cases, students who subsequently to this review do not improve their marginal status, may be asked to leave the program. Students who wish to appeal this decision may petition both the M.Arch. I Curriculum Committee and the Program Head.

Students enrolled in the M.Arch. II or M.A. programs who demonstrate only marginal scholarship may be referred to the Advanced Graduate Studies Curriculum Committee for review.

**Other Relevant Information**
Currently, UCLA does not offer a doctoral degree in Architecture.

**Urban Planning Program**
The Urban Planning Program in the Graduate School of Architecture and Urban Planning offers a curriculum leading both to the Master of Arts and the Ph.D. degrees.

**Admission Requirements**
Each September, the Graduate School of Architecture and Urban Planning publishes a Program Statement which provides descriptions of the programs offered and contains the Departmental Supplement Application. Prospective "Urban Planning" students may obtain this brochure and an Application for Graduate Admission by writing to: Admissions, Urban Planning Program, Graduate School of Architecture and Urban Planning, University of California, Los Angeles, 405 Hilgard Avenue, Los Angeles, CA 90024.

Applications to the program are reviewed by an Admissions Work Group of 10 to 12 members including both faculty and students. The group is chaired by a faculty member who is appointed by the Head of the Program.

Grade point averages, letters of evaluation, a statement of purpose, and relevant experience are all considered in the review process for admission. Applicants are encouraged to submit 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.

The statement of purpose should be no more than two or three pages in length. It should include a concise description of past and present education and employment experiences, how these experiences relate and have led to the choice of urban planning as a career objective, and a statement describing a specific focus in planning in terms of research interests or practice-oriented goals. This is especially important for applicants to the doctoral program. Three letters of recommendation should be submitted, written by persons, such as instructors or employment supervisors, who are in a position to describe the applicant's intellectual and professional capabilities in depth. A maximum of two work samples may be submitted in support of the application (e.g., reports, papers, slides, etc.). If team reports are submitted, the applicant's individual contribution must be clearly indicated. Samples written in a foreign language cannot be considered. Work samples will be returned only upon request. (Applicants in the U.S. must enclose a self-addressed, stamped envelope.)

Personal interviews are sometimes requested by the Admissions Work Group on an individual basis after application materials have been reviewed.

To apply to the Urban Planning Program at UCLA, the following materials, in addition to those required by the Graduate Admissions Office, must be submitted to the departmental address indicated above.*

1. the Departmental Supplement to the graduate application (contained in the School Program Statement),
2. three letters of recommendation,
3. a statement of purpose and goals,
4. one copy of transcripts from each college attended (Applicants educated outside the U.S. should send two copies of transcripts to Graduate Admissions for evaluation; one copy will then be forwarded to the department),
5. TOEFL scores (as stated above).

The Urban Planning Program admits students for the Fall Quarter only. Students who are admitted but do not enroll are not guaranteed admission at a later date.

Advising. Graduate Counselor: Barbara Vineyard, Graduate School of Architecture and Urban Planning, UCLA, 405 Hilgard Avenue, Los Angeles, CA 90024.

The Graduate Counselor assigns temporary faculty advisers to new students on the basis of similarities in student-faculty interests. Students are expected to select a permanent adviser by the end of the Winter Quarter of their first year.

Ongoing evaluations of students' progress are made at the beginning of each quarter, when students meet with their advisers to determine a course of study which best suits their needs and interests within the context of the general departmental and University requirements.

Doctoral students meet with their adviser and one other faculty member from their area of concentration for a formal progress review at the beginning of their second year of studies.

**Areas of Concentration**
Students should choose an area of concentration by the end of their 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, the deterioration of inner city neighborhoods present problems which call for comprehensive analysis and integrated solutions. Planning, in these contexts, characteristically starts from a concern with the region or community as a whole, and works towards a coordinated set of social, economic, political and spatial actions, designed to reinforce each other.

*Please be certain to clearly label materials "Urban Planning Program." If materials are not so labeled, they may be forwarded to the Architecture Program, and this may cause delay in consideration of an applicant.
Within this area, students are expected to choose an emphasis either on developments within the United States and other advanced industrial nations, or on problems of development in newly industrializing countries.

Social Policy and Public Services. While the urban and regional development concentration approaches issues through relationships between communities and regions, 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 serfi-publicly. 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. Planning actions almost always have some effect on, or are affected by, the natural environment. Environmental planners are specifically concerned with developing environmental policy, interpreting the appropriate technical information for use in planning decisions, and contribution from an economic/ecological perspective to the process for resolving tradeoffs among social priorities.

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, students can choose one of three specializations: the history, theory and criticism of the built environment; public policy and the built environment; or urban design and planning. The history, theory and criticism of the built environment emphasizes the economic, social and cultural analysis of buildings and cities. Public policy and the built environment stresses housing, the historic preservation of the urban fabric, and physical planning skills such as zoning, design, review processes, and public sector development skills. For students who choose to emphasize urban design and planning, the program offers studio and workshop courses. Students must have a bachelor’s degree in architecture, or undertake preparatory work in design in addition to the course requirements of the program if they wish to specialize in urban design rather than history or public policy.

Additional Areas of Concentration. In special circumstances, individual students may devise their own area in consultation with appropriate faculty members. Final approval of the proposed additional area of concentration must be obtained from the Program Head.

Comparative Development Studies. A number of students have a major interest in planning, teaching, and research in developing countries. Possibilities include direct hire by governments and educational institutions abroad, employment by international agencies, and private consulting. A number of courses on the problems of urban and regional development in industrializing countries and the transition to a global economy are offered each year. Invited lecturers and special seminars complete this program emphasis, which is articulated with one of the regular areas of concentration, such as Urban and Regional Development or Social Policy and Public Services (see also articulated degree program with Latin American Studies).

Students wishing to pursue development studies at either the M.A. or Ph.D. level should contact either Professor John Friedman or Professor Edward Soja.

Master of Arts in Architecture and Urban Planning (Urban Planning Program)

Admission to Master’s Program. Undergraduate course work in both microeconomics and mathematics is recommended for all applicants. Experience in planning or a related field is also recommended.

Course Requirements. Master’s students must complete a minimum of 72 units. Students generally take 12 units per quarter, completing the program in two years.

A minimum of 13 courses must be graduate courses (all 200 series courses with the exception of up to two courses or 8 units of 500 series courses) in urban planning or a related field.

The remaining five courses (not more than 20 units) may be any combination of 100, 200, or 400 series courses. A limited number of "elective" 500 series courses may also apply toward the degree (see below, 500 Series Course Limitations).

Core Course Requirement:
The core areas comprise knowledge common to all areas of planning, regardless of the specific focus of the student. Seven core courses are required:

- AUP 220A-Quantitative Analysis in Urban Planning I is required (waiver by examination).
- AUP 220B-Quantitative Analysis in Urban Planning II is required.
- AUP 207-Public Resource Allocation is required.

Two core courses in "Theory and Context" are required.

Two (three, if AUP 220A is waived) additional core courses are required from a selection of 14 remaining core courses in "Methods", "Theory and Context", and/or "Practice."

Upon entering the Program, all students must pass examinations indicating competence in basic mathematics and microeconomics before they will be permitted to enroll in AUP 220A and 207 respectively. Copies of sample examinations and references to materials to be mastered for passing these examinations will be mailed with admission offers to applicants accepted into the Program. An undergraduate course in college algebra or pre-calculus should provide suitable background to pass the basic mathematics examination. An undergraduate course in microeconomics should be sufficient preparation for the microeconomics examination.

The examinations will be administered during the first week of the Fall Quarter and may be repeated. Students who do not pass either or both examinations will be advised to take Math 1A or 1B and/or Econ 1, 100, or 101A at UCLA during their first year of studies. Credit for these courses will not normally count toward the master's degree.

Students are strongly encouraged to prepare for the examinations before coming to GSAUP so they can take AUP 220A and 207 during their first quarter of studies.

Area Course Requirement:

Master’s students must select an area of concentration. A list of courses is prepared for each area of concentration, from which students are required to choose at least five; two are generally specified.

Two Field Projects Courses (8 units) are required (subject to waiver).

Students are encouraged to seek waivers for requirements which have been met in their previous education.

Thesis or Comprehensive Examination Plan. In partial fulfillment of the requirements for the M.A. degree, students are required to complete either a thesis or one of the two comprehensive examinations (Plan A or Plan B). These three options are described in detail below.

Master’s Thesis. The thesis is intended to provide a student with the opportunity for independent scholarly research, and should be the length and quality of a publishable journal article. In order to meet established deadlines, students are urged to commence thesis work not later than the Fall Quarter of their second year. Academic credit for thesis preparation is given through course 596P. The thesis is accepted after it meets the approval of the thesis committee, consisting of three faculty, and general University thesis requirements.

Comprehensive Examination 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 course 597P (Preparation for Comprehensive Examination). Guidance of the long-term project rests with a committee of at least two faculty members and a representative of the client.

Students are encouraged to take the Comprehensive Planning Project Course (AUP 217AB) that is offered each year to fulfill the Comprehensive Exam requirement. This project course is taught by at least two faculty.
Concentration areas normally offered during the areas of concentration vary, bringing students of varying backgrounds and interests together in their end of Spring Quarter.) Each area of concentration faculty constitutes a committee for offering, reading, and grading the examination.

**Time to Degree.** From admission to the master's program, normative time to award of the degree is six quarters (12 units of coursework per quarter).

**600 Series Course Limitations**

**596P-Research in Planning (2-8 units), letter graded.**

**597P-Preparation for the Comprehensive Examination for the Master's Degree or Qualifying Examination for the Ph.D. Degree (2-8 units), S/U graded.**

**598P-Preparation for Master's Thesis in Urban Planning (2-8 units), S/U graded.**

Sixteen units of 500 series courses may apply toward the total course requirement for the master's degree.

Eight units of 500 series courses may apply toward the minimum graduate course requirement. Other Relevant Information

**Field Work.** Master's students who come to the Graduate School of Architecture and Urban Planning without previous experience in planning are required to complete a minimum of 8 units of field work. Field work is defined as some type of clinical or "real world" experience with a planning office, a private organization which is involved in planning, a community action agency, or applied research within a clinical context (excluding conventional university-based research projects).

Students may fulfill this requirement during the academic year by enrolling in courses AUP 223B, 496F and/or (if work is available on a client project at the Urban Innovations Group) 490. Alternatively, field work may be conducted during the summer between the first and second year of studies, with credit received (AUP 496F) in the following Fall Quarter. Students who plan to do field work during the summer must make prior arrangements for faculty supervision.

Students may petition to waive up to 8 units of the field work requirement. Those who have had at least one year of professional experience at a responsible level prior to entering the program may, upon petition to the Field Work Coordinator, receive a waiver of the full 8 units. Those with less than one year experience may obtain a partial waiver. The request must be submitted by the end of the first year of studies and be accompanied by a report, in the form of an evaluative paper, which will be assessed by the Field Work Coordinator.

**J.D./M.A. Concurrent Degree Program**

The aim of the J.D./M.A. Program is to provide an integrated professional curriculum for law and planning students specializing in the legal aspects of urban problems. Education in planning offers opportunities for learning theories and methods that permit comprehensive identification and treatment of urban problems. Education in law leads to mastery of institutionalized treatment of urban problems. The concurrent curriculum is open to students interested in any of the areas of concentration in the planning program.

**Admissions.** Persons interested in the concurrent degree program must apply and be admitted to the School of Law, the Urban Planning Program, and the Graduate Division. Applicants should contact the Law School Admissions Office regarding admission requirements and application procedures and deadlines for the School of Law. In addition, applicants should follow the normal procedures for application to the Urban Planning Program and the Graduate Admissions Office.* Applications to the concurrent program by first-year law students will also be considered.

**Degree Requirements.** The concurrent degree program requires the application of some of the same coursework towards both the J.D. and M.A. degrees. During the first year, the student follows the required law curriculum. During the second and third years, the student takes (a) the equivalent of 36 quarter units** to be applied toward the urban planning degree, and (b) the necessary courses required to complete the law degree.1 Of the 36 quarter units toward planning, three courses must be taken from the list below, and the balance will be taken from planning courses. The student's fourth year will be spent completing the coursework necessary for the planning degree (i.e., 36 additional quarter units). Fulfillment of the field work requirement in Urban Planning will be handled on an individual basis.

For additional information, contact the Graduate Counselor.

**Cross-Listed Courses.** The School of Law and the Urban Planning Program offer a three year concurrent degree program leading to the award of both an M.B.A. and M.A. The concurrent degree program provides an integrated set of courses for students who seek careers which draw on general and specialized skills in urban planning and management. By merging knowledge of the workings of the private and public sectors, the Program aims to educate individuals who are not only qualified for careers in private industry or public service but who also have acquired the necessary skills to move easily from one sector to the other. The goal is to train administrators with sympathies for the operations of both types of enterprise and the capabilities to work in either. Enrollment in the program is limited to twenty students.

**Admissions.** Those interested in the MBA/MA Concurrent Degree Program should contact the MBA Admissions Office, Graduate School of Management, regarding MBA admission requirements and application procedures. All MBA application materials and the Urban Planning departmental supplemental application (contained in this brochure) should be submitted directly to the MBA Admissions Office. Copies will be forwarded to the Urban Planning Admissions Office. All materials should be clearly marked "MBA/MA (Urban Planning)." Your statement of self-evaluation and educational objectives, which is part of the MBA application, should explain why you want to enter the concurrent degree program. Applications are reviewed by a joint committee of faculty from both schools. GMAT and TOEFL scores are required.
Degree Requirements. A total of 35 courses (140 units) is required for the M.B.A./M.A. Concurrent Degree Program: from 18 to 23 courses in the Graduate School of Management and from 12 to 17 courses in the Graduate School of Architecture and Urban Planning. All core and concentration requirements for each program must be met, but where the two programs' core courses are substantially the same, students may choose from either program's offerings. A maximum of six courses count toward unit requirements for both degrees. Students complete all first-year M.B.A. requirements during the first year of residence and the second and third years of study are divided between both programs.

Further details may be obtained by writing to the Graduate Counselor, Urban Planning Program.


Latin American Studies and the Urban Planning Program offer a 2½- to 3-year articulated program leading to an M.A. degree in each program.

Issues related to migration and settlement, comparative urbanization, human resources development and distribution, and rural economics are all of direct concern to planners and other policy-makers working in Latin America. In confronting such issues, a working knowledge of Latin American problems is essential. 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.

Admissions. Individuals should apply through the Urban Planning Program, following the standard application procedure for Urban Planning. The statement of purpose, however, should specifically address why the applicant wants to pursue the articulated program. In addition, GRE scores are required. All application materials should be clearly marked, "MA-Latin American Studies/MA-Urban Planning.

The final review of applicants will be conducted by a committee with representatives from both programs. Applications to the articulated program by current Latin American Studies or Urban Planning students will also be considered.

Degree Requirements. A total of 27 courses (108 units) is required for the articulated program: 18 courses for the M.A. in Architecture and Urban Planning; and 9 courses for the M.A. in Latin American Studies. Students must meet all requirements of each program and the degrees may be awarded simultaneously. Further details may be obtained by writing to the Graduate Counselor, Urban Planning Program.

Ph.D. in Urban Planning

Admission to the Doctoral Program. Students admitted to the Ph.D. program in Urban Planning must have a master's degree in planning or a closely related field from UCLA or another institution. Master's students in Urban Planning at UCLA should inform the Graduate Counselor before February 15 of their second year if they wish to be considered for the Ph.D. program for the following Fall.

Students must have a minimum of 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 Requirements. 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; Written and Oral Qualifying Examinations. Doctoral students must demonstrate a high level of competence in an Area of Concentration (major field), a minor-field, and in the Planning Theory core area as measured by coursework and doctoral examinations. In addition, doctoral students must satisfy a requirement in research methods, and are required to take at least 6 units of course 208AB (Seminar in Advanced Research Methods) to aid in preparation of dissertation research and writing.

Core Examination: Planning Theory. Planning Theory is concerned with the question of how scientific and technical knowledge can be effectively joined to organized actions that are intended to produce a social benefit.

Each doctoral student must pass the examination in Planning Theory which will probe the student's understanding of the literature as well as his/her ability to apply theoretical notions in a creative way to typical problem-solving and planning situations. It is recommended that the student take course 201B (Introduction to Planning Theory) and 201C (Colloquium in Planning Theory) in preparation for the examination. An extensive reading list is available to aid the student in preparing for the exam. (See Graduate Counselor.)

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 (1) statistics, and (2) their application to urban and regional studies and planning. The statistical tools include probability theory, probability distribution, sampling, survey methods, estimation techniques, hypothesis testing, analysis of variance, correlation, regression, and factor analysis. Students may also study methods which address research of a more qualitative nature, including ethnography, historiography, and Marxist methodologies.

To fulfill the research methods requirement, students 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 these courses must be 220B (Quantitative Analysis in Urban Planning II) or the equivalent. The three courses selected must be approved by the student's adviser before beginning the sequence, and the sequence should begin during the first year in the Ph.D. program.

Major Field Examination. The Major Field Examination is designed to test the student's indepth knowledge and understanding of his/her major field (area of concentration). The student is expected to demonstrate a level of competence equivalent to teaching a beginning course in that field and should be prepared to analyze and justify major policy options for the solution of those problems which he/she defines as being critical in the area covered by the examination. The examination has two parts, one written, one oral, and in addition, requires submission of an acceptable written "Statement of Intent".

The Major Field examining board will consist of three faculty in the student's major field, who will write and grade the written examination and administer the oral examination.

The Major Field Exam is given twice a year for each major field and is usually taken within six months after completion of the Planning Theory Examination. Students may receive academic credit for the preparation of the exam by enrolling in 597P. Students are expected to satisfy the Planning Theory Examination requirement prior to taking the Major Field Examination.

Minor Field Requirement. The Minor Field Requirement is intended to provide students with a breadth of knowledge which extends beyond the specific area of the major field. This requirement is flexible and closely adjusted to the dissertation focus of the student. It can be fulfilled in two ways:

1. Twelve units of coursework which (a) constitute a coodinated package of courses in the subject of the minor field, (b) are taken in an area of concentration other than the student's major field, and/or in another department (not necessarily in a single department), and (c) in which a passing grade ("B" or better) must be received, or

2. Passing the written portion of a Major Field Examination in an area other than the student's major field.

Oral Candidacy Examination. After successful completion of the Planning Theory Examination, Research Methods Requirement, and the Major and Minor Field Examinations, the student will petition the Graduate Division for approval of his/her doctoral committee.

The doctoral committee administers the Oral Candidacy Examination at which the student defends his/her dissertation prospectus. To assist the student in the development of the proposal, Ph.D. students are required to complete 6 units of the Seminar in Advanced Research Methods (208AB).
Final Oral Examination Following Completion of the Dissertation. This examination, which is optional at the discretion of the doctoral committee, involves a defense of the completed dissertation.

Time to Degree. Normal progress toward the degree, from admission to the doctoral program to award of the degree: 15 quarters (five years).

Disqualification and Appeal of Disqualification. For every student whose grade point average is below a 3.0 (i.e., on probationary status) or who is making insufficient progress toward the degree, a Counseling Board of three faculty members is established. The Board has the responsibility of reviewing the student's record, determining strengths and weaknesses, and advising the student in raising his/her academic performance to University minimum standards. In addition, the faculty and the Graduate Counselor meet each Winter or Spring Quarter to discuss the progress of all registered students.

Recommendations for termination of students on probation, students admitted provisionally, or other students who are not making sufficient progress toward the degree may be made in two ways: (1) The Counseling Board may recommend termination of a student by submitting a written statement to the Program Head discussing the reasons for the recommendation. (2) The Program Head, acting in consultation with the student's advisor, may identify a student as subject to termination. In either case, the student will be asked to withdraw from the program. Such students may petition to have their situation reviewed by a 3-person faculty Review Board.

Projects in Architecture and Urban Design

Note: While the required courses are regularly scheduled, the elective courses are not all offered every year.

4.01. Projects in Architecture. Laboratory, three hours. Prerequisite: consent of instructor. A number of different projects in relevant problem areas will be offered by faculty members from which the student may choose. May be repeated for credit.

4.02. Projects in Urban Design. Laboratory, three hours. Prerequisite: consent of instructor. A number of different projects in relevant problem areas will be offered by faculty members from which the student may choose. May be repeated for credit.

4.03. Project Studio With Specific Topic. (1/2 to 1 course) Studio, eight hours. Prerequisite: previous courses of particular sequence or consent of instructor. May be repeated for credit.


4.05. Projects in Energy Conservation Design.

4.06. Projects in Man-Environment Relations.

4.07. Projects in Educational Facilities.

4.08. Projects in History.

4.09. Projects in Design Methodology.

4.10. Projects with Specific Topic: Projects in Computer Aided Design. (1/4 to 1 course) Prerequisites: course 4.10, particular sequence or consent of instructor. May be repeated for credit.

4.11. Introductory Design Studio. Studio, twelve hours. Prerequisite: consent of instructor. Architectural composition is initially studied in terms of its separate elements. After each is studied by means of a manipulative approach which allows for exploration of its intrinsic possibilities, the student then undertakes a series of closely controlled exercises dealing with combining the elements. The latter part of the course is spent in the design of a small building, in which previously acquired knowledge is synthesized into a single design.

4.12. Building Design Studio. Studio, twelve hours. Prerequisite: course 4.11 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.

4.13. Building Design with Landscape Studio. Studio, twelve hours. Prerequisites: courses 4.11, 4.12 or consent of instructor. Building Design and Site Planning in relation to water, land forms and plants in natural landscape, with special attention to natural light, heat and ventilation.

4.14. Major Building Design I. Studio, twelve hours. Prerequisites: second year standing. Design projects which enable students to concentrate on specifically architectural issues, with emphasis either on treatment in breadth of large scale projects, or exploration in depth and detail of smaller scale projects. Students will learn to integrate structure, environmental control, building components and the cultural environment in design of buildings, and to present their ideas in graphic or model form.

4.15. Major Building Design II. Studio, twelve hours. Prerequisite: completion of 4.14, Major Building Design I. Design projects which enable students to concentrate on specifically architectural issues, with emphasis either on treatment in breadth of large scale projects, or exploration in depth and detail of smaller scale projects. Students will 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 will be placed upon integration of environmental control systems.

4.16. Comprehensive Design Studio. Studio, twelve hours. Prerequisite: completion of required course work up to first quarter, third year. Consent of instructor. Course will complete regular required sequence of design work, preparing students for the third year thesis. Comprehensive design projects will be structured to test students on integration of structural aspects, mechanical systems, site planning, and climatic considerations within their design solutions.

4.21. Architectural Drawing. Discussion, three hours; laboratory, three hours. Description of architectural drawing techniques and skills, including: sketching, diagramming, freehand drawing, drafting techniques, introduction to axonometric projection and orthographic projection.

4.22. Advanced Architectural Drawing. (1/4 to 1 course) Discussion, three hours; laboratory, three hours. Prerequisite: course 4.21, or consent of instructor. The course continues with an emphasis on the exploration of the interrelationships between drawing and design. More advanced design strategies, and modes of graphic exploration and presentation are developed.

Methodology and Computer Aided Design

224. Methodology: Design Theory. Lecture, three hours. A survey of the literature on systematic methods and design including problem-solving, interpretation, perception, artificial intelligence, and decision-making in the design process. May be repeated for credit.

Mr. Silly

225A. Information Systems. Discussion, three hours. Prerequisite: consent of instructor. Information processing models of design. The relationships between information flows and organizational structure. New techniques for information handling. Design of database and retrieval systems, automated document production, computer-assisted design techniques. Mr. Mitchell


227A. Computer Graphics. Discussion, three hours. Prerequisite: consent of instructor. Assuming a basic familiarity with visual and geometric properties, the course provides an introduction to the theory, techniques, and applications of computer graphics in architecture. It consists of a series of lecture/termnars on analysis and design, plus intensive practical. Mr. Aroni conducted on two storage-tube graphics terminals. Mr. Mitchell

227B. Computer Aided Design. Discussion, three hours. Prerequisite: consent of instructor. An examination of computer-assisted systems and decision-making. Topics will include artificial intelligence, self-organizing systems, and hardware capabilities and limitations. An attempt will be made to develop and test components of a computer design partner. Mr. Aroni

228A. Mathematical Models in Architectural Design. Lecture, three hours. Prerequisite: consent of instructor. An introduction to concepts and techniques of mathematical modeling in architecture. Baseline mathematical models with emphasis on the normal formal description of built form: data structures, practical case studies and exercises dealing with the use of mathematical models in architectural design.

Mr. Liggett, Mr. Mitchell

228B. Research in Design Graphics. 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.

Environmental Technology


Mr. Aroni


Mr. Aroni
SOCIO-PHYSICAL RESEARCH AND DESIGN

192. Housing and Settlement Patterns. Patterns of spatial organization in housing and small settlements in a range of cultures. Interaction between spatial patterns and prevailing social attitudes toward the individual, the family, land ownership and toward authority, aggression, and communalism.

203A. Special Topics in Architecture and Urban Design. (V to 1 course) Prerequisite: consent of instructor. Selected topics in architectural and urban design. Projects designed and executed under the direction of a member of the faculty.

ARCHITECTURAL AND URBAN DESIGN

218A-218B. Urban Structure: Analysis and Modeling. Discussion, three hours. Prerequisite: consent of instructor. Generation of conceptual frameworks on the urban structure based on empirical data, urban theories, and mathematical models. Individual and group research on selected aspects of urban systems. Application of models in decision-making, particularly in urban design projects. Mr. Lang

229. Special Topics in Architecture and Urban Analysis. Discussion, three hours. Prerequisite: consent of instructor. Selected topics in architectural and urban systems. Documentation and project work; field work.


249. Environmental Psychology and Sociology. Lecture, discussion, and critique of alternative physical solutions. Mr. Rand

259. Environmental Analysis and Design. Lecture, three hours. Prerequisite: consent of instructor. The course will analyze the social science theory and data to the design and development of socio-technical systems. Mr. Rand

262. Social Analysis of Buildings and Settlements. Lecture. Mr. Rand

267. Group Process in Design. Prerequisite: consent of instructor. The course aims to equip students with the knowledge and skills needed to work effectively in design processes with other professionals and with client and user groups in organizational and other settings where interaction is important in determining design outcomes.

271. Elements of Urban Design. Lecture, three hours. Prerequisite: consent of instructor. Selected topics in architectural and urban systems. Documentation and project work; field work.

289. Special Topics in Architecture and Urban Design. (V to 1 course) Prerequisite: consent of instructor. Selected academic topics initiating by students, student teams or faculty and directed by a member of the faculty. May be repeated for credit.

ARCHITECTURAL AND URBAN DESIGN


Environmental Management
Planning Theory

197. Planning for Minority Communities. Lecture, three hours. This course will introduce the student to inner city policy issues on three separate levels: (1) each student will develop a comprehensive inner city urban program using materials from the Alternative City Future Area, (2) each student is expected to identify the value systems and roles of social justice implicit or explicit in alternative intervention programs, and (3) each student is expected to participate in class discussions which emphasize minority issues which affect implementation.

Mr. Estrada 2018. Introduction to Planning Theory. The course provides a broad overview of the history of planning theory and focuses on current theories concerning the relationship between architecture and social organization. The role of the architect and the use of do
descriptive and normative frameworks for the discus
tion of architecture and its relation to other aspects of state, national, and imperial politics will be covered. The emphasis will be on understanding the role of the architect.

Mr. Roper 226A. Professional Development Series. Lecture, three hours. A seminar-project course offering an introduction to the planning profession and more specifically, to the Urban Planning Program at UCLA. An overview of the forces that shaped its practice over time and an exploration of various professions associated with planning will be covered. The course will be viewed as a response to changing needs and as a catalyst for emerging roles for professional planners. Several short projects are designed to expose stu
dents to real world planning problems and to the vari
ous roles the planner can play. The Housing, Regional Planning and the City Concentration specialities would be given in advanced seminars.

226B. History of Specific Building Types. Lecture, three hours. Historical evolution of specific building types, with emphasis on the role of history in the development of a specific building type, i.e., theaters, schools, museums and hospitals. May be repeated for credit.

Mr. Aran 287. Ancient and Islamic Architecture of the Mediterranean Area. Prerequisites: consent of instructor. The aim of this course is to study the influence of the physical and social environments on building culture, and the physical and cultural setting around the Mediterranean. Special emphasis is given to architectural development in Greece.

Mr. Aran 287. Architectural History: Medieval Period. Pre
requisite: consent of instructor. The course will cover the survey of European architecture from the year one thousand to the present, including buildings and environments considered in the cultural contexts.

Mr. Aran

Planning Methods

206. Urban Data Analysis. Lecture, four hours. This course will review research methods integrated by a common planning theme. Among the methods covered are observational methods, data collection tech
iques, including survey methods, and the use of available data (i.e., census data, administrative data, etc.). Analytical techniques such as index construction, standardization, and trend analysis, will also be discussed. Each method/technique will involve exercises by students. General Preparation: none.

Mr. Levine and The Staff

207. Public Resource Allocation. Lecture, three hours. Prerequisite: a passing score on a micro
economic examination given in the first day of class. This course emphasizes the practical use of economics in analyzing public resource allocation problems. Topical coverage includes a review of marginal analysis, the treatment and interpretation of market failure, goods and the free rider problem, environmental pricing, public service pricing, and conflicts between individual and collective rationality.

Mr. Shoup

208A-208B. Seminar in Advanced Research Meth
ods (1 course, 1 hour) Prerequisites: Ph.D. status, consent of instructor. Students are expected to participate in an independent study course under the guidance of a faculty member in the field of planning.

Mr. Shoup 208A. Seminar in Advanced Research Meth
ods (1 course, 1 hour) Prerequisites: Ph.D. status, consent of instructor. Students are expected to participate in an independent study course under the guidance of a faculty member in the field of planning.

Mr. Shoup

2123. Social Indicators and Reports for Metropolitan Regions. Discussion, three hours. Prerequisite: second year standing. Research seminar concerned with the development of social indicators for evaluating and reporting the performance of complex urban systems.

Mr. Clark M215A. Advanced Quantitative Analysis. (Same as Geography M270.) Lecture, two hours; laboratory, two hours. Prerequisite: Geography 171 or equivalent or consent of instructor. Advanced topics in the utilization of statistical techniques for urban and geographic research. Emphasis on linear models, factor analysis and grouping procedures as applied to geographic data bases.

Mr. Clark 2215B. Spatial Statistics. (Same as Geography M272.) Lecture, two hours; discussion, one hour; lab
oratory, one hour. Prerequisite: Mathematics 50 or Geography 171 and consent of instructor. Specific techniques useful in the analysis of spatial distributions including both point and areal patterns; and em
phasize the use of statistical techniques for analyzing models of spatial distributions, and statistical surfaces.

Mr. Clark 2220A. Quantitative Analysis in Urban Planning I. Lecture, three hours. Prerequisite: passing score on a basic mathematical concepts test given on the first day of class. An introduction to mathematical and statistical concepts and methods with applications in urban planning. The course will review basic material. The course is fundamental to planning methods and concepts descriptive statistics, probability and sampling techniques. The course will also in clude an introduction to the use of the computer as a tool in analysis of planning-related data.

Ms. Liggert 2220B. Quantitative Analysis in Urban Planning II. Lecture, three hours. Prerequisite: passing score on a basic mathematical concepts test given on the first day of class. An introduction to statistical in ference and the use of statistical concepts in urban planning applications. Topics to be covered include hypothesis testing, analysis of variance, correlation, regression and causal modeling. Applications will in clude such planning problems as forecasting population growth and change, estimating the need and use of public facilities, and analyzing the changing social and economic characteristics of urban populations. Case studies will be presented which cover the design and analysis of typical urban planning research projects. The course will also include use of the computer as a tool in statistical analysis and modeling.

Ms. Liggert
221A. Evaluation Research. Lecture, three hours. Prerequisites: courses 220A and 207. This course focuses on the conceptual approach, methods and problems encountered in conducting program evaluations. Topics covered will include purposes of evaluations, steps involved in the evaluation process, and several important methods in planning. Case studies and exercises are used as teaching techniques along with lectures provided by the instructor. Mr. Shoup.

221B. Project Evaluation Methods. Lecture; three hours. Prerequisite: course 207. This course explores new ways of estimating the economic worth of public programs and investment projects. The major topics covered include cost-effectiveness analysis, cost-benefit analysis, sensitivity analysis, distribution analysis, and implementation. Mr. Shoup.

228A. Computer Applications in Architecture and Urban Planning (Introductory). See "Interprogram Courses."

228B. Computer Application in Architecture and Urban Planning (Advanced). See "Interprogram Courses."

229. Special Topics in Planning Methods. (To 2 courses) Seminar on topics in planning methodology selected by the faculty. May be repeated for credit.

Projects in Planning

M202C. Seminar: Urban Affairs. (4 courses) (Same as Law M526.) 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 issues have arisen and are 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 most directly interests them. For each case a specific client works with the class in presenting to it 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. Credit given for the course includes the Environmental Quality Board, the Housing Authority, and others. Mr. Hagman. 217A-217B. Comprehensive Planning Project. Prerequisite: second year standing. The comprehensive project is offered by at least two faculty members representing different Areas of Policy Concentration in the Urban Planning Program and brings together students of varying backgrounds and interests in joint solution of a problem in urban planning and development. Each project counts the equivalent of 8 units, total, and will span two quarters. Because of the time required for the completion of project work, it is expected that students will choose this option or the Comprehensive Examination Plan in place of the Master's thesis. Credit on completion of 217B. 223B-223C. Professional Development Series. Prerequisite: 223A highly recommended. A two quarter sequence concerned with problems of professional practice. Students must be working in a field setting to enroll in the course. A job fair will be held at the beginning of the Winter Quarter to place students in field settings. Students who wish to arrange their own placement in a planning situation may be admitted at the discretion of instructor. 223B focuses on developing methods which integrate theory and practice through readings and individual and collective analyses of each student's work in the Camino 223C. Concepts and techniques covered in 223B with the addition of a larger look at the planning profession by bringing noted professionals to the classroom to dialogue with the students. 223A is highly recommended as a prerequisite but not required. Students must be placed by 223B or 223C with one quarter of 496F or 490 to meet their field work requirement.

Planning, Law and Politics

M202A. Public Control of Land Development. (4 or 1 course) (Same as Law M268.) Analysis of the legal and administrative aspects of the regulation of land use and development, and the problems and techniques of urban planning: dwelling legislation, building codes, zoning, subdivision control, public acquisition of land, tax controls, and urban development. Mr. Hagman.

M202B. Governance: State, Regional and Local. (4 or 1 course) (Same as Law M268.) Legal problems involving local and governmental entities; sources and extent of powers and duties with respect to personnel, finance, public works, community development, and public action. Mr. Hollins.

M205C. Urban Government. (Same as Political Science M229.) Discussion, four hours. An analysis of the policies, processes, interrelations and organization of governments in heavily populated areas. May be concurrently scheduled with Political Science 197F, sec. 1. Mr. Bollens.

211. Law and the Quality of Urban Life. Lecture, three hours. This course is an introduction to law as an urban system and is directed primarily toward those interested in social and advocacy planning. The course will be organized around a number of urban problems such as employment, housing, social welfare and land use and examine the law's role as a partial cause and cure of these problems. Although certain legal principles will be stressed, the course examines law as a changing process rather than a collection of principles. It is a goal of the course that the students develop a facility to interact with law and lawyers in a positive and forceful manner. Mr. Huskin.

Urban and Regional Development

M231. Urban Housing and Community Development. (4 to 1 course) (Same as Law M268.) Lecture, three hours. This course will comprehensively consider the rebuilding and construction of American cities with the major emphasis upon 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 an emphasis on field research in lieu of a substantial portion of the final examination. Mr. McGee.

222. 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 to the analysis of urban systems with a major emphasis on American urban problems. Topics to be covered include the historical geography of urbanization, the development and transformation of urban spatial structure, suburbanization and metropolitan political fragmentation, urban fiscal crisis, and the role of urban social movements. Mr. Soja.

234. Seminar in Spatial Development Policy. Prerequisite: course 232 or some background in analytical urban geography; or consent of instructor. An advanced seminar dealing with the analysis, measurement, and interpretation of spatial change in developing countries, particularly in East and West Africa. It combines an indepth examination of spatial development theory (especially with regard to spatial diffusion and settlement systems models), comparative studies in the geography of development, and a detailed assessment of some current African regional development plans. Generally taken in the second year. Mr. Soja.

235A-235B. Regional Approaches to National Development. Prerequisite: consent of instructor. A twoquarter sequence dealing with questions of urbanization and rural development in industrializing Third World countries. Generally taken in the second year. Mr. Friedmann.

236A-236B. Urban and Regional Economic Development. Prerequisite: course 207. Economic growth policies and development planning in cities and regions. 236A will cover basic principles of urban and regional economics as they bear upon public policy formation and urban and regional planning. 236B will focus on local economic development issues and community planning, stressing the social implications of economic change.

237. Introduction to Regional Planning: The Evolution of Regional Planning Doctrine. Lecture, three hours. A critical and historical survey of the evolution of regional planning theory and practice, with a particular emphasis on the relations between regional planning and developments within Western societies. The focus will be on issues of regional scale and the partial cause and cure of these problems. Although certain legal principles will be stressed, the course examines law as a changing process rather than a collection of principles. It is a goal of the course that the students develop a facility to interact with law and lawyers in a positive and forceful manner. Mr. Huskin.

Public Policy and Public Services:

Social Policy and Public Services (Area of Concentration)

240. Advanced Seminar in Social Policy and Public Services. Lecture. Prerequisite: consent of instructor. A seminar dealing with the general system within which services are supplied publicly or semi-publicly, the specific sectors comprising the system, and analytical techniques for evaluating the efficiency and effectiveness of services delivered to the public. Mr. Shoup.

M241A. Urban Transportation Planning I. (Same as Engineering Systems M286A.) Lecture, three hours. An introduction to the methods of 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 history 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.

M241B. Urban Transportation Planning II. (Same as Engineering Systems M288B.) Lecture, four hours. Prerequisites: courses M241A, 220B, or consent of instructor. This course is designed to familiarize students with the method of analyzing travel; basic data sources for examining urban travel and transportation; techniques of forecasting and analyzing travel; mathematical models of travel: trip generation, trip distribution, modal split, traffic assignment, network flow; forecasting and approaches to transportation system and project evaluation. Mr. Wachs.

M241C. Urban Transportation Planning III. (Same as Engineering Systems M288C.) Lecture, four hours. Prerequisite: consent of instructor. An introduction to the methods of 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 history 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.

244. Introduction to Housing Markets. Lecture, four hours. Prerequisite: AUP 207 (or equivalent), or consent of instructor. Recent experience and case studies in housing planning and policy: Planning a rail system and downtown people mover for Los Angeles, community development in Los Angeles, the effect of public housing, 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.
Natural Environment and Resources

(Area of Concentration)

M115. Engineering and Environmental Geology. (Same as Earth and Space Sciences M139.) Lecture, two to four hours. Prerequisite: Geology 100; 111A recommended. 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. Merfield

M119. Geomorphology. (Same as Geography M102.) Lecture, three hours; reading period, one hour. Prerequisite: consent of instructor. The role of the state, its effectiveness, or its failure in influencing man's response to natural and man-made hazards. The societal aspects of natural hazards and their effects on human population distribution. Mr. Orme

261A. Introduction to Environmental Analysis. Lecture, three hours. Discussion of basic ecological principles relevant to environmental planning, including classification of major ecosystems, energy transfer, biochemical cycles, dominance and niche, diversity and stability, species-area relations, etc. Attention will be drawn to the human role in modifying ecosystems. Generally taken in the first year. Ms. FitzSimmons

261B. Environmental Management. Lecture, three hours. Prerequisite: course 261A or consent of instructor. Application of ecological principles to the analysis of environmental impacts and the management of natural resources. Ms. FitzSimmons

262. Residue Analysis. (1/2 to 1 course) Lecture, three hours. Prerequisite: course 260 or consent of instructor. Advanced seminar covering a selected topic (to be specified each time the course is offered) in the management of atmospheric emissions or solid waste. Examinations in areas such as acid rain, solid waste disposal, etc. Ms. FlzSimmons

263. Natural Resource Conservation. Lecture, three hours. Seminar exposing students to presentations, readings, and discussion, the meaning of resource conservation, the feasibility, and the potential of economic, social, and political solutions to water, air, and land conservation. Mr. Estrada

264. Environmental Law and Policy. (1/2 to 1 course) (Same as Law M290.) The course first examines, from perspectives meaningful to legal institutions, the nature of environmental problems. It then considers the nature of the law as it has developed in the United States, the potential and the limits of that law, 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. Mr. Kier

286. Seminar on Land-Use Planning. Lecture, three hours. Prerequisites: consent of instructor. A seminar-discussion course that builds on the material of courses in business planning, natural resource planning, and land-use planning. Topics may include planning for urban areas including new towns, new town-in-town, shopping centers, industrial parks, office parks, housing, and recreation areas. Discussion of case studies in Southern California, exercises at the scale of the small city, the urban neighborhood, and the superblock. Mr. Kamnitzer

287. Site Planning. Introduction to principles of site planning for urban areas including new towns, new town-in-town, shopping centers, industrial parks, office parks, housing, and recreation areas. Discussion of case studies in Southern California, exercises at the scale of the small city, the urban neighborhood, and the superblock. Mr. Kamnitzer

The Built Environment

(Area of Concentration)

219. Special Topics in the Built Environment. (1/2 to 2 courses) Lecture, three hours. Seminar topics selected by the faculty. May be repeated for credit.

220. Comparative Settlement Forms. Lecture, one and one-half hours; discussion, one and one-half hours. Examines the nature and morphology of villages and small towns in the Third and Fourth Worlds and in traditional areas of industrialized nations. The starting point of this analysis has been a set of "determinants" of form suggested by Amos Rapoport's House Form and Culture applied to a sequence of case studies, including Native American and Native Canadian villages, Anasazi settlements, cooperative and communal societies (e.g., Iban longhouses), Maori, and other Pacific cultures, and Scandinavian and Norwegian groups and examples in South America, Europe, and the Middle East.

224. Introduction to Environmental Design and Planning. Lecture, three hours. Overview of the influence of land-use planning on the design of urban areas, with illustrations of the consequences for urban design. Generally taken in the first year.

225. Planning Workshop. (1 to 2 courses) Laboratory, six hours. Prerequisites: 421 or 422 or Art 153A-153B 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 real or hypothetical. A focus on problems of human interaction with the physical environment. Development of presentation skills, both graphic and verbal, is an essential component of this workshop.

227. Rural Planning With Native Americans. Treats past, present, and possible future directions of planning in Native America rural areas (reservations, communities, and nations). The course examines case studies in Native American reservation planning, such as the Rincon General Plan, or the Owens Valley, Morongo, Salt River Pima-Maricopa, and Navajo Plans, as well as certain "critical" comparative studies (e.g., the Crow and Northern Cheyenne reservations in Montana).
287. Research Methods in Human-Environment Relations. (¼ to 1 course) Lecture; three hours, discussion; two, hours. A survey of a variety of research methods and techniques, emphasizing the human-environment interface, including both those now frequently employed (survey research) and others not so well known (ecological psychology, ethnographic inquiry). The course will emphasize the application of research methods to selected exercises and specific field situations.

281. Introduction to the History of the Built Environment in the United States. Lecture, three hours. This lecture course is an introduction to American urban-environmental history. It involves a survey of the main economic, political, social, and aesthetic forces forming the built environment. It covers the colonial period to the present, emphasizing the importance of the spatial design of cities and buildings to public policy. Advanced undergraduates admitted by consent of instructor. Ms. Hayden

283. History of the American Household and the American Home. Lecture, one and one-half hours; discussion; one and one-half hours. Prerequisite: course 231 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 house and urban fantasies, from the 16th century to the present. Ms. Hayden

284. The Ideal City in History. Prerequisite: course 231 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, economists, and social critics, and architects to criticize existing society and envision alternative possibilities of the future. This seminar will deal with the utopian tradition in its literary, political, and aesthetic forms, examining textual cities, moral and political theorists, political, and urban fantasies, from the 16th century to the present. Ms. Hayden

285. Livable Cities for Women, Men and Children. Lecture, one and one-half hours; discussion, one and one-half hours. An introduction to the substantial literature on the relationship between gender and urban experience. Alternative research strategies attempt to define a public/private 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 will 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 "Architectural Theory, History and Criticism."


289. Architectural History: Medieval Period. See "Architectural Theory, History and Criticism."

Independent Study

190. Special Studies. (¼ to 2 courses) Prerequisites: consent of instructor. Independent research or investigation on a selected topic to be arranged with a faculty member. May be repeated for credit.

496. Supervised Independent Teaching. (¼ to 2 courses) Supervised individual teaching experience. This course is graded S/U and may be repeated for credit.

497. Special Projects, I. Architecture. (¼ to 2 courses) 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.

498. Field Projects. (¼ to 2 courses) To be graded S/U only; may be repeated for credit.

499. Special Projects in Urban Design. (¼ to 2 courses) 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.

501. Cooperative Program. (¼ to 2 courses) Prerequisites: approval of UCLA Graduate Advisor and Graduate Dean. Approval of 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. To be graded S/U.

596A. Directed Individual Research and Study in Architecture and Urban Design. (¼ to 2 courses) May be repeated for credit.

599P. Research in Planning. (¼ to 2 courses) May be repeated for credit.

599T. Preparation for the Comprehensive Examination for the Master's Degree or Qualifying Examination for the Ph.D. Degree. (¼ to 2 courses) May be repeated for credit. Graded S/U.

598A. Preparation in Architecture/Urban Design for the Master's Thesis. (¼ to 2 courses) Prerequisite: consent of instructor. May be repeated for credit.

599P. Preparation for Master's Thesis in Urban Planning. (¼ to 2 courses) May be repeated for credit. Graded S/U.

599P. Doctoral Dissertation Research in Planning. (¼ to 2 courses) May be repeated for credit. Graded S/U.

Interprogram Courses

187. Planning and Designing Our Cities. An introduction to urban planning and urban design with an 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 major projects. (3 to 4 hours) May be repeated for credit. Graded S/U.

190. The Human Environment: An Introduction to Architecture and Urban Planning. This 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. The 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 the issues involved in relating the human to the natural environment. The students are encouraged to comprehend the major urban issues both as citizens and as potential participants. A field visit to New York City is required.

226A. Computer Applications in Architecture and Urban Planning (Introductory). Lecture, three hours. Introduction to electronic computers and the FORTRAN IV programming language, with emphasis on writing and executing programs specifically applicable to architecture, urban design and planning. The course will also provide an introduction to computer mapping techniques. No prerequisite or prior knowledge of the computer is required. Ms. Liggett

226B. Computer Applications in Architecture and Urban Planning (Advanced). Lecture, three hours. Prerequisite: course 226A or equivalent. Seminar on advanced computing techniques and modeling as applied to architecture and urban planning. This course will introduce the PL/I programming language but will assume students have previous computing experience in another language.

690. Urban Innovations Group Workshop. (1 to 2 courses) 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 social or environmental issues. May be repeated for credit.

Art, Design, and Art History

(Office, 1300 Dickson Art Center)

Samuel Amato, B.F.A., Professor of Art.
Albert Boinne, Ph.D., Professor of Art History.
William J. Brace, Professor of Art.
Raymond B. Brown, M.A., Professor of Art (Chair of the Department).
John W. Butter, M.A., Professor of Art.
Susan B. Downey, Ph.D., Professor of Art History.
Elliot J. Elgart, M.F.A., Professor of Art.
Robert F. Heinkehn, M.A., Professor of Art.
Thomas Jennings, M.A., Professor of Art.
J. Bernard Kester, M.A., Professor of Art.
Velizar Mihich (Vasa), Professor of Art.
Lee Mullican, Professor of Art.
John A. Neuhart, Professor of Art.
Gordon M. Nunes, M.A., Professor of Art.
Carlo Pedratti, M.A., Professor of Art History.
Stan Stusy, M.F.A., Professor of Art.
Otto-Karl Werdermeister, Ph.D., Professor of Art History.
Laura F. Andreson, M.A., Emeritus Professor of Art.
Alexander Badawy, B.Arch., D.I.A., Ph.D., Emeritus Professor of Art History.
Karl M. Birkmeyer, Ph.D., Emeritus Professor of Art History.
E. Maurice Bloch, Ph.D., Emeritus Professor of Art History.
Archives of Art History.
Katharina Otto-Dorn, Ph.D., Emeritus Professor of Art History.
James P. Peas, Emeritus Professor of Art.
Frederick S. Wight, M.A., Emeritus Professor of Art History.
Mitsuuru Katoaka, M.A., Associate Professor of Art.
Cecelia F. Klein, Ph.D., Associate Professor of Art History.
David M. Kunde, Ph.D., Associate Professor of Art History.
Donald F. McCallum, Ph.D., Associate Professor of Art History.
Arnold Rubin, Ph.D., Associate Professor of Art History.
Adrian Sax, B.F.E., Associate Professor of Art.
Nathan Sheppard, Dottore in Architettura, Associate Professor of Architectural History.
James R. Valerio, M.F.A., Associate Professor of Art.
James W. Baseler, M.A., Assistant Professor of Art.
Cornelia K. Breitenbach, M.F.A., Assistant Professor of Art.
William C. Brown, M.A., Assistant Professor of Art.
Ioli Kalavrezou-Maxeiner, Ph.D., Assistant Professor of Art History.
Donald H. Salmberg-Salter, Ph.D., Assistant Professor of Art History.
Richard Marquis, M.A., Assistant Professor of Art History.
Alice M. McCloskey, M.A., Assistant Professor of Art.
Martin J. Powers, Ph.D., Assistant Professor of Art History.
Madeleine Sunkess, B.Ed., Emeritus Assistant Professor of Art, Emeritus.

Donald Roberts, Lecturer in Art.
Jean Weisz, M.A., Lecturer in Art History.

The Master of Arts Degree

Design

Admission requirements. An acceptable portfolio is required, in the form of slides (maximum 25). Acceptance is by a majority vote of
the Design faculty, Formal Design Area faculty review of graduate applicant portfolios takes place toward the end of the Fall and Winter quarters.

For applicants who have a B.A. degree or equivalent, it is possible to be admitted on an Unconditional Basis, or on a Provisional Basis. Further explanation follows.

Advising. Unconditional Admission: Immediately upon an applicant's acceptance on an Unconditional Basis, an Initial Advisory Committee will be formed by the Chair of the Design Area and/or the Graduate Affairs Assistant of the Department. This committee will be composed of the student's two sponsors, one of whom will serve as the student's adviser, and at least one other member of the Design faculty. It is the adviser's responsibility, along with other members of the committee, to observe the student's progress and give advice until the student is considered ready to select his/her Graduate Guidance Committee for the graduate degree. Members of this initial Advisory Committee may or may not eventually become members of the student's Graduate Guidance Committee.

Provisional Admission: Provisional admission for two quarters only is recommended when an applicant shows great promise, but the grade point average is below 3.0; preparation for the graduate area of specialization is insufficient as demonstrated in the portfolio; undergraduate preparation is inadequate as indicated in transcripts.

Immediately upon acceptance on a Provisional basis, an Advisory Committee for Provisional Students will be formed by the Chair of the Design Area and/or the Graduate Affairs Assistant of the Department. This committee will be composed of the student's adviser, and at least one other member of the Design faculty. It is the adviser's responsibility, along with other members of the committee, to consider the inadequacy which prompted Provisional Admission and outline a program of study that will strengthen the student sufficiently to allow him/her to continue on an Unconditional basis.

No later than the final week of instruction of the second quarter of Provisional Admission, the Advisory Committee will meet with the student to determine whether Provisional status is to be removed or the student dismissed. The recommendation of the committee will stand as the final decision in each case.

No later than the end of the fourth quarter of fulltime residency, the Graduate Guidance Committee shall be established. The student, in consultation with his/her adviser, is responsible for selection of committee members as specified in the following:

1) Committee Chair: the student's adviser, and a member of the Academic Senate, unless petitioned otherwise.
2) Second member: a faculty member from the Design area.
3) Third member: a person of academic rank or equivalent professional standing from outside the Department of Art, Design, and Art History (possibly outside the University).

The Advisory Committee and/or the Graduate Guidance Committee is charged with the responsibility of reviewing the student's progress at least once every quarter that the student is enrolled. A record of these reviews shall be placed in the student's file, open for his/her inspection.

Major Fields or Subdisciplines. Communication imagery, image transfer, electronic imagery, costume, ceramics, glass, fiber structures, textiles, landscape design, industrial design or exhibition design.

Course Requirements. A minimum of 36 quarter units in the Department of Art (or nondepartmental courses with the Graduate Advisor's approval) in courses numbered 100 to 299 (and possibly 596), with a "B" average, including a minimum of 20 quarter units of design numbered above 200, of which at least 8 units must be the Design Seminar, Art 290 A, B, C, and at least 8 units devoted to a comprehensive project in the student's area of study. In addition, 8 quarter units of art history; or if the student has a B.A. or B.F.A. in Art which includes a background in the history of art, he/she may in conference with his/her faculty adviser, substitute 8 units in other courses that are germane to his/her graduate pursuit.

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, other visual material, which may include a written statement as determined by the Graduate Guidance Committee. This examination is conducted by the student's Graduate Guidance Committee.

Time to Degree. From graduate admission to award of the degree: normally six quarters.

500 Series Course Limitations. No more than two 596 courses (8 units) may apply towards the 36 required for the degree.

Disqualification and Appeal of Disqualification. If, by virtue of a review by the student's Graduate Guidance Committee, the student's work is not deemed to be of graduate quality or quantity, the Guidance Committee may recommend termination.

Other Relevant Information. The M.A. degree reflects mature creative achievement demonstrated within the various disciplines of design, identifying the degree recipient as having developed an advanced level of original work.

Art Admission Requirements. Regular admission requires a B.A. or equivalent and faculty approval following the annual review of applicants' creative work in one of two kinds of presentations, 1) slides only, or 2) the original creative works, both presentations limited to a maximum of 20, minimum of 10 works showing media emphasis and potential for advanced study.

Provisional admission may be granted for work with faculty sponsors for three quarters, pending reconsideration of regular admission.

The M.A. is not prerequisite to the M.F.A. Admission to the M.F.A. program is usual, with a possible decision deferred to conclude an M.A. only, or before the M.F.A. The unit requirements applied to concluding the M.A. will not apply to the M.F.A., with the exception of the cumulative Art History units.

The annual review of applicants' work is in February, for admission in the next Fall Quarter, together with reviews of scholarship and teaching assistantship applications. Students are admitted for Fall Quarter only.

Admitted graduates who do not enroll, drop out, or take a leave of absence must be reviewed for readmission at the next annual review, except by petition.

Advising. For general advising: Graduate Affairs Assistant. Faculty advisers are available for new students, by referral and mutual consent, usually related to media specialization. Continuing Graduate Reviews are held toward the end of each quarter, with the entire faculty in attendance. Results of these reviews are placed in the student's file, and available for inspection by students.

Major Fields or Subdisciplines. Drawing, Painting, Sculpture, Printmaking, Photography, Video, New Forms and Concepts. No limits to the variations, extent, or value of these designations is intended.

Course Requirements for the M.A. A minimum total of 36 quarter units in the Department of Art, Design, and Art History from 100 to 299, are required, with a B or better average. Within those 36 units, a minimum of 20 quarter units in the 200 series must be taken in the field of specialization.

A minimum total of 36 quarter units must be taken in art history, theory and criticism, in undergraduate and graduate study. Subjects (by petition) related to the special interest of the student may be substituted.

Comprehensive Examination Plan. Each degree is granted upon the basis of the quality of the student's work as demonstrated in the exhibition which accompanies the final Comprehensive Examination. The number of units of credit attained is irrelevant to this judgment. By mutual consultation and consent of student and individual faculty, an Advisory and Examining Committee, with a chair, must be established not less than three quarters before the Comprehensive Examination. Committee members may not change in these three quarters except to provide for faculty absence.

The M.A. committee shall consist of a minimum of three members from the PSGA curriculum.
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.

**Time to Degree.** From graduate admission to award of the degree: six quarters.

*500 Series Courses Limitations.* A maximum of two 596 courses (8 units) may be applied toward the 36 units required for the degree. Disqualification. Following reviews, verbal and written notice may be given of probationary status, pending the next review. Unresolved difficulties may conclude in termination.

**Appeals.** Appeal may be made to the Vice Chair in Art, Design, and Art History.

### Art History

**Admission Requirements.** A minimum grade point average of 3.25 overall and 3.50 in upper division art history courses is required. The Graduate Record Examination is required, although no cutoff 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 the applicant’s interests in art history. In addition, the student must have completed six full courses in the history of art, distributed over at least four of the following seven categories such that three fall within categories a. through d., and three within categories e. through g.

a) Egypt, Ancient Near East, Classical  
b) Medieval (Western European; Byzantine)  
c) Renaissance, Baroque, Prints and Drawings  
d) Modern European, Modern American, Prints and Drawings  
e) Chinese, Japanese  
f) African, Oceanic, Native North America, Pre-Columbian  
g) Islamic, Indian

Applicants demonstrating exceptional promise who lack 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 of residence and will not count toward the 10 courses required for the degree. Instead of taking a course, the student may elect to substitute a competency examination in the deficient area.

Applicants are expected to possess some fluency in at least one of the two languages for which they will be responsible (see Foreign Language Requirement) and are encouraged to take either the ETS or the UCLA Art, Design, and Art History Department examination in one of those languages at the time of application.

**Prospective students may contact the Graduate Affairs Assistant, Department of Art, Design, and Art History for brochures, etc. The Department has no special departmental application.**

**Advising.** Address: Graduate Adviser, Department of Art, Design, and Art History. Personal advisers are selected as follows: By the end of the third quarter in residence, a student chooses his/her major and minor advisers; the choice is determined by the fields of study. Changes are made by petition to the Graduate Review Committee; the basis for change will normally be change in field. Internal grading and evaluation consists of comments made by professors about students' performance in seminars; these comments are put into students' files which are available to them. Overall assessment of a student's work is made by the personal adviser. The major adviser must be consulted at least once each quarter to review progress and plan the program. Records are not kept of these meetings. The student's major and minor advisers constitute the guidance committee.

**Major Fields or Subdisciplines.** Egyptian, Ancient Near East, Classical, Medieval (Western European; Byzantine), Renaissance, Baroque, Prints and Drawings, Modern European, Modern American, Chinese, Japanese, African, Oceanic, Native North American, Pre-Columbian, Islamic, Indian.

**Foreign Language Requirement.** A reading knowledge of French and German is required of all students except those intending to major in Asian (i.e., Chinese, Japanese, Indian) or Pre-Columbian art history. Students majoring in Chinese or Japanese art history (who are not native speakers of the relevant language) must substitute either Chinese or Japanese respectively for either French or German. Those majoring in Indian art history must substitute, for either French or German, an appropriate classical research language of India. 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 art history majors, all students must demonstrate reading fluency in both foreign languages in any of the following ways: a) by passing the Art, Design, and Art History Department language examination, b) by passing the ETS examination with a minimum score of 600, c) by enrolling in and completing with a minimum grade of B, the UCLA courses French 5, German 5, and/or Spanish 25. One of these language requirements must be satisfied by the end of the second quarter of residence and the other by the end of the fourth. Students majoring in an Asian art history area must satisfy their European language requirement by the end of the second quarter of residence and may do so in any of the three ways listed above. Their Asian 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 student’s major adviser. A student who has passed a required foreign language examination at another institution should consult the Chair of the Art Department Language Committee to determine if his/her previous examination is acceptable.

**Course Requirements.** The M.A. degree requires the completion of a major and two minors. Students intending to major in areas included in categories e. through g. (see Admission Requirements) will choose at least one minor from categories a. through d. Conversely, students intending to major in areas included in categories a. through d. will choose at least one minor from areas included in categories e. through g. Students are required to take a minimum of 10 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 (i.e., in the 200 and 500 series). At least four of these, including course 201 (Historiography of Art), must be in the 200 series, and no more than two may be “directed studies” (586) projects. All students must take: (1) course 201 (Historiography of Art), (2) four courses in the major and (3) two courses in each minor.

**Thesis Plan.** The thesis committee is established upon completion of all course requirements. The thesis committee consists of the student's major adviser and two other UCLA faculty members, one of whom must be a member of the art history faculty. Normally, the student's two minor advisers serve in this capacity. At the same time, the student selects a thesis topic in his/her major field. This 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.

**Time to Degree.** From graduate admission to award of the degree: two to three years.

*500 Series Course Limitations.** See Course Requirements above.

Disqualification and Appeal of Disqualification. If the thesis is rejected by one member of the student's committee, it may, at the request of the major adviser, be submitted to the Graduate Review Committee for final judgment; otherwise, the student's candidacy is terminated.

### The Master of Fine Arts Degree

**Design**

**Admission Requirements.** Admission requirements and procedures are essentially the same as for the M.A. in Design with the following difference in emphasis: The M.F.A. degree is the highest academic degree awarded in studio disciplines of art and is
conferring 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 of applicants seeking admission directly to the M.F.A. program in comparison to M.A. applicants. M.F.A. applicants are usually not admitted on a provisional basis when there are deficiencies in the applicant’s portfolio, preparation or academic record.

Course Requirements. A minimum of 72 quarter units of Design numbered 100 to 299, of which at least 8 units must be the Design seminar (Art 290 A, B, C) and of which at least 12 units must be devoted to a comprehensive project in the student's area of study; a minimum of 40 quarter units of art history in undergraduate and graduate study. The student, with the approval of his/her faculty adviser, may substitute a maximum of 12 units in other courses that are germane to his/her graduate pursuits.

Comprehensive Examination Plan. The Comprehensive Examination (offered each quarter) consists of an oral examination and 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, other visual material, and which may include a written statement as determined by the Graduate Guidance Committee. This examination is conducted by the student's Graduate Guidance Committee.

Time to Degree. From graduate admission to award of the degree: normally nine quarters.

500 Series Course Limitations. A maximum of three 596 courses (12 units) may be applied toward the 72 units required for the degree.

Disqualification and Appeal of Disqualification. Following reviews, verbal and written notice may be given of probationary status, pending the next review. Unresolved difficulties may conclude in termination.

Appeals. Appeals may be made to the Vice Chair in Art, Design, and Art History.

The Ph.D. Degree

Art History

Admission Requirements. 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 show evidence of having 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 M.A. course requirements, art history). Deficiencies must be made up during the first two quarters of residence and will not count toward the eight courses required for the Ph.D.

The student's application to the Department must include, in addition to official transcripts submitted to the Admissions Office and GRE scores, all of the following:

a) A standard, approximately 400-word, statement of purpose.

b) A copy of the applicant's 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.

c) Three or more letters of recommendation from individuals familiar with the applicant's scholarly work, of which one must be a detailed letter of assessment and endorsement from the individual who served as the applicant's major adviser for the M.A.

d) A written statement from the applicant's intended major adviser at the Ph.D. level of his/her willingness to supervise the applicant's Ph.D. work.

e) 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.

A reading knowledge of French and German is requisite for admission at the Ph.D. level for those majoring in all areas except Asian and Pre-Columbian. Students may demonstrate this knowledge by submitting proof of an ETS score of 600 or better, taking and passing the relevant UCLA Art, Design, and Art History Department language examination(s), or submit-
Prospective students may contact the Graduate Admissions Office for further information.

Students intending to major in an Asian art history area must demonstrate, by the means outlined above, reading fluency in either Chinese, Japanese, or Korean. In addition, they must present proof of completion — with a grade of B or better — of six consecutive quarter courses (or their equivalent) in an appropriate Asian language. Determination of the appropriate language and acceptable equivalencies should be worked out in advance with the applicant’s 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 case of the latter, UCLA’s course, Spanish 25, passed with a grade of B or better, fulfills the requirement.

A student who has passed a required foreign language at another institution should consult the chair of the Art, Design, and Art History Department Language Committee to determine if his/her previous examination is acceptable.

Prospective students may contact the Graduate Affairs Assistant, Department of Art, Design, and Art History for brochures and other information. The Department has no special departmental application.

Advising. At the time of application to the Ph.D. program, the student selects a major field of study; by the end of the second quarter of residence, he/she selects, in addition, two minors. The faculty members responsible for these fields serve as the student’s minor advisers. Each adviser is responsible for the student’s course of study and completion of requirements within his/her own field. In addition, the major adviser must be consulted regarding the student’s overall course of study at least once each quarter.

Major Fields or Subdisciplines. See under M.A. requirements.

Foreign Language Requirement. Students in the Ph.D. program are normally required to demonstrate, no later than the time of their Oral Qualifying Examination, reading fluency in one or more additional foreign languages. Among those fields requiring reading fluency in one or more additional foreign languages 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 student’s major adviser.

Course Requirements. The Ph.D. requires demonstrated competence in a major and two minors. If the student chooses two art history minors, one must be unrelated to his/her major. That is, students intending to major in areas included in categories e. though g. (see Major Fields or Subdisciplines) will choose at least one minor from categories a. through d. Conversely, students intending to major in areas included in categories e. through d. will choose at least one minor from areas included in categories e. through g.

As an option, one minor may be extradepartmental but must be related to the major field in art history. Extradepartmental minors may be interdisciplinary in scope, but one of the participating extradepartmental faculty must agree to serve as the adviser for that minor.

All students must have taken a minimum of four courses (at least one a graduate course) in one or more unrelated areas during the course of the M.A. and/or Ph.D. Credit may be given for coursework at another institution.

In all, a minimum total 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, students must take at least three, and may take up to five, extradepartmental upper division and/or graduate courses, which have to be approved by their major adviser.

Written and Oral Qualifying Examinations. Upon completion of coursework and language study, the student takes the Ph.D. Written Comprehensive Examination. This examination includes a 6-hour examination in the major field of study, designed and graded by the student’s major adviser; and a 3-hour examination, designed and graded by the appropriate minor adviser, in each of the two minor fields.

The purpose of the examination is to test the student’s breadth and depth of knowledge in his/her three areas of specialization. If a student fails to pass the examination, or any part thereof, any failed portion may be repeated during the subsequent quarter of residence. No further repetition will be allowed.

Upon passing the Written Comprehensive Examination, the student, in consultation with his/her major advisor, selects a dissertation topic; the members of his/her doctoral committee are then nominated, and the committee is appointed by the Dean of the Graduate Division.

After having conducted considerable exploratory research and preparation for his/her dissertation, the student submits to the committee a dissertation proposal. The student then meets with the members of his/her committee to be orally examined on the validity and feasibility of the proposed topic and on the methods employed, as well as on the soundness of his/her tentative conclusions. The committee then reports the examination “passed” or “not passed.” Assuming there is no more than one “not passed” vote, the student may initiate the procedure to become advanced to candidacy. If the student fails the examination, it may be repeated once. The doctoral committee may decide, by unanimous agreement, to waive the Final Oral Examination (not normally required) and select a minimum of three members — two from art history and one from outside the Department — who will read, approve, and certify the final draft of the dissertation.

Final Oral Examination Following Completion of the Dissertation. If a Final Oral Examination is required by the student’s committee (see above), it is held after the final draft of the dissertation has been circulated among the committee members. All members of the committee attend and vote. A student may pass with one negative vote so long as that vote is not that of his/her major adviser. In case of failure, the doctoral committee decides, by unanimous agreement, whether or not the candidate may be reexamined.

Time to Degree. From graduate admission to award of the degree including time spent on the M.A. degree:

For students majoring in Asian, Classical and Medieval: 21 quarters.

For all others: 18 quarters.

Disqualification. The Ph.D. Written Comprehensive Examination may be repeated once. If failed the second time, the student is terminated. Oral examination is considered “not passed” with more than one negative vote. Upon majority vote of the committee, the examination may be repeated once. If failed a second time, the student is terminated. The Final Oral Examination may be passed with one negative vote (provided this vote is not that of the major adviser). The candidate may be reexamined upon unanimous agreement of the committee.

Appeals. Appeals are made to the Graduate Review Committee via the Graduate Adviser.

Graduate Courses

Prerequisite for all courses: consent of the instructor. All courses may be repeated for credit upon recommendation of adviser. Not open to undergraduate students. See College of Fine Arts, Unit Requirement. Course 201 through 265; exact topics of both graduate lecture courses and seminars vary.

201. Historiography of Art History. Seminar, two hours. A critical study of the various approaches to art history through the centuries. The course may concentrate on one time period, on the work of one or more authors, or on a particular methodology.

202. Methodology of Art History. (1 to 2 courses) 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. Seminar, two hours. Course will focus 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. Seminar, two hours. Course may not be repeated.

206. Studies in Prints. 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 the Graphic Arts.

206. Studies in Drawings. Seminar, two hours. Critical studies in the history and connoisseurship of draughtsmanship in the western world. Individual studies often culminate in professionally presented exhibitions produced by the Grunwald Center for the Graphic Arts.
218. Egyptian Art. Seminar, two hours. Prerequisites: courses 101A, 101B, 101C, 102. A course designed to cover art in Egypt during the Late Period and the Greco-Roman Period. Students should be ready to prepare for every meeting by studying and reporting on a topic from archaeological memoirs, not to exceed ten pages. Mr. Baltin, Mr. Meek.

219. Problems in Islamic Art. Seminar, two hours. The art and architecture of the Islamic world from Spain to Iran from the 7th to the 17th century. The seminar will deal with either monuments or theoretical problems relating to Islamic culture and artistic production. Mr. Klimburg-Salter, Mr. McCallum, Mr. Powers.

220. The Arts of Africa, Oceania and Pre-Columbian America. Seminar, two hours. Typically dealing with some aspect of art in Africa, Oceania, or Native America, for cultural and historic content. Recommended only for students of archaeology. Interdisciplinary approaches and historical, cultural, social and economic issues are emphasized. Twenty minute oral presentation and 12-15 page paper are required. Ms. Klein, Mr. Rubin.

221. Topics in Classical Art. Lecture, two to three hours. Studies in Parthian art. A site by site survey of the Near East (Afghanistan, Iran, Iraq, Syria) during the period of Byzantine and Parthian control. Ms. Downey.


225. Renaissance and Baroque Paleography. Seminar. Prerequisites: Italian and working knowledge of Latin. A workshop approach to documents pertaining to artistic commissions from the 15th to the 17th centuries in Italy to study various aspects of handwriting in official and private deeds, correspondence, treatises, and inscriptions. Mr. Pedretti.

226. Italian Renaissance Art. Seminar, two hours. A study of various aspects of Leonardo's theoretical approach to art in terms of sources and the impact on followers. Italian required. Mr. Pedretti, Ms. Velisz.


228. Baroque Art. Seminar, two hours. The seminar will focus on a selected topic (e.g., a particular artist, trend, or problem). Research papers and oral reports required. German required.

229. Baroque Art. Seminar, two hours. The seminar will focus on a selected topic (e.g., a particular artist, trend, or problem). Research papers and oral reports required. German required.

230. Northern Renaissance Art. Seminar, two hours. The seminar will focus on a selected topic (e.g., a particular artist, trend, or problem). Research papers and oral reports required. German required.

231. Topics in European Art from 1700-1900. Lecture, two to three hours.

232. European Art from 1700 to 1900. Seminar, two hours.


235. Topics in European Art from 1700-1900. Seminar, two hours. Mr. Bennett.

236. American Art. Seminar, two hours. Advanced studies in the evolution of American art, chiefly architecture and painting from the eighteenth to the early twentieth centuries. Emphasis on the development of scholarship in the field with innovative research directed toward professional presentation.

237. Design and Structure. (1/2 to 2 courses) Laboratory, two to four hours. Emphasis on developing methods of critical evaluation. Work will be of a subjective and expressive nature in areas of fiber, ceramics, graphics and visual presentation. Exploration of form with emphasis on experimentation with color and processes. Mr. West.

238. Fiber Structures. (1/2 to 2 courses) Laboratory, two to four hours. Advanced formative work in traditional and experimental processes of fabric construction utilizing fiber media. Mr. Basseler, Mr. Kester.

239. Textiles. (1/2 to 2 courses) Laboratory, two to four hours. Advanced experimental work in the elements of fabric design, including surface manipulation and methods of fabrication, which may include but are not limited to dye and printing processes. Ms. Smithwick.


241. Art and Architecture of Georgian England. Seminar, two hours. Examination of the secular and religious art in England, China, Japan and adjacent regions. Topics dealing with will vary from term to term. Mr. Klimburg-Salter, Mr. McCallum, Mr. Powers.

242. Topos of Asian Art. Lecture, two to three hours. Lectures concerned with the secular and religious art of India, China, Japan and adjacent regions. Topics dealing with will vary from term to term. Mr. Klimburg-Salter, Mr. McCallum, Mr. Powers.

243. Field Work in Archaeology. (1/2 to 2 courses) Participation in archaeological excavations or other archaeological research under supervision of the staff.

244. Graduates Painting. (1/2 to 2 courses) Hours to be arranged. Tutorial studies in traditional, new forms and concepts media as well as in our media specialization. Independent development. Original research are fundamental objectives to this course.

245. Graduate Printmaking. (1/2 to 2 courses) Tutorial studies in traditional and experimental printmaking. Selected studies in intaglio, lithograph, woodcut, silkscreen, photo printmaking and mixed media.

246. Graduate Sculpture. (1/2 to 2 courses) Tutorial with specific attention given to the ongoing nature, specificity and approach to the student's particular discipline. Individual studio visits and consultation.

247. Graduate Printmaking. (1/2 to 2 courses) A tutorial or tutorial/seminar course concerned with the particular artistic development of each student's personal photographic art work. Emphasis on the expressive, original, humanistic values of individual art. Adjacent projects to the history and theory of the photographic medium.


249. Communication Imagiery. (1/2 to 2 courses) Laboratory, two to four hours. Exploration of graphic processes in visual systems. Design theory and procedures related to typography, letter form, photography and the graphic film as they communicate visually (i.e., poster, brochure, book, film and exhibition).

250. Image Transfer. (1/2 to 2 courses) Laboratory, two to four hours. Advanced experimental work in the various print processes. Employment of the fixed image, such as offset lithography, offset or letter press, screen printing and emulsion printing, through photo/mechanical means.

251. Electronic Imagery. (1/2 to 2 courses) 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, VTIR, and electronic synthesizers experienced and viewed on television monitors or print forms; images are stored on videotapes for later analysis.

252. Costumes. (1/4 to 2 courses) Seminar, two hours; laboratory, two hours. Historical and contemporary professional design 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 costume and religious art. Mr. McCloskey.

253. Ceramics. (1/2 to 2 courses) 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, investigation of historical and contemporary trends and processes for industry, clay as medium, and the historical importance of ceramics as a socially responsible discipline. Mr. Saxe.

254. Graduate Sculpture. (1/2 to 2 courses) Laboratory, two to four hours. Exploration and intensive investigation of processes and attitudes towards glass as a tool of expression and creative discipline. Mr. Marquis.

255. Research for and Preparation of the Doctoral Thesis. (1/2 to 2 courses) Seminar, two hours. Prerequisite: consent of instructor. To be graded by letter grade.

256. Preparation for the Comprehensive Examination for the Master's Degree or the Qualifying Examination for the Ph.D. (1/2 to 2 courses) Prerequisite: consent of instructor. Graded S/U.

257. Research for and Preparation of the Master's Thesis. (1/2 to 2 courses) Prerequisite: consent of instructor. Graded S/U.

258. Research for and Preparation of the Doctoral Dissertation. (1/2 to 2 courses) Prerequisite: consent of instructor. Graded S/U.

Related Courses In Another Department

259. Related Courses In Another Department. See the Graduate Bulletin for details.

ART, DESIGN, AND ARCHITECTURAL HISTORY

260. Related Courses In Another Department. See the Graduate Bulletin for details.
Asian American Studies

(Interdepartmental)

(Office, 3232 Campbell Hall)

Hans Baerwald, Ph.D., Professor of Political Science
David Farquhar, Ph.D., Associate Professor of History
Patrick Ford, Ph.D., Professor of English
John Hawkins, Ph.D., Associate Professor of Education
Lucy C. Hirata, Ph.D., Associate Professor of Sociology (Chair)
Claudia Mitchell-Kernan, Ph.D., Associate Professor of Anthropology
Stanley Sue, Ph.D., Professor of Psychology

The Master of Arts Degree

Admission Requirements. In addition to the University's minimum requirements, applicants are expected to present evidence of their previous interest in Asian American Studies. The interest may be demonstrated by previous courses taken at the undergraduate level, 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 program as a part of their application. Three letters of recommendation are also required.

Further information may be obtained by writing to the Graduate Adviser, Asian American Studies Center, 3232 Campbell Hall, UCLA, Los Angeles, California 90024, or by calling (213) 825-2974.

Advising. One of the criteria for admission is that a UCLA faculty member be willing to supervise the student's work. Thus, the student's academic adviser is assigned at the time the decision to admit is made. If a change in academic adviser should become necessary due to a change in major field or for any other reason, the change will be effected after discussion with the student, the academic adviser and the Chair of the M.A. Committee.

Students are expected to meet quarterly with their academic advisers, usually at the beginning, to review their progress and to have their class program approved.

At the beginning of the second year in residence, students are expected to recommend a 3-person guidance committee for review and approval by the Dean of Graduate Division. This committee, which is usually chaired by the student's academic adviser, is responsible for supervising, reviewing, and finally approving the M.A. thesis. The committee also conducts an examination of the student on the topic of the thesis.

Major Fields. The Asian American Studies program is interdepartmental. Thus, its major fields are determined by the participating faculty from the various departments. Recruitment of new faculty is a continuing effort, but supporting faculty in history, sociology, anthropology, education, psychology, and theater arts participate at present.

Research Tool Requirement. The Research Tool Requirement may be satisfied by one of two options:

(a) Asian Language: Students must present a minimum of two full years of study in an Asian language at University level or its equivalent. This requirement may be fulfilled prior to entering the program, but all students choosing this option must pass a proficiency examination administered by the Asian American Studies Center and the Faculty Guidance Committee.

(b) Research Methods: Students must take three upper division or graduate courses in research methods, e.g., statistics, computer science, field and observational techniques, experimental techniques, archival methods. The specific courses must be approved by the Faculty Guidance Committee.

The option must be justified by the student in a written statement. The rationale must include specification of the courses chosen 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 level courses, including AAS 200AB, Critical Issues in Asian American Studies. These are the program's only required courses. Three of the graduate courses must be selected from the following:

History 201H — Topics in History
Sociology 261 — Ethnic Minorities
Anthropology 231 — Asian Americans: Personality and Identity

Education 253G — The Asian American and Education

Thesis Plan. The thesis committee is synonymous with the guidance committee. It is normally constituted at the beginning of the second year of residence at which time the student is expected to submit a plan for approval.

After the approval of the thesis, the committee will conduct an oral examination of the student on its subject.

Time to Degree. It is estimated that six quarters in residence are required from time of admission to award of degree. This estimate presumes there are no deficiencies or non-related courses required such as the English 33 series for foreign students.

500 Series Course Limitation. The program allows two courses in the 500 series to be applied toward the 11-course requirement. However, only one of the two may be applied toward the requirement of the seven graduate courses. Since the program is interdepartmental, students enroll in 500 series through departments and must comply with departmental policy as to grading and units.

Disqualification. Termination of graduate status may be recommended by the academic adviser for failure to maintain specified required progress toward the degree, failure of the oral examination, or failure to submit an acceptable thesis a second time.

Appeals. Appeal may be made to the full interdepartmental committee.

Interdisciplinary Courses

Lower Division

Oriental Languages 3AB. Cantonese.

Upper Division

Asian American Studies 100A-100B. Introduction to Asian American Studies
Asian American Studies 103. Asian Americans and the Law
Asian American Studies 197. Topics in Asian American Studies

Theater Arts 110B. Problems and Issues in Broadcast Media.

Graduate Courses

200A-200B. Critical Issues in Asian American Studies. (3 courses) Prerequisite: Graduate Standing. Consent of instructor. A two-quarter interdisciplinary seminar which attempts to (1) review systematically and critically the literature on Asian American Studies, (2) identify areas of knowledge and controversial issues in the field, and (3) develop plans of research and investigation that focus on these issues.

Ms. Hirata

297. Topics in Asian American Studies.

598. Directed Individual Study or Research (1 to 2 courses). To be arranged. Prerequisite: consent of instructor.

598. Research for and Preparation of the Master's Thesis. (1 to 2 courses) Prerequisite: consent of instructor. Preparation of research data and writing of master's thesis. Graded S/U.

The following courses pertaining to Asian American Studies are offered by the departments listed. With the approval of the committee, other related courses may be included in a student's program.

Anthropology 100A-103B-103C. Peoples of Asia. 163. Women in Culture and Society.
166. Comparative Minority Relations.
167. Urban Anthropology.
172T. Ethnohistory of Hispanic Cultures in the U.S. Southwest.
177. Cultures of the Pacific.
Astronomy

(Office, 8979 Mathematical Science Building)

George O. Abell, Ph.D., Professor of Astronomy.
Lawrence H. Allen, Ph.D., Professor of Astronomy.
Ferdinand Coronill, Ph.D., Professor of Physics and Astronomy.
Harland W. Epps, Ph.D., Professor of Astronomy.
Holland C. Ford, Ph.D., Professor of Astronomy.
Michael A. Jura, Ph.D., Professor of Astronomy.
Miroslav Pavec, Ph.D., Professor of Astronomy.
Roger K. Ulrich, Ph.D., Professor of Astronomy (Chair of the Department).
Edward L. Wright, Professor of Astronomy.
Daniel M. Pope, Ph.D., Emeritus Professor of Astronomy.
Steven A. Grandi, Ph.D., Assistant Professor of Astronomy.

Robert P. Kraft, Ph.D., Director of Lick Observatory.

Admission Requirements. The basic requirement for admission to the Astronomy program 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 Aptitude Test and Advanced Test in Physics. For further information, prospective students should contact the Graduate Adviser, Dr. M. Jura, Department of Astronomy, UCLA, Los Angeles, CA 90024.

Each entering student and each student who has not been admitted to candidacy for the Ph.D. should consult with the Graduate Adviser at the beginning of the Fall Quarter to determine a program for the year.

Disqualification. Every Winter Quarter, the entire faculty of the Department meets to evaluate the progress of the graduate students. Students are advised either informally or in writing on the faculty’s evaluation of their progress. Students who are subject to dismissal from the program if (1) they do not maintain high enough grades; (2) they fail their comprehensive or thesis exams; or (3) they do not maintain normal progress toward their degree.

Appeals. Any student who is dismissed may within 30 days appeal the decision in writing to the faculty adviser who will then reconvene the entire faculty to reconsider the student’s dismissal.

The 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 500 series may not apply toward the total course requirement or the graduate course requirement.

Comprehensive Examination Plan. To receive the master’s degree, the student must obtain at least a B average in the Written Qualifying Examinations taken in the graduate program. The Written Qualifying Examinations are described in more detail below.

Time to Degree. A full-time student with no deficiencies at admission should normally be able to finish the master’s degree in three quarters.

The Master of Arts in Teaching (M.A.T.) Degree

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 from upper division or graduate courses in astronomy, mathematics, physics or from the 100 or 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 500 series may not apply 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 should be taken including supervised teaching.

Comprehensive Examination Plan. This plan is the same as for the M.S. degree.

Time to Degree. A full-time student with no deficiencies at admission should normally be able to finish the M.A.T. degree in five quarters.

The Ph.D. Degree

Course Requirements. The required courses for the graduate degree are 200, 204A, 208A, 217A, 219A, 227A, 230A, at least four courses from 204B, 208B, 217B, 219B, 227B and 230B, and at least two courses (projects) from 204C, 208C, 217C, 219C, 227C and 230C. Each quarter in residence, students are required to take course 250.

Teaching Experience. Before receiving a Ph.D. degree, each student is required to spend at least three quarters as a teaching assistant at UCLA or have equivalent experience elsewhere.

Written Qualifying Examination. The Departmental Written Qualifying Examination is divided into sections, with one section for each course in the A or B series that the student takes to apply to the Ph.D. (or M.S.) requirement. In each case, the examination section covers the material that normally should be
covered in that course. This departmental examination is scheduled at the time the final examination for the course would normally be scheduled.

The Graduate Adviser will appoint a committee of three faculty members to administer each examination section; one of these three will be the instructor of the course. The instructor is primarily responsible for preparing the examination. However, the entire committee must certify that the examination section meets departmental standards. Moreover, the committee is responsible for certifying the grading of the examination section, and reporting the scores earned to the Graduate Adviser for the departmental records. These grades are reported as letter grades including plus and minus.

Students may repeat courses that they fail for credit, but may not repeat the departmental Comprehensive Examinations for departmental credit. New students should note this fact before commencing regular graduate work, especially if they are weak in undergraduate physics or astronomy.

For the Comprehensive Examinations, the following evaluation procedure will be followed. The A and B courses are worth a total of 20 points each while each C course (project) is worth 50 points so that there is a total of 300 possible points. The total number of points that a student receives depends upon his or her grade. The maximum number of points is assigned to an A+, and other grades receive only fractionally as many points, according to the scheme A (0.9), A- (0.8), B+ (0.7), B (0.6), B- (0.5), C+ (0.4), C (0.3), C- (0.2), F (0.0). For example, if a student receives a B+ in Astronomy 204A, he or she would receive 14 points. To be qualified to go on to the Ph.D. degree, each student must acquire at least 210 points total, at least 60 points on the C courses (the projects) and at least 120 points on the A and B courses together. After the Comprehensive Examinations are completed, the student must then fulfill the normal University requirements for a dissertation.

Projects. During the Fall Quarters of the second and third years, students are expected to complete a research project. Students should work closely with one of the staff both when the project subject is chosen and throughout the course of the work. It is the responsibility of the staff member to provide enough guidance to keep the projects moving and to adjust the goals in case unforeseen difficulties arise. The projects may be a continuation of work begun during the preceding Spring Quarter. However, this is not necessary. The goals of the project should be chosen in such a way as to reflect the amount of work completed in the Spring Quarter.

The evaluation of the projects will be based as much on the quality of the written report as on the quality of the research itself. An obvious consequence of this evaluation procedure is that students should spend at least two to three weeks on the preparation of the report. Thus, the active phase of the research should be terminated about three weeks before the end of the quarter regardless of whether or not it is "complete". A completed original research project is expected for the Ph.D. dissertation itself and not for these Fall Quarter projects. 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. Finally, the report should present whatever results were obtained prior to the final three weeks of the quarter. Since these results may be incomplete, the student should state what additional aspects of the project would be most important to complete, if time permitted. If the project is original and interesting, but incomplete, the student would be encouraged to complete it later, but the grade assigned will be based on the portion completed by the end of the Fall Quarter.

Final Oral Examination Following Completion of the Dissertation. Each student must pass a final examination upon completion of his or her dissertation.

Time to Degree. The normative time-to-degree is 18 quarters. A full-time student with no deficiencies is expected to finish in less than the normative time-to-degree.

Graduate Courses

Prerequisite to all graduate courses is consent of the instructor. Graduate courses 204 through 230 are offered in alternate years. With the exception of the introductory graduate course 200, the regular graduate courses consist of three quarters according to the following scheme: level A (Winter Quarter, 4 units); a basic survey course presenting the minimum knowledge in the field expected for all students who wish to obtain the Ph.D. degree, but who do not necessarily plan to specialize in the field covered by the course; level B (Spring Quarter, 6 units); advanced level for those considering the possibility of taking up a research project in the field. Level C (Fall Quarter, following academic year, 10 units); individual research projects supervised by the instructor in the form of a laboratory. The introductory courses are given in the Winter Quarter so that (1) full use may be made of the favorable fall weather for observational projects, (2) new graduate students may be acquainted with the program and with the department in the introductory course 200, which is offered every year. Course 240 is equivalent to the B courses.

200. Introduction to Graduate Study of Astronomy. Prerequisite: to be taken by all newly entering graduate students. Surveys the various fields of astronomy and astrophysics, giving the student 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 permission of instructor. The sun, solar phenomena, and solar-terrestrial relationships. The interplanetary medium and problems of planetary and interplanetary space. Stellar plasma physics, comets, meteorites, meteors, satellites and planets, planetary atmospheres. Origin and evolution of the solar system.

- M. Aller, M. Urich

204A-204B-204C. Observational Astronomy. (1 course, 1½ courses, 2½ courses) Prerequisites: consent of instructor. Spherical and positional astronomy; parallaxes, proper motions, and radial velocities of stars. Star catalogues and charts. Radiation measurements, photoclectric photometry, and other techniques. Spectroscopic observations. Ecplaining binaries. Includes laboratory work.

- Epps, F. Ford


- M. Aller, M. Grandi, M. Jura

217A-217B-217C. Stellar Photospheres. (1 course, 1½ courses, 2½ courses) Prerequisites: consent of instructor. Physics of stellar photospheres and radiative transfer. The continuous and line spectra of stars. Chemical composition of individual stars. Stars with extended and unstationary atmospheres.

- M. Aller, M. Plavec, M. Urich


- M. Abell, M. Ford


- M. Plavec, M. Urich


- M. Corronit, M. Wight

240. Modern Problems in Astronomy and Astrophysics. Special topics often include work with the visiting professors. Open to qualified graduate students in astronomy and in related fields (physics, meteorology, planetary and space physics). May be repeated for credit.

250. Seminar on Current Astronomical Research. (½ course) Prerequisite: Graduate students only (required of all). Current astronomical problems.

256. Cosmic Ray Physics. (Same as Earth and Space Sciences M256.) Cosmic ray composition, origin, acceleration, propagation, interactions with interstellar matter, magnetic field and radiation field, role in interstellar heating, non-thermal galactic radio and galactic X- and gamma-radiation. Interaction in the earth's atmosphere.

258. Origin and Evolution of the Solar System. (Same as Earth and Space Sciences M258.) Dynamical problems of the solar system; chemical evidence 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 will vary from year to year. May be repeated for credit. Graded S/U.
Individual Study and Research

The following courses, 596A, 596L and 599, may be repeated by a student at the discretion of the Department.

596L. Directed Individual Studies. (1 to 2½ courses)

596. Advanced Study and Research at the Lick Observatory. (1 to 3 courses) Intended for graduate students who require observational experience as well as those working upon observational problems for their thesis.

598. Doctoral Research and Writing. (2½ to 3 courses)

Atmospheric Sciences

(Office, 7127 Mathematical Sciences Building)

Akio Arakawa, D.Sc., Professor of Atmospheric Dynamics.

James G. Edinger, Ph.D., Professor of Meteorology.

Hans R. Pruppacher, Ph.D., Professor of Atmospheric Physics (Chair of the Department).

George L. Saxton, Ph.D., Professor of Atmospheric Physics.

Richard M. Thorne, Ph.D., Professor of Atmospheric Physics.

Selvakumar V. Venkateswaran, Ph.D., Professor of Atmospheric Physics.

Morton G. Westlake, Ph.D., Professor of Atmospheric Dynamics.

Mishio Yamaz, D.Sc., Professor of Atmospheric Dynamics.

Yale Mintz, Ph.D., Emeritus Professor of Meteorology.

Martin Netburne, Ph.D., Emeritus Professor of Meteorology.

Carlos R. Mechoso, Ph.D., Assistant Professor of Atmospheric Dynamics.

Desai, C. Montague, Ph.D., Assistant Professor of Atmospheric Chemistry.

Mats J. Sutera, Ph.D., Assistant Professor of Atmospheric Dynamics.

The Department of Atmospheric Sciences offers the M.S., Ph.D. degree. Below are the requirements for the three degrees.

Admission Requirements. There are no admission requirements in addition to University minimum requirements and no application form in addition to the one used by Graduate Admissions. Three letters of recommendation are required. For departmental procedures and information write to: Department of Atmospheric Sciences, UCLA, Los Angeles, California 90024. The Department recognizes the desirability of a wide variety of backgrounds of students concerned with study of the various aspects of the atmosphere. In addition to those 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 status 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.

Advising. Evaluations of academic progress are made each September when the Graduate Advisers, sitting as a committee, review the progress of each student and assist in formulating future plans. Records are kept of these meetings and additional meetings are held prior to Spring Quarter if students are not advancing as expected.

For the M.S. degree one adviser is assigned to each student after his/her first year of study.

Ph.D. students are assigned a 3-person Departmental Guidance Committee after one year's work has been completed, recommended by the Graduate Advisers and appointed by the Chair. The Chair of this committee then becomes the principal adviser of the student.

Major Fields or Subdisciplines

Dynamic and Synoptic Meteorology

Dynamics and Microphysics of Clouds and Precipitation

Radiation

Upper Atmospheric and Space Physics

Course Requirements. M.S. A total of nine (9) courses must be completed in graduate status, five of which must be in the 200 or 500 series. Students must also attain a grade of B (3.0) or higher in one 150 series or graduate course in each of two fields other than his/her field of specialization. The only formal course requirement beyond the UCLA general requirements is the seminar course, Atmospheric Sciences 280, in which the candidate must present a formal seminar, announced in the UCLA Weekly Calendar, and attended and graded by all faculty.

Ph.D. 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 the students to have insufficient background to help them in preparing to pass the Comprehensive Examination.

The Comprehensive Examination. The Comprehensive Examination is conducted twice a year based on coursework given during a prior 2-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. An average grade of 3.0 is required for a pass at the M.S. level; an average grade of 3.5 or better allows the student to continue toward entry into the Ph.D. program. Students are permitted two attempts to obtain the requisite grade either for termination at the M.S. level or for continuation toward a Ph.D. Students must, however, attempt the examination by the end of their first two years of study and if necessary, retake the examination at the earliest available time. The structure of the examination is the responsibility of the three Graduate Advisers who construct a separate examination in each major field or subdiscipline using material suggested by faculty members who have recently given the appropriate courses. The examination consists of two 3-hour written examinations.

M.S. Thesis Plan. Students with grade point average of 3.5 or higher may petition the Department to obtain the M.S. by writing an original thesis. The petition must be received by the Graduate Advisers at least one year prior to completion of the degree (at the end of the first year of study). The petition should set forth the subject and plan of work to be performed and must be signed by the supervising professor. Provided the student maintains a high academic standard in coursework, the accepted thesis may be used instead of the Comprehensive Examination for continuance toward entry into the Ph.D. program. No outside member is required on the thesis committee.

Ph.D. Oral Qualifying Examination. After passing the Comprehensive Examination at the requisite level, or completion of the M.S. thesis in this department, students must take a further in-depth written or oral examination in their area of research specialization. Subsequently, a full doctoral committee is appointed with two (or more) outside members which is responsible for conducting the Doctoral Candidacy Oral Examination on the student's chosen thesis topic and related areas, and the final defense which is required for all students. Each of these examinations must be passed in no more than two attempts.

Time to Degree. M.S. From graduate admission to completion of degree, normal progress is six (6) quarters. The maximum allowable time limit for the degree is nine (9) quarters.

Ph.D. Because of the variability in students' backgrounds, there is a corresponding variability in the period of study necessary for completion of the degree. After completion of the requirements for the M.S. in Atmospheric Sciences a student will normally be expected to pass the oral or written Departmental Qualifying Examination within three (3) quarters, advance to candidacy in six (6) quarters and complete the Ph.D. thesis defense in nine (9) quarters.

Final Ph.D. Oral Examination Following Completion of the Dissertation. This examination is required of all students.

Candidate in Philosophy Degree. All students are eligible to receive the C.Phil. degree upon advancement to candidacy for the Ph.D. degree.

500 Series Course Limitations. Only one (four units) 500 series course may apply to the minimum graduate course requirement for the M.S. degree.

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.
Diqualification. Students are normally terminated if they fail to maintain a 3.0 average for two consecutive quarters or if they fail to pass the graduate Comprehensive Examination after two attempts.

Appeals. Appeals may be made to the Chair but the student will be allowed to continue only in very special circumstances.

Graduate Courses

Dynamic and Synoptic Meteorology

206. Atmospheric Convection. Lecture, three hours. Prerequisites: course M149 or consent of instructor. Basic theory of Rayleigh convection. Experiments and theory of buoyant bubbles and plumes. Thermodynamics of moist air. Observations and theory of cumulus convection. Cumulus models. Mesoscale convective systems. Interaction of cumulus ensemble with the large-scale environment. Mr. Yanai

208A. Atmospheric Turbulence. Lecture, three hours. Kinematics of homogeneous and shear flow turbulence. Surface and internal energy transfer; heat transfer and turbulent convection. Survey of field and laboratory observations and their interpretation by theory. Mr. Wurtele

208B. Atmospheric Diffusion and Air Pollution. Lecture, three hours. Nature and sources of atmospheric pollution; use of diffusion models; boundary layer and atmospheric stability. Mr. Wurtele

210A. Atmospheric Waves Motions. Lecture, three hours. Prerequisite: course M149 or equivalent. Oscillations of a compressible, stratified and rotating atmosphere. Geostrophic adjustment. Scale analysis instability. Vertical propagation of wave energy. Mr. Suarez


212A. Numerical Methods in Geophysical Fluid Dynamics. Lecture, three hours. Prerequisite: course 210A or consent of instructor. Basic numerical methods for initial-boundary value problems in fluid dynamics, with an 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. Special methods. Mr. Arakawa

212B. Numerical Modeling of the Atmospheres. Lecture, three hours. Prerequisites: courses 210A and 212A or consent of instructor. Physical and computational design of numerical weather prediction and climate simulation models. The basic dynamical models. Vertical, horizontal and time differencing. Parameterizations of sub-grid scale processes. Mr. Suarez

214. Climatology. Lecture, three hours. Prerequisite: course 149 or consent of instructor. Observations of the atmospheric general circulation; global budgets of energy and angular momentum. The hydrologic cycle. Observations of past climates and history of climatic change. Feedback mechanisms determine the sensitivity of climate. Precipitation and climate change. Numerical experiments in climatic sensitivity. Mr. Suarez


212B. Dynamics of the Tropical Atmosphere II. Lecture, three hours. Prerequisites: course 210A. Planetary- and synoptic-scale wave disturbances in the tropics. Theory of equatorial waves. The energy cycle of tropical waves. Excitation mechanisms. Observed and theory of the quasi-biennial oscillation in the equatorial stratosphere. Mr. Yanai

213. Dynamics of the Atmosphere-Ocean Systems. Lecture, three hours. Mass, momentum and heat transfer; ocean currents and tropical ocean-driven ocean currents; thermohaline convection; dynamics of the Gulf Stream. Mr. Yanai

219. Special Topics In Dynamic Meteorology. (1/2 to 1 course) The content of this course varies from year to year.

Dynamics and Microphysics of Clouds and Precipitation

221A. Atmospheric Chemistry I. Lecture, three hours. Prerequisite: course 156 or consent of instructor. Observations of the extended chemical properties of tropospheric and stratospheric air, the processes of atmospheric photochemistry, and the meteorological factors affecting the chemistry and transport of air masses. Mr. Venkataraman

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; stratosphere and photochemistry; chemistry of the airglow and nightglow; chemistry of other planetary atmospheres. Mr. Montague

222A. 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; cloud formation by condensation; electrical equilibrium; condensation of aerosol particles to form droplets; and deposition of condensation nuclei on aerosol particles to form cloud drops. Mr. Pruppacher

222B. Cloud and Precipitation Physics II. Lecture, three hours. Prerequisite: course 222A. Theory of the growing drop; formation of raindrops; growth of raindrops; formation of ice crystals in supercooled clouds; thermodynamics of rigid bodies in a viscous medium; hydrodynamics of cloud drops, rain drops and לאס ondır atmospheres; growth of cloud drops and atmospheric ice particles by collision. Mr. Pruppacher

224. Atmospheric Electricity. Lecture, three hours. Prerequisites: course 223B and Physics 110A-110B. Fair weather electricity; atmospheric ion; electric structure of stormy and nonstormy clouds; electric charge generation mechanisms in atmospheric physics; physics of thunder and lightning; effect of electric fields and charges on cloud and precipitation formation. Mr. Pruppacher

222A. Clouds and Radiation. Lecture, three hours. Radiation budget of the troposphere; radiative forcings to the climate system; cloud feedback mechanisms; dependence of cloud radiative properties on microphysical parameters; test-bed modelling techniques of radiative effect of clouds; radiative dynamical interactions in climate. Mr. Pruppacher

222B. Radar Meteorology. Lecture, three hours. Radar detection of spherical and non-spherical particles; use of radar in studying size distributions of cloud and precipitation particles, precipitation intensities; echoes, horizontal wind; horizontal wind and turbulence; radar observations of convective clouds, thunderstorms, tornadoes, hurricanes, squalllines, and fronts; clear air echoes.

Radiation

235. Infrared Radiative Transfer. Lecture, three hours. Prerequisite: course 153. Theory of radiative transfer. Propagation of radiative energy through a medium; absorption spectroscopy; band models; absorption by atmospheric gases; fluxes and heating rates. Satellite radiation measurements.

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; aerosol and their effects on the radiative balance of the atmosphere; atmospheric 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 theoretical and experimental methods of the transfer of radiation (visible, ultraviolet and infrared) through the atmosphere. Computations of fluxes and heating rates using various methods. The emphasis of the course will be to provide a familiarity with the available techniques in the literature.

Upper Atmospheric and Space Physics

240A. Solar System Magnetohydrodynamics. Lecture, three hours. Prerequisite: course 154 or consent of instructor. Derivation of the MHD equations with two fluid aspects, generalized Ohm's law for anisotropic plasma, shock waves, and instabilities. Applications to the statics and dynamics of the solar wind and planetary magnetospheres and to solar wind-magnetosphere-ionosphere coupling. 240B. Solar System Microparticle Physics. Lecture, three hours. Prerequisite: course M154 or consent of instructor. Adiabatic charged particle dynamics; ionospheric radiation processes; collective effects in a plasma; propagation characteristics of disturbances in non-resonant interaction between charged particles and plasma waves. Mr. Thorne

240C. Ionospheric Plasma. Lecture, three hours. Prerequisites: courses M154 and 240B. Formation of planetary ionospheres; transport processes; currents and electric fields; ionospheric plasma instabilities; non-linear effects and artificial modification. Mr. Venkataraman

246. Physics of the Ionosphere. Lecture, three hours. Prerequisites: Physics 110A-110B or consent of instructor. Structure, composition and dynamics of ionospheric layers. Mr. Venkataraman

247. Radiation Belt Plasma Physics. Lecture, three hours. Prerequisite: course 240B or consent of instructor. Turbulent and magnetic fields; magnetic field topology; magnetospheric structure and dynamics; transport processes. Mr. Venkataraman

248. Advanced Topics In Interaction Between the Lower and Upper Atmospheres. Lecture, three hours. The content of this course varies from year to year. Mr. Venkataraman

249. Special Topics In Solar Planetary Relations. (1/2 to 1 course) Selected topics of current scientific interest in the 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 atmospheric origin; radiative and photochemical damping of atmospheric gravity waves; wave-zonal wind interactions; internal instabilities; theories of circulation features including annual, semi-annual and quasi-biennial oscillations and the build-up and breakdown of polar vortex. Mr. Venkataraman
Seminar in Meteorology. (1/2 course)
25. Seminar in Atmospheric Dynamics. (1/2 course)
26. Seminar in Cloud and Precipitation Physics. (1/2 course)
27. Seminar in Atmospheric Radiation. (1/2 course)
28. Seminar in Physics of the Upper Atmosphere. (1/2 course)

Individual Study and Research
596. Directed Studies for Graduate Students. (1 to 1 course)
597. Preparation for the Comprehensive Examinations. (1 to 1 course)
598. Research and Preparation of the Master's Thesis. (1 to 1 course)
599. Research on Doctoral Dissertation. (1/2 to 2 courses)

Graduate Courses of Special Interest to Qualified Meteorology Majors
Biometeorology 223A-223B.
Chemistry 215; 223; 225.
Earth and Space Sciences 202; 203; 211; 214; 217; 220; 261; 265.
Engineering: Mechanics and Structures 250A-250C; 251A-251C; 252A-252B; 256A.
Engineering: Chemical, Nuclear & Thermal Engineering 237C, 240.

Biochemistry
Graduate Study
Programs of study and research leading to the M.S. and Ph.D. degrees in the general area of biochemistry are offered in the Department of Biological Chemistry, School of Medicine, in the Division of Biochemistry, Department of Chemistry, and in the Department of Biology. More detailed information regarding admission requirements and opportunities for graduate studies in these programs may be obtained by writing to the Graduate Adviser in the department in which you are interested.

Biological Chemistry
(Office, 33-257 Center for the Health Sciences)
Robert J. DeLange, Ph.D., Professor of Biological Chemistry.
Written Qualifying or Comprehensive Examination (Master of Science and Ph.D. Degrees)

After completing the core course requirements (see above), all students in this department 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 the students’ answers to these questions. The Graduate Student Guidance Committee evaluates the overall student performance on the examination and makes a recommendation to the departmental faculty of one of the following for each student:

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 makes the decision whether to give a student who fails the examination an opportunity to take the examination a second time (permission is rarely given to take it 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.

Specific Requirements for the Master of Science Degree

(see General Requirements listed above)

Course Requirements: In addition to the core course requirements described above for all students in this department, candidates for the master’s degree should complete courses fulfilling any two of the collateral A, B or C (see Specific Requirements for the Ph.D. Degree for a more complete description of the collateral). Further electives are chosen to complete a total of nine courses (36 units).

Teaching Experience. In general, no teaching requirements are expected of students in the master’s program, although they might be asked to help grade examinations, etc., from time to time.

Thesis or Comprehensive Examination Plans. In general, this department prefers students to enter directly into the Ph.D. program, but if a student enters 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 the student must pass the departmental Written Examination at the master’s level of achievement (see above).

Thesis Plan: In addition to coursework, a written thesis is required. A thesis committee consisting of the Thesis Adviser and two other faculty members (one may be from outside the Department), will help the candidate plan the thesis research, determine the acceptability of the thesis, administer a final examination (if deemed appropriate) and recommend 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.

Time to Degree. Students in the Comprehensive Examination Plan can normally expect to receive their master’s degree after three academic quarters plus a summer (when the Written Examination is given). This assumes the maintenance of satisfactory progress and the absence of deficiencies upon admission to graduate status. Students in the Thesis Plan will ordinarily require a minimum of six academic quarters (plus one to two summers) to complete the requirements.

500 Series Course Limitations. This department follows the regulations of the Los Angeles Division of the Academic Senate regarding 500 series courses to meet requirements for the master’s degree. These regulations include the stipulations that no more than two courses (8 units) in the 500 series shall apply toward the nine courses (36 units) required for a master’s degree, and that only one (4 units) of the two courses may be counted toward the minimum of five graduate courses (20 units) required for the degree.

With the approval of the Graduate Adviser, courses 596, 597 and 598 may be taken by graduate students in the master’s program if they are appropriate to the student’s programs. In general, a student in the Comprehensive Examination Plan would not register for 596 or 598, but might register for 597 (Preparation for Examination). A student in the Master’s Thesis Plan might register for all three courses at appropriate times during his/her studies. All three courses (596, 597 and 598) are graded S/U only, and may be taken as often as necessary (2-12 units each time).

Disqualification. Termination of a student’s graduate status may be recommended by the Graduate Student Guidance Committee (or the thesis committee, if applicable). Reasons for such a recommendation might include (a) failure to maintain a 3.0 grade point average, (b) particularly poor performance in the major departmental courses, (c) failing the Written Examination, (d) failure to complete required collateral requirements within a reasonable time, (e) failure to maintain adequate progress in research (Thesis Plan), (f) other.

Appeals. A student for whom a recommendation of termination has been made can appeal to the Graduate Student Guidance Committee (or the thesis committee, if applicable) for reconsideration of the recommendation. In the event that the recommendation is not withdrawn, the student can appeal directly to the Department Chair who will consult with the departmental faculty as to whether the recommendation should be changed.

Specific Requirements for the Ph.D. Degree

(see General Requirements listed above)

Admission to the Doctoral Program. 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. degree.

Course Requirements. In addition to the above course requirements, students in the Ph.D. program are expected to complete:

(a) Biol. Chem. 220 (Biochemical Preparations) each quarter during the first year. Each student shall arrange for at least two rotations in the laboratories of different faculty members to help the student in the selection of a research adviser.

(b) Collateral A: An approved course involving scientific instrumentation ("language of an instrument") or statistics.

(c) Collaterals B and C: Two courses (minimum), offered by departments other than this one, that would be of particular help to the student in his/her graduate studies.

(d) Biol. Chem. 596, 597 and/or 599 during quarters in which research (596, 599) or study for written or oral examinations (597) is part of the student’s program. Biol. Chem. 599 is for students who have passed their oral examinations; Biol. Chem. 596 is for those who have not.

Teaching Experience. All students in the doctoral program are expected to participate in teaching activities by assisting the faculty in a laboratory for medical or dental students (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).

Written and Oral Qualifying Examinations. A student in the Ph.D. program who has passed the departmental Written Examination at the Ph.D. level of achievement (see above) should consult with the Department Chair who is responsible for nominating faculty members (three in and two out of the Department) to serve on the student’s doctoral committee. Suggestions for members of the doctoral committee should be made to the Department Chair by the student after consultation with his/her research adviser and other potential members of the doctoral committee. The doctoral committee is then appointed by the Dean of the Graduate Division, usually at least three to four weeks prior to the time of the Oral Qualifying Examination (see below).

The Oral Qualifying Examination, which must be passed before a student can be advanced
to candidacy, consists of the presentation and defense of a research proposal to the student's doctoral committee (see above). This proposal should not be in the area of the student's dissertation research. Written summaries of the proposal should be given to each member of the doctoral committee sufficiently in advance of the examination date to enable the committee members to study it in detail. A brief informal discussion of the student's research project should be presented before or after the Oral Examination. The doctoral committee determines whether the student passes the examination and whether a student who fails the examination will be allowed to repeat it (can be repeated only once). It is expected that students will complete the Oral Qualifying Examination by the beginning of the third year of graduate work.

Final Oral Examination Following Completion of the Dissertation. The doctoral committee may elect to waive the Final Oral Examination.

Time to Degree. Students can normally expect to receive their Ph.D. degrees in 15 quarters (including summers) if satisfactory progress is maintained and there were no deficiencies upon admission to graduate status.

Disqualification. Termination of a student's graduate status may be recommended by the Graduate Student Guidance Committee or the student's doctoral committee. Reasons for such a recommendation might include (a) failure to maintain a 3.9 grade point average (b) particularly poor performance in the major departmental courses (c) failing the Written Qualifying Examination (d) failing the Oral Qualifying Examination (e) failure to complete required course requirements within reasonable time (f) failure to maintain adequate progress in research (g) other.

Appeals. A student for whom a recommendation of termination has been made can appeal to the Graduate Student Guidance Committee or the doctoral committee for reconsideration of the recommendation. In the event the recommendation is not withdrawn, the student can appeal directly to the Department Chair who will consult with the departmental faculty as to whether the recommendation should be changed.

Other Relevant Information. Students can apply for the M.D.-Ph.D. program by making simultaneous applications for graduate status in this department or admission to the School of Medicine. Acceptance by both of the concerned units is necessary for this program. Certain changes in the requirements (e.g., fewer required collateral) allow some savings in time compared to separate M.D. and Ph.D. degrees.

Most students in the Ph.D. program in this department receive financial support, if needed.

**Upper Division Courses**

101E. Biological Chemistry Laboratory. Laboratory periods required in the medical curriculum; consent of instructor is required for nonmedical students. Experiments illustrating some of the procedures employed in clinical chemistry, enzymology and metabolic studies.

102A-102B. Biological Chemistry Lecture (Dental Students). Lecture, three hours. Prerequisite: courses for admission to dental school. Required in the dental curriculum; consent of instructor is required for nondental students. The biochemical properties and structures of living systems are considered with special emphasis on mineral metabolism and nutrition.

102C. Biological Chemistry Laboratory and Seminar (Dental Students). (½ course) Laboratory, four hours (including preclinical curriculum; consent of instructor is required for nondental students. The laboratory, which consists of experiments designed to illustrate biochemical principles, includes studies on enzymes, metabolic processes, respiration and calculated structures. The seminars, which will be given to the students to small discussion groups, involve presentation of material from current research dealing with biochemical studies related to dentistry.

Mr. Snocke and the Staff

**Graduate Courses**

201A-201B. Biological Chemistry. Lecture, three hours. Prerequisite: consent of instructor. A course in undergraduate biochemistry other than a beginning survey course. Consent of instructor is required. A graduate level course in fundamentals of biochemistry, with emphasis on mammalian biochemistry. Structure, function and metabolism of major cell constituents.

220A-220B-220C. Biochemical Preparations. (½ to 2 courses) Prerequisite: consent of instructor. During the first quarter, students will carry out supervised experiments utilizing and adapting techniques in biochemistry. Emphasis will be placed on the chemistry of lipids and their metabolism. Mr. Mead, Mr. Popjak.

222. Biochemistry of the Synapse. (½ course) Lecture or recitation, one hour. Prerequisites: consent of instructor. Basic concepts in relation to comparative aspects of metabolism and functional organization of eukaryotic chromatin. Mr. Glitz.

223. Detailed analysis of the research literature dealing with the function and metabolism of, major cell constituents. Mr. Roberts and the Staff.

224. Biochemistry of the Synapse. (½ course) Lecture or recitation, two hours. Prerequisite: course 221. Detailed analysis of the research literature dealing with biochemical of the synapse. Metabolism, storage and release of transmitter; transmitter reuptake; transmitters; and neuronal plasticity. Mr. Howard.

225. Advanced Chemistry. (same as Chemistry M261.) Lecture or recitation, five hours. Prerequisites: Chemistry 110A, 157A-157B or Biological Chemistry 101A-101B or 201A-201B or equivalent. Recommended: Biochemical Genetics/Chemistry M259. Thermodynamic and kinetic aspects of metabolism; regulatory properties of enzymes; metabolic regulation; consideration of comparative aspects of metabolism in relation to physiological function; and enzymic mechanism and methods for their study.

Mr. Atkinson, Mr. Coty, Mr. Edmondson.

225B. Physical Chemistry of Biological Macromolecules. (½ course) (Same as Chemistry M257.) Lecture or recitation, five hours. Prerequisites: Chemistry 110A or 222 or consent of instructor. Theory of hydrodynamics, optical and x-ray techniques used to study the structure and function of biological macromolecules.

226. Biochemical Endocrinology. (½ course) Prerequisite: Chemistry 110A or 201A-201B or equivalent. Knowledge of elementary chemistry and biochemistry of the other major classes. Emphasis will be placed on the chemistry of peptide and steroid hormones which are important for their biological actions, the interaction of these hormones with the various macromolecules and the physiological function of peptide and steroid hormones and the role of second and third messengers in hormone action. Winter quarter, alternate years.

Mr. Mott, Mr. Fierce, Mr. Roberts.

226A-M224B-M224C. Molecular Basis of Atherosclerosis. (½ course) (Same as Chemistry M254.) Lecture or recitation, five hours. Prerequisite: course M216 or equivalent with consent of instructor. The course will cover the biochemical, morphological and physiological aspects of atherosclerosis. Emphasis will be placed on the chemistry of lipoproteins and the role of plasma lipoproteins in the regulation of tissue lipid metabolism and the development of athrosclerosis.

226. Seminar in the Biochemistry of Nucleic Acids. (½ course) Lecture or recitation, one hour. Prerequisite: Biological Chemistry or Chemistry M253 or equivalent. Biochemistry and chemistry of nucleic acids and nucleotides. Mr. Glitz.
296A-296B. Seminar in the Biochemistry of Differentiation. (1/4 course 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 biochemistry of development.

Mr. Harary, Mr. Herschman

M287. Macromolecular Structure and Subcellular Organization. (1 1/2 courses) Same as Chemistry M267. Lecture or recitation, five hours. Prerequisites: Chemistry 157A, 157B, or equivalent. Recommended: Biological Chemistry or Chemistry 253. Metabolism of nucleic acids and proteins; biosynthesis of complex lipids and polysaccharides; structure and properties of cellular organelles.

M298. Developmental Biochemistry. (1/2 course) Same as Chemistry M267. Lecture, two hours. Prerequisite: Biological Chemistry 267 or consent of instructor. This course will deal with the 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 will be studied as they contribute to such topics as hormone induction, morphogenesis and viral transformation. Emphasis will be placed on the use of differentiating in vivo systems and cell culture ag models.

Mr. Harary, Mr. Herschman

Graduate Programs

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 advice of staff members in their field of interest. Prospective applicants to this department are invited to visit the campus for this purpose.

Admission Requirements

All applicants are required to meet the minimum requirements for admission established by the Graduate Division, including a minimum grade point average of 3.0. The Department encourages applications from students in all areas of science, but expects successful applicants to have or 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 prospective 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 to the M.A. program.

Graduate Record Examination (GRE). All applicants are required to take the Aptitude Test (Verbal, Quantitative and Analytical) of the Graduate Record Examination. The Advanced Test in Biology is not required.

Letters of Recommendation. 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.

Minority Applicants. The Department has an affirmative action program dedicated to recruiting, financing, and supplying of special guidance for minority groups. Minority applicants are reviewed by both the Department and the Departmental Committee on Minorities.

Teaching Credentials. Teaching credentials and Ph.D.'s in Education with specialization in Biology are obtained through the School of Education with assistance from the Graduate Adviser in Biology. A Cognate in Biology may...
be obtained by completing the equivalent of the master's degree in Biology.

**Correspondence and Information.** Applications, departmental brochures and additional information may be obtained from: The Graduate Affairs Office, Department of Biology, 2316 Life Sciences, UCLA, Los Angeles, California 90024.

**Program of Study**

The Department is organized for administrative purposes into two divisions based on mutual interest. Applications should be directed to either:

**Div. I – Molecular, Cell & Developmental Biology, or Div. 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 the campus. Opportunities are also available away from campus for intensive study of marine biology at the Catalina Marine Science Center in the Fall Quarter (CMBQ) and of field biology in the Spring Quarter (FBQ). Courses and other opportunities for study are also available in several of the basic science departments of the School of Medicine, located on campus.

**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. degree. However, in the pursuit of certain subspecialties of biology, students may be required to gain proficiency in one or more foreign languages.

**Advising**

**The Graduate Adviser.** All academic affairs for graduate students in Biology are directed through the Graduate Adviser. The Graduate Adviser is assisted by the administrative staff of the Graduate Affairs Office.

**Guidance Committee.** The Graduate Adviser establishes, at the time of admission to graduate study, a Guidance Committee consisting of three faculty members for each student. The chair of the Guidance Committee acts as the student's Provisional Adviser. The Divisional affiliation of the Guidance Committee chair determines the appropriate examination and review procedures for the student.

Service as a Provisional Adviser is designed to be provisional for both professor and student. It does not commit the professor to supervise the dissertation or thesis, nor does it commit the student to a professor. Changes in Provisional Adviser are made by mutual consent of concerned parties and approval of the Graduate Adviser. Lack of a Provisional Adviser places a student on probation to the end of the quarter when he/she is subject to dismissal if a Provisional Adviser is not obtained. Division I: has elected that guidance committees are formed only for the first year for students in that Division. If the student has not obtained a permanent sponsor (chair of the doctoral committee) by the end of his/her first year, he/she will be advised in their second year by the Graduate Adviser. Any student without a permanent sponsor by the end of his/her second year will be dismissed. Division II: a Provisional Adviser serves until the student finds a Permanent Adviser and the doctoral or master's examination or thesis committee is established.

To assess the incoming student's knowledge, and as an aid in advising students in their studies, each student is required to complete the Departmental Written Qualifying Examination at an early point in his/her graduate career. The exact timing and content of the DWQE varies between the Divisions. The examination is given twice each academic year, in the Fall and Spring Quarters.

Performance on the first attempt is used by the Guidance Committee to assist the student in remedying deficiencies. Any area passed on the first attempt need not be retaken. All areas not passed must be retaken the next time the examination is offered. All areas must be passed by the second attempt or the student will be in violation of normal progress and placed on academic probation subject to dismissal.

**Disqualification and Appeal of Disqualification.** A student in violation of normal progress is placed on academic probation, ineligible for departmental support, and may be disqualified for the following reasons:

1) Grade point average below 3.0;
2) Unsatisfactory performance as determined by the students' advisory committee;
3) Failure to pass all areas of the Departmental Written Qualifying Examination;
4) Failure to pass the Master's Comprehensive Examination, or failure to pass the Ph.D. Oral Qualifying Examination;
5) Failure to take either examination within the specified time limits;
6) Failure to maintain a Provisional or Permanent Adviser (Ph.D.); and/or
7) Failure to complete the Master's degree within six quarters, or failure to complete the doctoral dissertation within 18 quarters of residence following first registration.

A recommendation for disqualification is open for appeal to the appropriate subgroup or Chair of the Department.

**The Master of Arts Degree**

**Admission to the Master's Program.** Applications are evaluated by the appropriate Divisional Admissions Committee.

**Course Requirements.** The program consists of at least nine courses completed in graduate status, of which at least five must be graduate (200 series) courses. The remainder may be 100 or 200 level, or 500 level as noted below. No more than two courses (8 units) of 596 Directed Individual Study, may apply toward the minimum 9-course requirement; and only one course (4 units) of 596 may be counted toward the minimum 5-graduate-course requirement. Courses graded S/U may not be applied toward the minimum requirement, except that a S/U graded course outside the major and applicable to the degree may count, provided that no more than one such course is taken per quarter.

Specific course requirements are established individually for each student by his/her 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 student's master's thesis committee of three faculty. Before beginning work on the thesis, the student obtains approval of the subject and general plan from the faculty members concerned and from his/her thesis committee.

**Comprehensive Examination Plan.** The Master's Comprehensive Examination is a 3-hour examination prepared and graded by the student's committee or committee chair, and approved by the Graduate Adviser. The examination is graded pass or fail. If a student fails, recommendation for or against a second examination must be made by the Graduate Adviser.

**Time to Degree.** Students enrolled in the master's program, either by thesis or examination, are expected to complete the degree within six quarters.

**The Ph.D. Degree**

**Admission to the Doctoral Program.** Each Division determines admission of students to the Ph.D. program separately.

**Division I.** Applications for doctoral study in fields associated with Division I are considered by the Division I Admissions Committee. Ph.D. students in Division I are admitted in the Fall Quarter.

**Division II.** Applications to Division II are reviewed by the division's Admissions Committee, which advises prospective sponsors about the desirability of admission, although admission is dependent on obtaining a provisional sponsor.

**Course Requirements.** There are no formal course requirements for the Ph.D. Specific course requirements are established individually for each student by his/her Guidance Committee. All students are required to enroll for full time study, as defined by the Graduate Division.

Students are strongly encouraged to rotate laboratory and/or course experience with several faculty members during their 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.

Permanent Adviser and Doctoral Committee. The importance of finding a Permanent Adviser and dissertation research supervisor to chair the doctoral committee is a sine qua non for the doctoral degree. Failure to find or maintain a Permanent Adviser and dissertation research supervisor places a student in probationary status for one quarter, after which he/she is dismissed if no adviser is obtained.

Students are urged to discuss permanent sponsorship and dissertation research with faculty at the earliest opportunity, to pick a Permanent Adviser by the end of their first year, and to advance to candidacy by the end of their second year; in all cases they are required to advance to candidacy by the end of their third year in residence following first registration.

The doctoral committee consists of the Permanent Adviser who serves as the chair of the committee, two other faculty members of the Department, and two faculty members from outside the Department and outside the student's major field, in accordance with the provisions of the Graduate Division.

The doctoral committee conducts the Oral Qualifying Examination and guides the student in the preparation and defense of the dissertation.

Oral Qualifying Examination (OQE). The OQE is conducted by the doctoral committee as prescribed by the Graduate Division. The OQE includes the preparation, presentation, and defense by the student of an original written research proposal, a copy of which is deposited in the student's file. The examination is graded Pass, Fail, or Repeat. A failure requires dismissal. The second attempt at the exam is graded Pass/Fail. The examination must be completed by the end of the third year following first registration or normal progress will have been violated. A grade of repeat also violates normal progress after the third year.

Following successful completion of the OQE and completion of the administrative details, the student is advanced to candidacy.

Final Oral Examination Following Completion of the Dissertation. The candidate must complete a dissertation by demonstrating an original contribution to knowledge, written to conform to the regulations set by the University. The doctoral committee guides and reviews the research and writing. Final approval in the Department is accomplished when the committee approves the written form and is satisfied with the Final Oral Examination.

Requirements for the Candidate in Philosophy Degree. Requirements for the Candidate in Philosophy degree are identical with 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.

Time to Degree. The normative time for the Ph.D. degree in Biology is 16 quarters. Failure to complete the dissertation within 18 quarters places the student on academic probation.

*Graduate Courses

The consent of the instructor is required for admission to all graduate courses. Any additional prerequisites are stated in the course descriptions.

202. Principles of Systematics and Taxonomy. Lecture, three hours; discussion, two hours. Prerequisites: course 120. The concepts, principles, and methods involved in the inference of evolutionary relationships and the application of biological nomenclature.

203. Marine Botany and Physiology. (2 courses) This course is given at the Santa Catalina Marine Biological Laboratory. Prerequisites: consent of instructor. Structure, reproduction, life histories, systematics and biology of marine algae; techniques in culture and cytological investigations of algal materials.

204A. Advanced Algae. Lecture, four hours. Prerequisites: consent of instructor. A consideration of current research in experimental psychology. Topics include a discussion of the appropriate aspects of chemical and physical oceanography and limnology; algal physiology; and experimental ecology. The laboratory will provide suitable algal materials.

204B. Advanced Algae. Lecture, three hours; laboratory, six hours. Prerequisite: consent of instructor. A course designed to introduce students to current concepts in algal systematics and quantitative analysis. The laboratory section is designed to teach students, by practical application to unknowns, to how to identify algae by appropriate application of keys.

205. Marine Invertebrate Biology. (2 courses) This course is given at the Santa Catalina Marine Biological Laboratory. Functional morphology, life histories, and systematics of marine invertebrates of all major and most minor taxa; emphasis on the living animal and its habitat.

206. Advanced Ichthyology. Lecture, three hours; laboratory, three hours. Prerequisites: course 111 or 112. Advanced study of various aspects of fish biology. The theme will vary from year to year. May be repeated for credit.

207. Molecular and Cellular Biophysics. Lecture, three hours. Prerequisites: Math 32A or equivalent; Physics 6C; Chemistry 25 and 110A, or permission of instructor. Chemistry 110B or 156 strongly recommended. This course introduces students to the field of biophysics including: thermodynamics, diffusion, statistical mechanics, and molecular forces. This material will then be applied to areas of molecular and cellular biology including: macromolecule characterization, enzyme catalysis, assembly of biological structures, membrane properties, active transport, electrophysiology, and energy transduction. Biological applications of probability, statistics and fluctuations will also be discussed.

208. Advanced Vertebrate Morphology. Lecture, two hours; laboratory, eight hours. Prerequisites: course 110 or the equivalent and consent of instructor. Emphasizes a functional approach to evolution of vertebrate locomotor, feeding, and circulatory systems. Laboratory includes comparative and experimental analyses of morphological adaptation. An independent project is required. May be taken twice for credit.

210. Advanced Ornithology. Lecture, two hours; laboratory, two hours; fieldwork, two hours. Prerequisites: course 114 or equivalent and consent of instructor. Advanced study of topics in avian biology, including systematics, distribution, behavior, and ecology. Students will carry out independent study projects in laboratory, museum, or field.

211. Animal Sociology. Lecture, two hours; discussion, two hours. Prerequisites: course 128, The Behavior of Animals, or equivalent. The description, analysis, physiology, ecology and evolution of different social systems in animals.

213. Community Ecology. (1 course) Lecture, three hours. Prerequisites: course 122 or equivalent, one year of calculus. Investigation of the structure and function of animal communities, in theory and in practice; includes the concepts of coexistence, competition, niche and diversity.

214. Ecological Physiology. (1 course) Lecture, two hours. A consideration of the ecologically relevant aspects of animal physiology.

217. Theoretical Population Biology. Lecture, three hours. Prerequisites: courses 6 and 8; Mathematics 32A or 3C, or consent of instructor. The use of mathematical models in studying ecological and evolutionary systems. Relevant mathematical techniques discussed include basic calculus, differential equations, linear algebra, and probability. This course is not open to students who have previously completed 119.

218. Marine Ecology. (2 courses) This course is given at the Santa Catalina Marine Biological Laboratory. Structure, diversity and energetics of marine communities; behavior, population dynamics, and biogeography of component species; associated oceanography and marine biology.

218. Oceanology. (2 courses) This course is given at the Santa Catalina Marine Biological Laboratory. Ecology and dynamics of pelagic and benthic associations; physico-chemical properties of seawater and marine substrates and their biological significance; quantitative and qualitative methods of oceanology.

219. Animal Behavior in Laboratory and Field. Discussion, two hours; laboratory, six to eight hours. Prerequisites: course 129 and consent of instructor. Limited enrollment. Laboratory and field studies of selected animal behavior problems. Mr. Howell, Mr. Nagy, Mr. Taylor, Mr. Vance.

220. Multigene Families. (Same as Anatomy M213.) Lecture, two hours; discussion, two hours. Prerequisites: course M132 and 144 (or equivalent) and consent of instructor. Analysis of the molecular structure, developmental regulation, and evolution of multigene families. Topics to be discussed will include the hemoglobins, immunoglobulins, histones, ribosomal RNAs, satellite DNAs, and histocompatibility antigens. Grading basis: S/U.

221. Genetic Analysis. Lecture and discussion, three hours. Prerequisite: course 8 or equivalent. Examples of genetic analysis in eukaryotic organisms by means of mutation and chromosome changes. Recent advances in the field will be presented. Examples to be presented include Drosophila chromosome behavior, techniques of gene localization, the one gene one chromosome hypothesis, meiotic mutants, mosaics, animals and cell lineage, behavior, and X-chromosome inactivation.

222A-222B. Topics in Genetics. Lecture. Prerequisites: course 8. Intensive study of selected topics.

222A-223B. Advanced Genetics Laboratories. Laboratory, nine hours. Prerequisites: course 8 or equivalent and consent of instructor. Laboratory is designed to give students an opportunity to search with supervision in eukaryotic genetics; topics include transmission, developmental and behavioral genetics. 223A and 223B may be taken one time each for credit.

224. Developmental Biology of Marine Organisms (2 courses) This course is given at the Santa Catalina Marine Biological Laboratory. Descriptive and experimental studies of developmental stages of marine plants and animals; patterns of reproductive biology and biophysical morphology.

225. Special Topics In Development. Lecture, three hours. Variable topics emphasizing the control of eukaryotic gene expression and morphogenesis. Special attention will be given to the role of hormones in the modulation of gene expression during development.

Mr. O'Connor
228. Prokaryotic and Eukaryotic Gene Systems. (4 course) Lecture, two hours. Prerequisite: consent of Instructor. Presentations concerning current experiments in molecular biology, emphasizing quantitative microscopy, and studies on viruses and protein crystals.

Mr. Eisering and the Staff

M23OA. Structural Molecular Biology. (4 course) (Same as Chemistry M230A and Microbiology M230A.) Lecture, two hours; discussion, one hour. Prerequisite: Physics 6C, Mathematics 3C and consent of Instructor. Emphasis on current research problems in molecular biology, including protein chemistry, structure and physical properties, and integrated biological functions. 

Mr. Feaster

M230B. Structural Molecular Biology Laboratory. (4 course) (Same as Chemistry M230B and Microbiology M230B.) Laboratory, ten hours. Prerequisite: consent of Instructor. Emphasis on practical experience with electron microscopy of macromolecules and supramolecular structures, emphasizing quantitative microscopy, and studies on viruses and protein crystals. 

Mr. Eisering, the Staff

230D. Structural Molecular Biology Laboratory. (4 course) (Same as Chemistry M230D and Microbiology M230D.) Laboratory, ten hours. Prerequisite: consent of Instructor. Emphasis on practical experience with electron microscopy of macromolecules and supramolecular structures, emphasizing quantitative microscopy, and studies on viruses and protein crystals. 

Mr. Eisering, the Staff

233A-233B. Electron Microscopy of Cells. (2 courses each) Lecture, four hours; laboratory, twenty hours; demonstration, three hours. Prerequisite: consent of Instructor. Emphasis on the use of the electron microscope for high resolution electron microscopy. 

Mr. Sjostrand

234. Advanced Topics In Development. Lecture, three hours; discussion, one hour. Prerequisite: course 138 or equivalent. A 4-unit lecture course which will cover at an advanced level, special topics in areas such as: changes in gene activity during development, hormone action during development, cell commitment and differentiation, developmental genetics, plant development and developmental neurobiology. 

Ms. Lengyel and the Staff

M237. Steroid Hormones. (4 course) (Same as Biological Chemistry M237.) Lecture, two hours. Detailed examination of the mode of action of steroid hormones on both in vivo and in vitro systems. Topics will include steroid uptake, receptor purification & activation, and nuclear events among others. Previous courses in Biochemistry and Cell Biology are highly desirable. 

Mr. Coty, Mr. O'Connor

238. Structure, Function and Biogenesis of the Mitochondrion. Lecture, three hours. Prerequisites: course 158, Chemistry 22, and consent of Instructor. Origin, maintenance and function of the mitochondrion as an example of a highly organized subcellular organelle in the eukaryotic cell. 

Mr. Simpson

239. Laboratory Techniques In Nucleic Acid Research. (2 course) (Same as Microbiology M239.) Lecture, two hours; discussion, one hour; laboratory, twelve hours (open lab). Prerequisite: consent of Instructor. Emphasis on practical experience with nucleic acid techniques, including isolation of DNA and RNA and physical and chemical characterization by several means; characterization of circular DNA molecules by electron microscopy; gradient centrifugation and restriction enzyme analysis; in vitro transcription and hybridization analysis. 

Mr. Nierlich, Mr. Simpson

240. Physiology of Marine Animals. (2 course) This course is offered at the Santa Catalina Marine Biological Laboratory. Lecture and laboratory studies on cellular, tissue, organ, and animal physiology; regulatory biology; metabolic characteristics of cells, energy transformations. 

Mr. Eckert, Mr. O'Lague

241. Laboratory in Advanced Electrophysiology. (2 course) Laboratory, twelve hours. Prerequisites: course 168, and consent of Instructor. In-depth involvement in individual research projects under staff guidance. Approximately two projects each quarter. Course may be repeated twice. 

Mr. Eckert, Mr. O'Lague

242. Topics in Neurobiology. Lecture, three hours. Prerequisites: course 171 or the equivalent and consent of Instructor. Selected current problems in neurobiology will be discussed in depth with emphasis on analysis of original papers. May be repeated for credit. 

Mr. Eckert, Mr. O'Lague

243. Animal Communication. Lecture, three hours; discussion, one hour. Prerequisites: Mathematics 13C, Physics 6C and consent of Instructor. Emphasis on the role of communication in the lives of animals. 

Mr. Marlin

244. Advanced Topics in Invertebrate Zoology. Lecture, four hours. Prerequisites: consent of Instructor. Emphasis on selected current problems in invertebrate zoology. 

Mr. Merriam, Ms. Spencer

245. Animal Behavior. Lecture, three hours. Prerequisites: course 171 or the equivalent and consent of Instructor. Emphasis on selected current problems in animal behavior. 

Mr. Marlin
287. Gene Manipulation: Genetic Engineering. Lecture, three hours. Prerequisite: course 144 or 138 or consent of instructor. A survey of the methods and applications of recombinant DNA research. Emphasis will be on both basic scientific research and the biotechnological industry. Mr. Salser

288. Seminar in Ichthyology. Discussion, two hours. Prerequisite: course 111 or 112. Student presentations and discussion of specific topics in ichthyology. The theme will vary from year to year. May be repeated for credit. Mr. Both

289. Seminar in Herpetology. Discussion, three hours. Prerequisite: course 113 or consent of instructor. Seminar in current approaches to herpetology. Main theme will vary from year to year in areas such as biogeography, ecology, behavior, environmental physiology. Mr. Gorman

290. Seminar in Biology of Terrestrial Vertebrates. (1/2 course) Mr. Bartholomew, Mr. Howard

291. Seminar in Vertebrate Paleontology. (1/2 course) Same as Kinesiology M292D. Prerequisite: course 110 or consent of instructors. Discussion of current problems in vertebrate morphology and evolution. Graded S/U. Ms. Peterson, Ms. Zernick

292. Seminar in Vertebrate Paleontology. (1/2 course) Mr. Vaughn

293. Seminar in Population Genetics. (1/2 course) Discussion, two hours. Prerequisite: consent of instructor. Seminar on topics of current interest in population genetics: selectionist-neutralist, sociobiology, an introduction to genome selection. Mr. Taylor

294. Evolutionary Concepts, (1/2 course) Lecture: three hours. Exploration in depth of evolutionary concepts, their diversity, biological interpretations and impact on social and humanistic patterns of today and the past. Mr. Bilello

295. Seminar in Biophysical Plant Ecology. (1/2 course) Mr. Nobel

296. Seminar in Plant Ecology. (1/4 course) Mr. Cody, Mr. Thompson

297. Seminar in Population Biology. (1/2 course) Mr. Cody

298. Seminar in Animal Ecology. (1/2 course) Discussion, three hours. Prerequisite: consent of instructor. A seminar to discuss specific topics in animal ecology and related fields; designed for advanced undergraduate and graduate students. Mr. Thompson

299. Seminar in Environmental Physiology. (1/4 course) Mr. Bartholomew, Mr. Nagy

300. Seminar in Physiologic and Myology. (1/2 course) Lecture, two hours. Prerequisites: course 100 or equivalent and consent of instructor. Advanced study in biology of algae and fungi. The topics will include bioenergetics, motility, organelle DNA, membrane structure and function, oncogenic transformation, nuclear organization and function. Mr. Simpson

301. Seminar in Structural Macromolecules. (1/2 course) Lecture, one hour; discussion, three hours. Prerequisite: courses 108 or equivalent; genetics, microbiology. Lectures and discussion of key papers underlying our present concepts of MHC structure and function. Emphasis is on the murine MHC (H-2), but where appropriate and illustrative, the human MHC is discussed. Mr. Clark

302. Seminar in Topics in Cell Biology. (1/2 course) A discussion of various topics on the biology of eukaryotic cells. A different topic will be emphasized each year. The topics will include bioenergetics, motility, organelle DNA, membrane structure and function, oncogenic transformation, nuclear organization and function. Mr. Feaster

303. Seminar in Protein Synthesis. (1/2 course) Discussion, three hours. Prerequisite: course 144 and/or consent of instructor. A detailed analysis of our current understanding of the structural and functional events occurring during protein synthesis. Mr. Lake

304. Seminar in Plant Development. (1/2 course) Lecture, one hour; discussion, two hours. Prerequisite: a course in plant physiology and at least one advanced undergraduate or graduate course in plant development or biochemistry, Chemistry 153 or equivalent. A graduate seminar that will concentrate on a specific topic in plant development each quarter. Mr. Phinney, Ms. Tobin

305. Seminar in Comparative Cell Physiology. (1/2 course) Mr. McCasland, Mr. James

306. Seminar on Plant Cell Biology. (1/4 course) Prerequisite: course 162 is particularly recommended. Ms. Gonzalez

307. Seminar in Plant Physiology. (1/2 course) Ms. Lutes

308. Seminar in Comparative Physiology. (1/2 course) Mr. Gordon, Mr. Narins

309. Seminar in Physiology and Biochemistry of Arthropods. (1/2 course) Mr. Englemann

310. Seminar on Topics in Ultrastructure. (1/2 course)

311. Seminar on Current Aspects of Photosynthesis. (1/2 course) Mr. Chapman, Mr. Thornber, Mr. O'Lague

312. Seminar in Neurophysiology. (1/2 course) Mr. Eckert, Mr. O'Lague

313. Seminar in Molecular Endocrinology. (1/2 course) Ms. Szego M266. Seminar in Current Topics in Molecular Biology. (1/2 course) (Same as Biological Anthropology M266, Chemistry M236, Microbiology M228, Microbiology and Immunology M228 and Molecular Biology M225) Prerequisite: enrollment must be approved by the instructor and by the Graduate Adviser of the Interdepartmental Molecular Biology Ph.D. Committee. Each student enrolled conducts or participates in discussions on assigned topics. May be repeated for credit.

314. Seminar in Parasitology. (1/2 course) Mr. Macnair

315. Seminar on Chromosome Structure and Replication. (1/2 course) Prerequisite: course 227. Current topics in the field of control and mechanism of DNA replication. Mr. Ray

291. Seminar in Molecular Biology. (1/2 course) Prerequisite: consent of instructor. Mr. Ray

282. Major Histocompatibility Complexes: Genetics, Biochemistry, and Biology. (1/2 course) Lecture, one hour; discussion, one hour. Prerequisites: courses 106 and 105 or equivalent; genetics, microbiology. Lectures and discussion of key papers underlying our present concepts of MHC structure and function. Emphasis is on the murine MHC (H-2), but where appropriate and illustrative, the human MHC is discussed. Mr. Clark

316. Seminar in Genetics. (1/2 course) Mr. Eberle, Mr. Merrim, Mr. Siegel

317. Seminar in Information Processing in Eukaryote Cells. (1/2 course) Discussion, three hours. Prerequisites: Chemistry 153, Biology 132, or equivalents; consent of instructor. Structure and organization of eukaryotic DNA; nuclear RNA species; definition and properties of eukaryotic mRNA; translation of mRNA; current related topics. Mr. Clark

318. Seminar in Developmental Biology. (1/2 course) Prerequisite: consent of instructor. Graded S/U. Mr. Tobin

495. Preparation for the Teaching of Biology in Higher Education. (1/4 course) Prerequisites: Graduate Standing and consent of instructor. Study of problems and methodologies in teaching biology, which include workshops, seminars, apprenticeship teaching, and peer observation. Graded S/U. Mr. D. Walker

501. Cooperative Program. (1/4 to 2 courses) Prerequisites: approval of host campus instructor, Department Chair and Graduate Dean. The course is used to record the enrollment of UCLA students in graduate courses taken under cooperative arrangements with neighboring institutions. To be graded S/U.

Individual Study and Research

The conduct of each of the courses listed below is supervised by a member of the faculty.

506F. Directed Individual (or Tutorial) Studies. (1/4 to 2 courses)

506F. Directed Individual (or Tutorial) Studies. (1/4 to 2 courses) Directed individual (or tutorial) studies at the Santa Catalina Island Marine Laboratory.

597. Preparation for Comprehensive Examination for the Master's Degree or Qualifying Examination for the Ph.D. (1/2 to 2 courses) Prerequisite: consent of instructor. Course 597 may not be used to fulfill any course requirements for the Master's or Doctor's degree, and is graded S/U.

598. Master's Thesis Research and Writing. (1/4 to 2 courses)

599. Doctoral Dissertation Research and Writing. (1/4 to 2 courses)

Biomathematics

(Office, AV-611 Center for the Health Sciences)

Abdelmonem A. Affif, Ph.D., Professor of Biostatistics and Biomathematics.

Virginia A.Clark, Ph.D., Professor of Biostatistics and Biomathematics.

Edward C. Deland, Ph.D., Adjunct Professor of Surgery and Biomathematics.

Willfrid J. Dixon, Ph.D., Professor of Biomathematics (Vis a Chair of the Department) and Professor of Biostatistics and Physiology.

Olivia Jean Dunn, Ph.D., Professor of Biostatistics and Biomathematics.

Janet D. Elashoff, Ph.D., Adjunct Professor of Biomathematics.

Robert M. Elashoff, Ph.D., Professor of Biomathematics and Biostatistics.

Donald J. Jenden, B.Sc., M.B., BS, Professor of Pharmacology and Biomathematics.

Robert J. Jennrich, Ph.D., Professor of Mathematics, Biomathematics, and Biostatistics.

Frank J. Massey, Ph.D., Professor of Biostatistics and Biomathematics.

Bruce C. Moul, Ph.D., Ph.D., Professor of Biostatistics (Chair of the Department) and Professor of Radiation Oncology.

Arthur Peckoff, Ph.D., Adjunct Professor of Biomathematics and Physiology.

Michael E. Phelps, Ph.D., Professor of Radiological Sciences and Biomathematics.

M. Anne Spence, Ph.D., Professor of Psychiatry and Biomathematics in Residence.

Kenneth L. Lange, Ph.D., Associate Professor of Biomathematics.

Eli Engel, M.D., Ph.D., Adjunct Assistant Professor of Biomathematics.

Susan E. Hearn, D.Sc., Assistant Professor of Biomathematics in Residence.

Henry Huang, D.Sc., Assistant Professor of Radiological Sciences and Biomathematics in Residence.

Edward Korn, Ph.D., Assistant Professor of Biomathematics in Residence.
BIOMATHEMATICS

Elliot Landew, M.D., Ph.D., Assistant Professor of Biomathematics.
Ping Yu Liu, Ph.D., Assistant Professor of Biomathematics in Residence.

Fred Dorey, Ph.D., Lecturer in Biomathematics.
Alan B. Forsythe, Ph.D., Computer Systems Designer, Department of Biomathematics, and Lecturer in Dentistry.
Mary Ann Hill, Ph.D., Senior Statistician.
Nancy Mann, Ph.D., Research Statistician.
Gerard E. Mette, Ph.D., Lecturer in Biomathematics.
M. Ray Mickey, Ph.D., Research Statistician.
Noel Wheeler, Ph.D., Lecturer in Biomathematics.

Biomathematics relates to the physical domain, much as mathematical physics relates to the physical. It also seeks to develop theoretical and computational vehicles for moving basic research findings rapidly and effectively into medicine. The Department of Biomathematics offers course sequences in biomedical computation, modeling, and the relating of models to biomedical data and experimental strategies. The Department participates in the medical curriculum, and offers the M.S. and Ph.D., in Biomathematics. The following is a description of requirements for both degree programs.

Admission Requirements. 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 the applicant's 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 application forms, applicants 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 for the departmental forms, should be sent to: Chair, Graduate Admissions Committee, Department of Biomathematics, School of Medicine, UCLA, Los Angeles, California 90024.

Students are admitted to either program after completing the Graduate Record Examination and personal observation of progress and ability.

Assessments of progress are developed and reported to the Advisory Committee by the student's advisor(s) or dissertation committee on the basis of grades, research, the Written Comprehensive Examination, and personal observations on progress and ability.

Diagnosis. Every effort will be made to admit students who have a high likelihood of completing the program and to provide them with a supportive environment and the individualized instruction and research opportunities required to correct deficiencies and to aid their development into strong, independent biomathematical investigators. If unforeseen difficulties arise, the Advisory Committee will seek to guide the student to overcome them, recommending withdrawal if all else fails.

Appeals. A decision to appeal the Advisory Committee's recommendation must be directed to the Department Chair within two weeks. The Chair will then announce a special faculty meeting to discuss the appeal. The student and anybody he or she wishes to bring may participate in that meeting. Thereafter, a mail ballot to faculty will decide between the Advisory Committee's recommendation and the student's proposed alternative.

Factors considered in evaluating a student are biomathematical research aptitude, progress toward completing degree requirements, performance on the required examinations, and grades.

The 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, 202A, and 203 are required.

Thesis or Comprehensive Examination Plan

Thesis Plan. Students generally will be required to follow the Comprehensive Examination Plan. Permission to undertake a thesis plan must be given by the Advisory Committee, which must approve the thesis committee proposed by the student, as well as the student's 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 will cover material presented in the candidate's coursework. This will usually be the Written Comprehensive Examination for the doctoral program given during the summer, but in exceptional cases a special committee and written examination will be provided.

Time to Degree. A well-prepared student should be able to complete the degree within four full-time quarters.

500 Series Course Limitations. No more than two Biomathematics 500 courses may apply toward the required nine courses, and none may apply toward the graduate course requirement in Biomathematics.

The Ph.D. Degree

Major Fields or Subdisciplines. Each student will complete the requirements for a field of special emphasis in biology.

Courses. A course of study for each presently approved specialty field has been developed in consultation with the Graduate Adviser or an equivalently authoritative person in that field. It usually comprises course requirements for doctoral students in that field, with possible omission of some courses having primarily a laboratory orientation. Presently approved fields of special emphasis include genetics, immunology, neurosciences, pharmacology, and physiology. Others can be added in response to students' requests. The requirements for a new field or revisions in requirements for an existing field of special emphasis must be approved by the Department of Biomathematics' Curriculum Committee.

Examination. The student must pass the Written or Oral Comprehensive Examination offered in the field of emphasis to his doctoral students prior to the examination that advances them to candidacy.

Exceptions. Students entering with a Ph.D. in a biological field will be exempt from the above requirements. Students with an M.D. will be exempt from the required course work; exemption from the examination may be granted by joint action of the Curriculum and Advisory Committees in consultation with advisers from the specialty area.

Course Requirements

Required Courses:
Biomathematics: 201, 202A, 203, 204, and 8 units chosen from 205, 206, M207, 206, 209.
Mathematics: Five graduate courses from an approved list, with two substitutions possible if especially appropriate to the student's research field. (Approval may be given by the Curriculum Committee at the time of a student's admission to the program, to count previous graduate courses for full or partial completion of this requirement.)
Biology: Courses required for the field of major biological emphasis.

Recommended courses:
Mathematics: By individual study or coursework, the student should have strength in differential equations, probability and statistics, and real and complex analysis. Offerings in the Department of Mathematics are especially recommended.
Quality, Scope and Feasibility of the Student's Proposed Dissertation Work. It will also explore the strength of the student's biomathematical, mathematical, and biological-biomathematical research in his or her intended area of expertise. The student advances to candidacy after passing this examination.

Doctoral Committee. The initial membership list of the doctoral committee should be approved by the Advisory Committee prior to submission to the Graduate Division for approval.

Final Oral Examination Following Completion of the Dissertation. A final oral examination is required of all candidates and is a defense of the dissertation, administered by the doctoral committee.

Time to Degree. A full-time student with no deficiencies upon admission should be able to complete the program in five years (15 academic quarters plus research and/or individual instruction during the summers).

*Graduate Courses*

200. Research Frontiers In Biomathematics. (1/2 course) Prerequisite: consent of instructor. A series of presentations by the faculty on research frontiers in biomathematics.

201. Deterministic Models In Biology. Prerequisites: Linear algebra and differential equations. The conditions under which deterministic approaches can be employed are examined, and conditions where they may be expected to fail. Topics receiving special attention include compartmental analysis, enzyme kinetics, physiological control systems, and cellular animal population models.


203. Stochastic Models In Biology. Prerequisites: Mathematics 150A or equivalent experience in probability. The mathematical description of biological relationships with particular attention directed 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.

204. Biomedical Data Analysis. Prerequisites: consent of instructor. The quantity and quality of observations has 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 their use for such arling laboratory and clinical research.

Mr. Dixon

205. Electric Potential Problems In Membranes, Cells and Tissues. Prerequisites: differential equations and electrostatics or consent of instructor. Review of electrostatics; potential problems in rectangular, spherical and cylindrical coordinates; modeling subcellular 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 synapic; computer evaluation of potential barriers for ions traversing a membrane pore.

Mr. Pescoff

206. Modeling Of Cellular Systems. (1/2 course to 1 course) Prerequisite: People who can contribute either as biologists or theoreticians may attend. Expected performance will be based on each individual's background. Study of recently reported characterization of differentiating systems, flow cytometry, etc. Deterministic, stochastic, and computer simulation models are developed from simple dividing systems through special cell populations. Biological assumptions, conditions for various approaches, and relationships to laboratory research and clinical applications are emphasized.

Ms. Newton

207. Modeling In Genetic Analysis. (Same as Anthropology (M222R) Prerequisites: Graduate Standing, Anthropology M222Q (formerly numbered M222C), or consent of instructor. Basic concepts of human genetics with methods of computer-oriented genetic analysis. Topics include segregation analysis, genetic linkage, polygenic (quantitative) models, and population structure. Ms. Spence

208. Modeling and Analysis of Neuroelectric Data. Prerequisites: consent of instructor. Introduction to specific areas of electrical brain wave phenomena and their development and demonstration of the principles for modeling and analyzing brain waves in a computer-oriented environment. Open to other science majors. Mathematical approaches for modeling and developing neural theory are applied to basic neuropsychological phenomena and neural models. Appropriate practical approaches are also presented.

209. Problems In Fluid and Electrolyte Management. (1/2 course) Prerequisites: biochemistry, physiology, FORTRAN equivalent. Principles of fluid and electrolyte balance and acid-base chemistry. We begin with a brief review of fluid and electrolyte metabolism and mechanisms of physiologic control with reference to the research literature. This is followed by development and demonstration of the principles for making general acid-base calculations and their use in a computer-based patient simulation. Depending upon each student's interests, special topics will include analysis of patient data, design of parenteral and dialysis fluids, mathematical principles, patient simulation, computer-oriented blood line patient data, or analysis of physiologic mechanisms.

Mr. DeLand

210. Introduction to Biomedical Computation. Prerequisites: Graduate Standing. Basic concepts of data acquisition and machine computation, with special reference to biostatistics. Data types for biomedical applications. Decision diagrams. Computational and data management problems encountered in the use of small digital computers for biomedical research are analyzed. Practical experience will be gained in the use of the department's minicomputer in system generation and patching, documentation, interfacing, file management, assembler language, and higher order language. Practical experience will be useful in developing laboratories designed for experimental use in the direct processing of physiological data and in controlling laboratory experiments.

215. Advanced Biomedical Computation. Prerequisites: course 210 or equivalent programming experience. Biomedical computation enabling those having elementary FORTRAN programming to acquire skills applicable to biomedical research. Use of random number generation, stochastic modeling, models with differential equations, package programs, specialized applications, interactive modeling on IMAGIC graphics system. Individual term projects.

Ms. Newton and the Staff
Individual Study and Research 596. Directed Individual Study or Research in Biochemistry. (1 to 3 units) This course will serve for individual study on topics not yet covered by the offerings of the department. This course can be taken several times for credit when different topics are covered. A letter grade will be used.

Chemistry and Biochemistry

(Office, 3010 W.G. Young Hall)

Frank A. L. Anet, Ph.D., Professor of Chemistry.
Daniel E. Atkinson, Ph.D., Professor of Biochemistry.
Mark E. Baur, Ph.D., Professor of Physical Chemistry.
Kyle D. Bayes, Ph.D., Professor of Chemistry.
Paul D. Boyer, Ph.D., Professor of Biochemistry.
Orville L. Chapman, Ph.D., Professor of Chemistry.
Donald J. Cram, Ph.D., Professor of Organic Chemistry.
Richard E. Dickerson, Ph.D., Professor of Biochemistry and Geophysics.
David S. Eisenberg, Ph.D., Professor of Chemistry and Molecular Biology.
Mostafa A. El-Sayed, Ph.D., Professor of Chemistry.
Paul S. Farrington, Ph.D., Professor of Chemistry.
Christopher S. Foote, Ph.D., Professor of Chemistry.
William M. Gelbart, Ph.D., Professor of Chemistry.
M. Frederick Hawthorne, Ph.D., Professor of Chemistry.
Eric J. Heller, Professor of Chemistry.
Herbert D. Kass, Ph.D., Professor of Chemistry.
Daniel Kivelson, Ph.D., Professor of Chemistry.
Charles M. Knobler, Ph.D., Professor of Physical Chemistry.
William G. McMillan, Jr., Ph.D., Professor of Physical Chemistry.
John P. McTague, Ph.D., Professor of Chemistry.
Malcolm F. Nicoll, Ph.D., Professor of Physical Chemistry.
Howard Reiss, Ph.D., Professor of Chemistry.
Werner H. Schumaker, Ph.D., Professor of Biochemistry and Molecular Biology.
Robert L. Scott, Ph.D., Professor of Physical Chemistry.
Robert A. Smith, Ph.D., Professor of Biochemistry.
Robert V. Stevens, Ph.D., Professor of Chemistry.
Kenneth N. Trueblood, Ph.D., Professor of Chemistry.
Joan S. Valentine, Professor of Chemistry and Biochemistry.
John T. Watson, Ph.D., Professor of Geochemistry and Chemistry.
Charles A. West, Ph.D., Professor of Biochemistry (Chair of the Department).
Francis E. Bucet, Ph.D., D.Sc., Emeritus Professor of Chemistry.
Gifford S. Garner, Ph.D., D.Sc., Emeritus Professor of Chemistry.
E. Russell Hardwick, Emeritus Professor of Chemistry.
Thomas L. Jacob, Ph.D., Emeritus Professor of Chemistry.
James D. McCullough, Ph.D., Emeritus Professor of Chemistry.
Jay Gralla, Associate Professor of Biochemistry.
John M. Jordan, Ph.D., Associate Professor of Biochemistry and Molecular Biology.
Michael E. Jung, Ph.D., Associate Professor of Chemistry.
Jerome V. V. Kasper, Ph.D., Associate Professor of Chemistry.
Emil Reisler, Associate Professor of Biochemistry and Molecular Biology.
Charles E. Strom, Ph.D., Associate Professor of Chemistry.
Richard L. Weiss, Associate Professor of Biochemistry.
Jeffrey I. Zink, Ph.D., Associate Professor of Chemistry.

Steven G. Clarke, Ph.D., Assistant Professor of Biochemistry.
Harold G. Martinson, Ph.D., Assistant Professor of Biochemistry and Molecular Biology.
Joseph R. Murdock, Ph.D., Assistant Professor of Biochemistry.
Wayne J. Thompson, Assistant Professor of Chemistry.
R. Stanley Williams, Assistant Professor of Physical Chemistry.

The Department of Chemistry and Biochemistry offers programs of study and research leading to the M.S. and Ph.D. degrees. Prospective candidates for advanced degrees may specialize in the following fields: biochemistry, inorganic, organic, or physical chemistry.

There is close cooperation between the Department of Chemistry and Biochemistry and the Department of Biological Chemistry in the School of Medicine, but a student must be formally admitted into the program of one department or the other.

The M.S. in Biochemistry may be obtained by the Thesis Plan or the Comprehensive Examination Plan. A student who is planning to work toward the Ph.D. should not seek to obtain a M.S. degree first, but should apply directly to the Ph.D. program. Application materials may be obtained by writing to Phyllis Jergenson, Director, Graduate Office, Department of Chemistry and Biochemistry, UCLA, Los Angeles, California 90024.

Admission Requirements. Excellent undergraduate record in addition to the University minimum requirements. Graduate Record Examination (GRE) Aptitude and Advanced Tests are recommended.

Advising. Phyllis Jergenson, Graduate Office, 4006 Young Hall.

Initial academic advising is handled by the appropriate Area Adviser. The student will continue to consult each quarter with this adviser until completion of his/her course requirements. During this period he/she will also choose a Research Director who will supervise the thesis research. The Graduate Study Committee, consisting of the Graduate Adviser and the Area Advisers, reviews each student's progress quarterly. Notification in writing is given to students performing at a very high level and to those who are not making adequate progress. Both the Graduate Adviser and Area Advisers are available for personal consultation.

Orientation Examinations. Each student admitted to graduate status is given orientation examinations at the beginning of the first quarter. These diagnostic examinations in physical, organic, analytical, and inorganic or biochemistry. The main purpose of the orientation requirement is to help the student and his/her adviser plan his/her course program. The examinations include material covered in upper division courses in physical, organic, inorganic, and biochemistry. All courses suggested
because of deficiencies in undergraduate preparation are normally to be completed by the end of the first year.

**Orientation to Research.** Students are encouraged to become familiar with research activities of all faculty in their areas 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 — (one of the following) German, French (with approval of the Research Director), substitute course program, coordinated course in computer programming; Inorganic — German or coordinated course in computer programming. (A foreign student in the M.S. program may use English as the required foreign language.) Either the ETS Examination (with score of 500) or the Departmental Examination is acceptable. The Departmental Examination requires translation of a journal article with the aid of a dictionary. The substitute course program should consist of 10 units of coordinated upper division or graduate courses forming a minor field of concentration. These courses may be taken on a S/U basis, but may not be used to fulfill the departmental requirements.

**Course Requirements.**

**Chemistry (M.S.)** At least nine quarter courses (36 units) are required, of which at least five (20 units) must be graduate courses and the remainder upper division courses. The student must take at least two courses in his/her major area and one course in an outside area. Choices may be made from the following:

- **Organic:** Chemistry 243A,B, 207, 232, 236, 241A-Z, 242, 244, 245, 246
- **Physical:** Chemistry 215A,B,C,D, 223A,B,C, 225
- **Inorganic:** Chemistry 174, 207, 275, 276A,B, 277, 279

Substitutions may be made with approval 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. Research courses may be used to complete the graduate level and total course requirements as follows:

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**Seminar (Chem 218, 248, or 278)** may apply toward the graduate course requirement and the total course requirement.

**Biochemistry (M.S.) Plan I (Thesis).** 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, M267. Registration in Chemistry 258 (Student Seminar) is required for three quarters, but is not applicable to the 36-unit requirement. Research courses may be used to complete the graduate level and total course requirement as follows:

**500 Series Course Limitations**

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<tr>
<th>Course</th>
<th>Unit</th>
<th>Type of</th>
<th>No. Times</th>
<th>May Be Repeated</th>
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<tbody>
<tr>
<td>596</td>
<td>2-16</td>
<td>S/U</td>
<td>No limit</td>
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<td>598</td>
<td>2-16 letter</td>
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Up to 22 units of Chemistry 596 or 598 may be applied toward the total course requirement. Up to 8 units of Chemistry 596 or 598 may be applied toward the graduate course requirement.

**Thesis Plan.** After completion of course requirements, the student consults with his/her Research Adviser and the Graduate Office to form a thesis committee. This committee consists of three members, with the Research Adviser as Chair. A member from outside the Department is permissible, but not required.

**Chemistry (M.S.) Plan II (Comprehensive Examination).** 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, M267. Students using Plan II may apply 6 units of Chemistry 258 (Student Seminar) and 6 units of Chemistry 597 to the graduate level requirement and the total course requirement. With the exception of Chemistry 258 and 597, all courses must be taken on a graded basis.

**500 Series Course Limitations**

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<td>597</td>
<td>2</td>
<td>S/U</td>
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(Ph.D.) Candidates in each area of specialization should normally complete as a minimum the coursework indicated below. Note: Some of these requirements can be met on the basis of orientation examinations and courses taken previous to entry into the graduate program.

**Biochemistry (Ph.D.).** Candidates should normally complete as a minimum the coursework indicated below. Note: Some of these requirements can be met on the basis of orientation examinations and courses taken previous to entry into the graduate program.

- **a)** Required background material: Chemistry 173.
- **b)** Two courses selected from 276A, 276B, or 277.
- **c)** Two courses selected from 174, 275, 207, or 279.
- **e)** Three courses selected from Chemistry 207, 271A-Z, 275, 278A.
- **f)** Chem 278.

**Organic Chemistry**

- **a)** Required background material: Chemistry 133A,B,C, 136, 144.
- **b)** Chemistry 243A,B.
- **c)** Chemistry 213B, 276A or 245.
- **d)** One additional course selected from the following offerings in physical chemistry (215A, 223A, 221) or inorganic chemistry (173, 174, 275, 276A) or biochemistry (157A,B).
- **e)** Two courses selected from Chemistry 207, 232, 236, 241A-Z, 242, 244, 245, 248.
- **f)** Chemistry 248.

**Physical Chemistry**

- **a)** Required background material: Chemistry 110A,B, 113A.
- **b)** Chemistry 215A,B, 223A,B.
- **c)** Two courses selected from Chemistry 215C, 215D, 212A-F, 223C, 225 Physics 131 (or approved substitutions).
- **d)** Two additional courses from upper division or graduate offerings in chemistry or physics.
- **e)** Chemistry 218.

Biochemistry (Ph.D.). Candidates should normally complete as a minimum the coursework indicated below. Note: Some of these requirements can be met on the basis of orientation examinations and courses taken previous to entry into the graduate program.

- **a)** Required background material: Chemistry 110A, 133 A, B, C, 156, 157 A, B, some coursework in the life sciences and some biochemistry lab experience. Deficiencies in background may be made up after admission.
- **b)** The core courses M253, M255, M267 (18 units).
- **c)** An additional 12 units of upper division or graduate courses subject to the approval of the Graduate Adviser. It is recommended that 8 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.
- **d)** Chemistry 258 each quarter during the first two years.

**Written Qualifying Examinations.** In accordance with University requirements, each student in the Ph.D. program must pass a Written Qualifying Examination. Rather than a single comprehensive examination, the Department gives a series of written tests called Cumulative Examinations. These are designed to encourage and test the continued growth of professional competency by the student through coursework, study of the literature, attendance at, and participation in departmental seminars, and informal discussions with colleagues.

- **a)** Three examinations are given per quarter at approximately monthly intervals.

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**500 Series Courses**

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<td>598</td>
<td>2-16 letter</td>
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</table>
b) The student who enters directly into the Ph.D. program and performs satisfactorily on the orientation examination in his/her special area may begin writing the examinations immediately. All students must begin by the start of their second quarter of residence, and must continue until they have passed five. To remain in good standing, a student 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, each student’s overall progress will be evaluated by the Graduate Study Committee, taking into account performance in courses, cumulative examinations, and research. The student’s Research Director will be consulted in borderline cases. The Committee may recommend that the student: 1) be qualified to proceed to oral examination, 2) be placed on probationary status for one quarter, during which time he/she will continue to take cumulative examinations with a final determination made at the end of this period, 3) be disqualified from the Ph.D. program, 4) be terminated.

Oral Qualifying Examination. This examination is based on a research proposal prepared by the candidate. The proposal should represent independent work on the student’s part and should offer the doctoral committee an opportunity to judge his/her ability to think creatively and to formulate significant ideas for research. The Oral 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 express permission has been obtained from the Research Adviser. Prior to the examination, the student’s Research Adviser is to prepare a thorough written evaluation of the candidate’s research abilities, progress, and potential to present to the committee. The committee’s decision to advance the student to candidacy, to allow him/her to repeat the oral, or to disqualify him/her will be based on the quality of the written proposal, the adequacy of the oral presentation, his/her overall record at UCLA as reflected in coursework and examinations, and his/her research ability.

Appointment of the Doctoral Committee. A doctoral committee, appointed with the approval of the Graduate Division, will conduct the Oral Qualifying Examination. This committee must consist of not fewer than five members, (six for biochemistry), two of whom must be from departments other than Chemistry and Biochemistry. At the end of a successful examination, the chair and members of the committee in consultation with the student shall determine which of its members will guide, read, approve and certify the dissertation. At least two members from the Chemistry Department and at least one outside member must act in this capacity. A decision is also made as to whether a Final Oral Examination will be required.

Advancement to Candidacy. When a satisfactory report on the completion of the Written and Oral Qualifying Examinations and the departmental language requirements has been submitted, the student will be mailed an application for advancement to candidacy. The filing of this application and payment of the fee constitutes formal advancement to candidacy for the Ph.D.

Candidate in Philosophy Degree. In conjunction with advancement to candidacy, a student may request award of the Candidate in Philosophy Degree. This is a non-terminal degree for which the academic criterion is advancement to candidacy for the Ph.D. Students who desire to teach in positions which do not require the extensive research experience usually associated with the Ph.D. may find this a reasonable alternative.

In-Candidacy Fee Offset Grant Program. Students who have been advanced to candidacy for the Ph.D. are eligible for this program and the attendant registration fee offset. Students in the program must register each quarter until completion of all degree requirements, including filing of the dissertation. The fee offset will be issued until departmental normative time-to-degree (17 quarters) is reached. Students who fail to complete their Ph.D. within this time frame may continue as students, subject to the regulations of the program, but will no longer be eligible for the fee offset. Unless a leave of absence has been approved, failure to register will result in lapse of status as a graduate student and Ph.D. candidate.

Time to Degree

Normal Progress Toward the Degree (M.S.)

<table>
<thead>
<tr>
<th>Academic Quarters</th>
<th>Calendar Years</th>
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<tr>
<td>From admission to completion of courses</td>
<td>3-6 1-2</td>
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Normal Progress Toward the Degree (Ph.D.)

<table>
<thead>
<tr>
<th>Academic Quarters</th>
<th>Calendar Years</th>
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<tbody>
<tr>
<td>From admission to completion of cumulative exams</td>
<td>3-6 1-2</td>
</tr>
<tr>
<td>From admission to advancement to candidacy</td>
<td>6-7 2-3</td>
</tr>
<tr>
<td>From admission to award of degree</td>
<td>12-17 4-5-6</td>
</tr>
</tbody>
</table>

Final Oral Examination Following Completion of the Dissertation. The Final Oral Examination is optional with the doctoral committee.

Teaching Experience. One year of teaching experience is required. (No requirement for M.S. II).

Disqualification and Appeal of Disqualification. A student may be disqualified from the M.S. or Ph.D. program by action of the Graduate Study Committee for failure to maintain an adequate level of performance in coursework, in qualifying examinations, or in research progress. Appeal of disqualification may be made to the Department Chair.

Manuscript Preparation. Orientation meetings with the University Archivist are scheduled each quarter. A list of these dates is posted on the Graduate Office Bulletin Board. A booklet entitled Standards and Procedures for Theses and Dissertations is available free of charge from the Graduate Division, 1225 Murphy Hall. The student is required to submit two unbound copies of the manuscript to the Archivist and one bound copy to the Research Supervisor.

Final Clearance. Before the Department will give final approval to the Registrar for the formal granting of the degree, all appropriate clearances must be obtained by the student. Check-out cards are available in the Chemistry Graduate Office.

*Graduate Courses

207. Organometallic Chemistry. Lecture and discussion three hours. Prerequisite: Course 234A (or 250A) and consent of instructor. Survey of synthesis, structure and reactivity (emphasizing a mechanistic approach) of compounds containing carbon bonded to elements selected from the main group elements and the transition metals including olefin complexes and metal carbenes; applications in catalysis and organic synthesis.

213B. Physical Chemistry: Molecular Spectroscopy. Lecture and quiz, five hours. Prerequisite: course 113A or equivalent. 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, infrared, microwave, Electronic, Nuclear Magnetic Resonance spectroscopy and vibrationless transitions. An independent study project is required. Mr. Kasper, Mr. Bayes C215A-C215B. Quantum Chemistry: Methods. Lecture: four hours; discussion: one hour. Prerequisites: courses 113A and 31A, 31B, 32A, 32B, 33A (or 31C and 32C). Recommended: Knowledge of differential equations equivalent to Mathematics 135A or Physics 131 and of analytic mechanics equivalent to Physics 105B or Physics 115B is a prerequisite for course C215B. Postulates and systematic development of nonrelativistic quantum mechanics: expansion theorems; wells; oscillators; angular momentum; hydrogen atom; matrix techniques; approximation methods; time dependent problems; bound and unbound atoms; spectroscopy; magnetic resonance; chemical bonding. Students entering course C215A will normally be expected to take course C215B the following quarter. These two courses are designed for chemistry students with a serious interest in quantum chemistry. May be concurrently scheduled with Chem C115A-C115B.


215D. Molecular Spectra, Diffraction and Structure. Lecture and quiz, four hours. Prerequisite: course 215B, Physics 131, or equivalent. Selected topics from electronic spectra of atoms and molecules; vibrational, rotational and Raman spectra; magnetic resonance spectra; electron and neutron and electron diffraction; coherence effects.

218. Physical Chemistry Student Seminar. (4 courses) Seminars are presented by staff, outside speakers, postdoctoral fellows and graduate students. S/U grades are used for this course. May be repeated for credit.

*For concurrently scheduled courses ("C") prefix suitable separate activities and/or standards for performance and evaluation will be applied for graduates and undergraduates.
M220D. Structural Molecular Biology Laboratory. (1% course) (Same as Biology M220D and Microbiology M220D.) Lecture and discussion, three hours per week. Prerequisite: consent of instructor. Each course will encompass a recognition of specialty in physical chemistry, and will be taught by a staff member whose interest research embraces that specialty. M223A. Chemical Thermodynamics. Lecture: two to four hours, discussion: one hour. Prerequisite: course 110B or equivalent. An introduction to 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, non-electrolyte and electrolyte solutions, surface phenomena, high polymers, gravitation. May be scheduled concurrently with Chem C123A-C123B.

Mr. Knobler. Mr. Scott 223C. Statistical Mechanics. Lecture and quiz, four hours. Prerequisites: courses 215A, 223A, Physics 131 or equivalent. Fundamentals of statistical mechanics; classical equations of state; coulomb systems; phase transitions; quantum statistical mechanics; quantum treatment of liquid nitrogen; density matrix; second quantization.

225. Chemical Kinetics. Lecture and quiz, four hours. Prerequisites: courses 215A, 223A, 223B. Theories of chemical reactions and their applications to experimental data. Equilibrium and concentration theories of elementary reactions; energy transfer processes; experimental studies. Mr. Kasper (Sp)

226. Chromosome Structure and Regulation. (Same as Biology M226, Biological Chemistry M226, Microbiology M226 and Immunology M226.) Lecture and discussion, three hours; laboratory, two hours. Prerequisites: courses 133C, 133D, 133E, or consent of instructor. Each course will encompass a recognition of speciality in organic chemistry, generally taught by a staff member whose research interests embrace that specialty.

242. Organic Photochemistry. Lecture and discussion, three hours. Prerequisite: course 243A (may be taken concurrently) or consent of instructor. Interactions of light with organic molecules, mechanistic and preparative photochemistry.

C243A. Organic Chemistry: Structure and Mechanisms. Lecture, three hours; discussion, one hour. Prerequisite: course 133C (may be taken concurrently). 110B, 113A, or equivalent, with grade C- or higher, or consent of instructor. Mechanisms of organic reactions. Acidity and acid catalysis; linear free energy and isoelectronic effects. Molecular orbital theory; photochemistry; pericyclic reaction. May be scheduled concurrently with Chemistry C143A.

Mr. Chapman 243B. 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 scheduled concurrently with Chemistry C143B.

244. Strategy and Design in Organic Synthesis. Lecture and discussion, three hours. Prerequisite: course 243A (may be taken concurrently) or consent of instructor. The theory behind the planning of syntheses of complex molecules from simple molecules: Organic reactions and their use in the synthetic process. The reasoning and art involved in organic synthesis.

245. Applications of Electronic Theory in Organic Chemistry. Lecture and discussion, three hours. Prerequisite: course 243A. Techniques of electronic structure calculation; electronic and spectroscopic applications; theory; and review of electronic and optical behavior.

246. Bio-Organic Chemistry. Lecture and discussion, three hours. Prerequisite: course 243A (may be taken concurrently) or consent of instructor. Organic chemical models for biological processes; synthesis of these molecules; their synthesis and use in the study of chemical regulation.
282. Biological Energy Transduction. Prerequisite: course M253. Molecular basis of energy-transducing processes, including oxidative and photosynthetic phosphorylation, other energy-linked oxidative functions, membrane-transport mechanisms, muscle contraction, and special sensory functions.

283. Molecular Basis of Atherosclerosis. (1/4 course) (Same as Biological Chemistry M264 and Microbiology M264.) Lecture, two hours. Prerequisite: course M221 or equivalent with consent of instructor. The course will cover the biochemistry, morphology and physiology of atherosclerosis. Emphasis will be placed on the chemistry of lipoproteins and the role of plasma lipoproteins on the regulation of tissue lipid metabolism and the development of atherosclerosis.

290. Seminar in Techniques for the Study of Gene Regulation. (1/4 course) Prerequisite: course 259 or consent of instructor. A seminar to discuss specific experiments and approaches being taken in the study of gene regulation. Emphasis will be on the specific biochemical techniques being used to study regulatory protein-DNA interactions in diverse biological model systems.

297. Macromolecular Metabolism and Subcellular Organization. (1/4 course) (Same as Biological Chemistry M267.) Lecture, two hours. Prerequisite: courses 157A-157B or Biological Chemistry 101A-101B or 201A-201B or equivalent. Reconciliation of biochemistry, biology, and molecular biology. M253. Metabolism of nucleic acids and proteins; biosynthesis of complex lipids and polysaccharides; structure and properties of cellular organelles.

300. Biochemistry Research Seminar. (1/4 course) Seminars are presented by staff, outside speakers, postdoctoral fellows and graduate students on topics of current biochemical research interest. S/U grades are used for this course. May be repeated for credit.

350. Developmental Biochemistry. (1/4 course) (Same as Biological Chemistry M263.) Prerequisite: course M227 or consent of instructor. This course will deal with the biochemical aspects of development, specific tissue and cell function, and differential gene expression. The biochemistry of cell division, macromolecular synthesis, and protein function in gene expression, cell-cell interactions, membrane organization, and growth will be studied as they contribute to such topics as hormone induction, morphogenetic basis, and viral transformation. Emphasis will be placed on the use of differentiating in vivo systems and cell culture models.

371A-371Z. Advanced Topics in Inorganic Chemistry. (4 to 1 course each) Lecture, two to four hours. Prerequisites: M253 or consent of instructor. Each course will encompass a recognized specialty in inorganic chemistry, and will be taught by a staff member whose research interests embrace that specialty.

C375. Inorganic Chemistry: Reaction Mechanisms. Lecture and quiz, three hours. Prerequisites: courses 110A, 110B and 113A, or equivalent. Survey of inorganic reactions; mechanistic principles; electronic structure of transition-metal coordination chemistry; inner- and outer-sphere and chelate complexes; substitution, isomerization and racemization reactions; stereochemistry; oxidation-reduction, cyclic voltammetry, and photochemical reactions of inorganic species. May be scheduled concurrently with Chemistry C175.

Mr. Hawthorne

C278A. Inorganic Chemistry: Group Theory and Spectroscopy. Lecture, three hours; discussion, one hour. Prerequisites: courses 113A, 175 or equivalent. Group theoretical methods; molecular orbital theory; ligand field theory; electronic spectroscopy; vibrational spectroscopy. May be scheduled concurrently with Chemistry C178A.

278B. Physical Methods for the Characterization of Inorganic Compounds. Lecture, three hours. Prerequisite: course 278A or consent of the instructor. Applications of spectroscopic techniques including IR, Raman, visible, UV, NMR, ESR, and NQR to the elucidation of structure and bonding in inorganic and organometallic compounds. Mr. Strouse (W)

278. Inorganic Chemistry Student Seminar. (1/4 course) Seminars are presented by staff, outside speakers, postdoctoral fellows and graduate students. S/U grades are used for this course. May be repeated for credit.

279. Biominorganic Chemistry. Lecture, three hours. Prerequisites: Chemistry 110A and either Chemistry 156 or Chemistry 173. The role of metal ions in biology; introduction to metalloenzymes and metalloproteins; metal ion interactions with nucleic acids; metal ion metabolism. J. Valentine

Individual Study and Research

596. Directed Individual Study or Research. (1/4 to 4 courses) To be arranged with the member of the faculty who will direct the study or research. Graded on a S/U basis. May be repeated for credit.

597. Preparation for the Doctoral Qualifying Examination or the Master's Comprehensive Examination. (1 to 1 course) Prerequisite: consent of the Chemistry graduate advisor. Graded on a S/U basis.

598. Research for and Preparation of the Master's Thesis. (1 to 4 courses) Each member of the faculty supervises research of master's students and holds research group meetings, seminars, and discussions with the students that take his master's research course.

599. Research for and Preparation of the Doctoral Dissertation. (1 to 4 courses) Each member of the faculty supervises research of doctoral students and holds research group meetings, seminars, and discussions with the students that take his doctoral research course.

The Master of Arts Degree

Admission Requirements. 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.) with 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; 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 the B.A. degree, 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 of Classics uses the same application as Graduate Admissions, which may be obtained from the Department (7349 Bunche Hall) or Graduate Admissions (1247 Murphy Hall).

Advising. All students in the M.A. programs are supervised by the Graduate Adviser, a member of the regular departmental faculty; for 1982-83, Andrew R. Dyck, 7361 Bunche Hall. All students are required to consult the Graduate Adviser (or the Department Chair when the Graduate Adviser may be unavailable) at the beginning of each quarter to plan their programs, and as needed to discuss changes in programs, notify of plans for examinations, or consult about difficulties. At the end of each academic year, the Graduate Adviser conducts a review of all graduate students at a full departmental faculty meeting. The results of the review are recorded in the departmental minutes, and the substance of the evaluation of each individual student is communicated in writing to that student by the Graduate Adviser within 30 days.

Major Fields or Subdisciplines. The Department of Classics 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, the
student must demonstrate proficiency in German, French, or Italian during the 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 (Advanced Prose Composition), one course apiece from the Greek 200A-B-C and Latin 200A-B-C series (History of Greek/Latin Literature), and one course in the 201-229 series in each language. The three remaining courses are to be chosen in consultation with the Graduate Adviser from the upper division and graduate courses offered by the UCLA Classics 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 of these be graduate courses. For the Greek M.A., these must include Greek 210, two courses from the Greek 200A-B-C series, one course from the Greek 201-229 series, three additional upper division or graduate Greek courses, and two additional upper division or graduate courses to be chosen in consultation with the Graduate Adviser. The Latin M.A. course requirements are identical except for the substitution of Latin for Greek courses.

Thesis or Comprehensive Examination Plan. The Department of Classics follows the Comprehensive Examination Plan for the M.A. degree. Before presenting themselves for the examination, students are expected to complete the departmental reading lists in Greek (for the Greek M.A.), or Latin authors (for the Latin M.A.), or in Greek and Latin authors (for the Classics M.A.) and, where a choice is permitted, to indicate which works they have read. Copies of the reading lists are issued to new graduate students and available to graduate students and applicants at all times. Substitutions to works on the reading lists may be made with the approval of the Department’s regular faculty. The examinations consist of a 2-hour written examination on sight translations from Greek and on prepared texts from the Greek reading list (for the Classics and Greek M.A.); a 2-hour written examination on sight translations from Latin and on prepared passages from the Latin reading list (for the Classics and Latin M.A.); a 2-hour written examination on the history of Greek and Latin literature (Greek or Latin 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, and students who intend to take examinations during that quarter are requested to notify the Graduate Adviser well in advance. The examination committee, consisting of two members of the Classics faculty, is appointed by the Graduate Adviser. The Graduate Adviser may also serve as a member of the committee, especially when the two members are unable to reach an agreement. Possible grades on the examinations are Pass with Distinction, Pass, or Fail. All examinations may be repeated once; in exceptional cases and with the approval of the departmental faculty, more than once.

Time to Degree. A full-time student (i.e., one taking at least two courses per quarter) is expected to finish the M.A. degree within six quarters. Students normally take only one course when serving as teaching assistants, and progress towards the degree is accordingly apt to be slower in proportion to the amount of teaching undertaken.

500 Series Course Limitations. No more than one 596 course may count towards the fulfillment of the M.A. course requirement.

Disqualification. Conditions which may lead to termination include failure to maintain a grade point average above 3.0, insufficient progress towards the degree, or failure of M.A. examinations. A student deemed deficient in any of these respects by the departmental faculty is notified by the Graduate Adviser that failure to improve or correct deficiencies during the following quarter will lead to termination.

Appeals. On being notified subsequently of termination, the student may petition to the departmental faculty for reconsideration and may similarly petition to retake an examination after failing it twice.

The Ph.D. Degree

Admission Requirements. In addition to the M.A. degree (see below), the Department of Classics requires a statement of purpose; from students without a UCLA M.A., also three letters of recommendation, normally from previous instructors in the Classics, and the Graduate Record Examination (where 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 of Classics uses the same application form as Graduate Admissions, which may be obtained from the Department (7349 Bunche Hall) or Graduate Admissions (1247 Murphy Hall).

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 equivalence to the UCLA M.A. degree, the Department may allow provisional admission and require the candidate to pass with distinction, during the first year of residence, a set of examinations identical with the M.A. comprehensive examinations which may normally be repeated once.

Advising. All new students in the doctoral program are required, at the beginning of each quarter, to consult the Graduate Adviser, Professor Andrew R. Dyck, who assists in planning the program of study and guides the student towards the choice of an individual adviser as research interests dictate. After the Written Qualifying Examinations have been completed, the individual adviser takes responsibility for the guidance of the student, who must nevertheless continue to submit each quarter’s study list for the Graduate Adviser’s approval. The individual adviser is responsible for the establishment of the doctoral committee.

Major Fields or Subdisciplines. The UCLA Department of Classics 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, the student is required to demonstrate proficiency in either French (Italian may be substituted with the permission 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. 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 exam is administered by the Department.

Course Requirements. At least one full year of graduate study (normally eight to nine courses) is required as preparation for the qualifying examination. The student 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; students specializing in Classical Literature and Philology may concentrate on Greek or Latin as their research interests dictate. Students entering with a UCLA Greek M.A. or the equivalent must take, in addition, Latin 210 (Advanced Prose Composition), one course from the Latin 200A-B-C series (History of Latin Literature), and one course from the Latin 201-229 series if they have not previously taken these courses; students entering with a UCLA Latin M.A. or the equivalent must satisfy identical course requirements in Greek.

Written and Oral Qualifying Examinations. Before presenting themselves for the Qualifying Examinations, students must complete the departmental Ph.D. reading list in either Greek or Latin authors, which is additional 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, and students entering with the Latin M.A. must complete the Greek M.A., reading list. Students are advanced to candidacy as a result of successfully taking the Qualifying Examinations, which consist of: a 3-hour written translation examination on Greek or Latin passages partly from the reading list and partly at sight; for students with the Greek or Latin M.A. only, a similar additional 3-hour examination on the Latin or Greek reading list; a 3-hour written examination on the area of specialization, with special emphasis on the student's research interests within that area; an oral examination covering both the area of specialization, with some emphasis on the student's proposed dissertation topic, and the general field of Classical studies. The oral examination is administered by the doctoral committee under the supervision of the student's individual adviser. Each examination may normally be repeated once.

Doctoral Committee. The Department of Classics imposes no conditions additional to those of the Graduate Council.

Final Oral Examination Following Completion of the Dissertation. An oral defense of the dissertation, which is written under the supervision of the individual adviser and must contribute significantly to research on the subject, may be required or waived at the discretion of the doctoral committee.

Time to Degree. A full-time student with no deficiencies on admission to graduate status might be expected to complete the Ph.D. degree within nine quarters after entry into the doctoral program. Students normally take only one course when serving as teaching assistants, and time to degree is thus longer in proportion to the amount of teaching undertaken.

Candidates In Philosophy Degree. Students receive the C.Phil. degree on advancement to candidacy for the Ph.D. degree.

Disqualification. Conditions which may lead to termination include failure to maintain a grade point average above 3.0, insufficient progress towards the degree, or failure of Qualifying Examinations. A student deemed deficient in any of these respects by the departmental faculty is notified by the Graduate Adviser that failure to improve or correct deficiencies during the following quarter will lead to termination.

Appeals. On being notified subsequently of termination, the student may petition to the departmental faculty for reconsideration and may similarly petition to retake an examination after failing it twice.

Classics

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 Asia Minor in the second and first millennia B.C. Readings in Pehlevi, Palaeo-Luwian, Hieroglyphic, Lycian, and Lydian inscriptions. Anatolian-Greek relationships and survivals in Classical and Hellenistic times. Mr. Puhvel

240. Etrusco-Arabic. Prerequisite: consent of instructor. A survey of scholarly research on Etruscan language and culture, with analysis of epigraphic material. Mr. Puhvel

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. Lattimore

251B. Seminar in Classical Archaeology. Graeco-Roman architecture. Mr. Lattimore

251C. Seminar in Classical Archaeology. Graeco-Roman sculpture. Mr. Lattimore

251D. Seminar in Classical Archaeology. Graeco-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. Seminar in Roman Religion. Prerequisite: consent of instructor.

268. Seminar in Comparative Mythology. Prerequisite: course 168 and 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. Reading, research and discussion of selected topics from Greek and Roman literature. May be repeated for credit.

Individual Study and Research

596. Directed Individual Study or Research. (1/2 to 2 courses)

597. Study for the M.A. Comprehensive Examination or the Ph.D. Qualifying Examination. (1/2 to 2 courses)

598. Research for the Doctoral Dissertation. (1/2 to 2 courses)

Greek

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. An introduction to the history of Greek literature, supplemented on the part of the student by the independent reading of Greek texts in the original. Ms. Bergren, Mr. Haslam, Ms. King

210A-210B. Homer: The Iliad. Ms. Bergren, Mr. Haslam, Ms. King

220A-220B. Homer: The Odyssey and the Epic Cycle. Ms. Bergren, Mr. Haslam, Ms. King

233. Byzantine Poetry. Mr. Dyck

234. Greek and Latin Meter. Prerequisite: consent of instructor. A comprehensive study of meter as it functions in classical poetry. Mr. Haslam

240A-240B. History of the Greek Language. Prerequisite: consent of instructor. 240A covers the linguistic history of Classical Greek. In 240B the Classical, Medieval, and Modern Greek are discussed. Mr. Dyck

241. Greek Epigraphy. A survey of Greek historical inscriptions, chiefly Attic. Mr. Dyck

242. Greek Diacritics and Historical Grammar. Prerequisite: consent of instructor. The linguistic situation in early Greek. Readings in Classical Greek dialectal texts. Greek grammar in the context of common Greek and Indo-European linguistics. Mr. Puhvel

243. Mycenaean Greek. Prerequisite: consent of instructor. Script, language, and grammar of the Linear B inscriptions; their relevance to Ancient Greek linguistic and cultural history. Mr. Puhvel

244. Greek Papyrology. Prerequisite: consent of instructor. Some reading knowledge of Greek required. An introduction to Greek papyri, considered both as historical documents and as carriers of literature. Mr. Haslam

245. Greek Palaeography. Studies in the development of the book hand in Greek manuscripts earlier than the invention of printing.

Individual Study and Research

596. Directed Individual Study or Research. (1/2 to 2 courses)

597. Study for the M.A. Comprehensive Examination or the Ph.D. Qualifying Examination. (1/2 to 2 courses)

598. Research for the Doctoral Dissertation. (1/2 to 2 courses)
Latin

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 the independent reading of Latin texts in the original.

201. Seminar in the Roman Epic: Ennius to Silius Italicus. The fragments of Ennius and selected readings from the minor epic poets (Lucan, Valerius Flaccus, Statius, Silius Italicus).


203A. Elegiac Poetry. Mr. Frischer, Mr. Levine

203B. Propertius. Mr. Levine

204A-204B. Vergil's Aeneid. Mr. Haslam, Mr. King

205. Seminar in Vergil's Bucolics. Mr. Frischer

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.

208. Ovid. Prerequisite: a reading knowledge of Classical Latin is required. A detailed study of the poetic works of Ovid: readings in the original with discussion of the secondary literature and scholarship. This course may be repeated for credit as the content varies.

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. The choice of author may vary 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 the equivalent. A study of considerable portions of the writings of:

211A. Sallust.

211B. Livy.

211C. Tacitus.

215. Seminar in the Roman Novel. (Formerly numbered 224.) Works such as Petronius Satyricon and Vellutus Metamorphoses: a study of the literary problems. The course may be repeated for credit as the content varies.

220A. Cicero's Rhetorical Works. Mr. Dyck

220B. Cicero's Orations. Ms. Bergren

221A. Cicero's Philosophical Works. Mr. Dyck, Mr. Levine

221B. Cicero: De Nature Deorum. Mr. Dyck, Mr. Frischer, Mr. Levine

222. Seminar in Roman Stoicism. Prerequisite: a reading knowledge of Greek and Latin.

223. Lucan. Mr. Dyck, Mr. Frischer

224. Lucan. A detailed study of Lucan, Bellum Civile: readings in the original, discussion and reports on important literary and historical aspects.

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. With instructor's permission, may be repeated for credit.

240. History of the Latin Language. Prerequisite: consent of instructor. The development of Latin from the earliest monuments until its emergence in the Romance languages.

242. Italic Dialects and Latin Historical Grammar. Prerequisite: consent of instructor. The linguistic situation in early Italy. Readings in Oscuran, Umbrian, and early Latin texts. Latin grammar in the context of Italic and Indo-European linguistics.

243. Seminar in Latin Paleography. Studies in the development of the book hand in Latin manuscripts earlier than the invention of printing. Mr. Levine


Professional Courses in Method

370. 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. (½ course) Prerequisite: current service as a teaching assistant and consent of instructor. Methodology of instruction, in conjunction with classroom practice.

Individual Study and Research

596. Directed Individual Study or Research. (1/2 to 2 courses)

597. Study for the M.A. Comprehensive Examination or the Ph.D. Qualifying Examination. (1/2 to 2 courses)

599. Research for the Doctoral Dissertation. (1/2 to 2 courses)

Related Courses in Other Departments


Art 103A. Greek Art.

103B. Hellenistic Art.

103C. Roman Art.


117A-117B-117C. History of Rome.

121A-121B. Medieval Europe.

123A-123B. Byzantine History.

215A-215B. Seminar in Ancient History.

216A-216B. Seminar in Byzantine History.

222A-222B. Seminar in Medieval Intellectual History.


M150. Introduction to Indo-European Linguistics.


101B. Plato: Later Dialogues.

102. Aristotle.

Comparative Literature (Interdepartmental)

Arnold J. Bend, Ph.D., Professor of Hebrew and Comparative Literature.

Pier-Maria Pasinetti, Ph.D., Professor of Italian and Comparative Literature.

Ross P. Shideiher, Ph.D., Professor of Scandinavian Languages and Comparative Literature. (Chair of the Program).

Katherine C. King, Ph.D., Assistant Professor of Classics and Comparative Literature.

Kathleen L. Komar, Ph.D., Assistant Professor of German and Comparative Literature.

Lucia Re, Ph.D., Assistant Professor of Italian and Comparative Literature.

Michael J.B. Allen, Ph.D., Professor of English.

Ehrhard Bahr, Ph.D., Professor of German.

Amin Banani, Ph.D., Professor of Persian and History.

Daniel G. Calder, Ph.D., Professor of English.

Marga Cottino-Jones, Ph.D., Professor of Italian.

Hassan El Nouy, Docteur en Lettres, Professor of French.

Eric Gans, Ph.D., Professor of French.

Kenneth Harper, Ph.D., Professor of Slavics.

Claude L. Hulot, Ph.D., Professor of Spanish and English.

Carroll B. Johnson, Ph.D., Professor of Spanish.

Murray Krieger, Ph.D., University Professor of English.

Richard D. Lehan, Ph.D., Professor of English.

Gerardo Luzurjaga, Ph.D., Professor of Spanish.

Vladimir Markov, Ph.D., Professor of Slavics.

Maximillan E. Novak, D. Phil., Ph.D., Professor of English.

Joseph M. Riddell, Ph.D., Professor of English.

Stephen I. Yenser, Ph.D., Professor of English.

Ben Betu, Ph.D., Associate Professor of Oriental Languages.

Albert Braunmuller, Ph.D., Associate Professor of English.

Frederick L. Burwick, Ph.D., Associate Professor of English.

Edward J. Condren, Ph.D., Associate Professor of English.

Michael Heim, Ph.D., Associate Professor of Slavics.

Albert D. Hutter, Ph.D., Associate Professor of English.

Robert M. Maniquis, Ph.D., Associate Professor of English.

Stephen D. Werner, Ph.D., Associate Professor of French.

Shuhei Kao, Ph.D., Assistant Professor of French.

Romney T. Keys, Ph.D., Assistant Professor of English.

The Master of Arts Degree

Admission Requirements. For entrance into the program, a B.A. in literature, ancient or modern, is a prerequisite. 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. All applicants for admission must take the Graduate Record Examination. Three letters of recommendation...
are required. Applicants should have literary proficiency in one foreign language and at least an elementary knowledge of a second.

Advising. Graduate advisers are: Professor Arnold J. Band, Professor Katherine C. King, Professor Kathleen L. Komar, Professor Lucia Re, and Professor Pas R. Shidelar. They can be contacted at the Comparative Literature Program office, 334 Royce Hall.

Students are assigned advisers for their first year, then changes are made to suit the student’s program of study. Students’ records are reviewed on a regular basis by the core committee of the Comparative Literature Program. Any student falling below a 3.4 grade point average is sent a warning by the Chair and may be placed on probation.

Students should meet at least quarterly with their advisers. Records are kept of these meetings.

Areas of Study for the M.A. Degree. The student’s study plan should combine the work in the major and minor literatures by focusing on a limited area in which these literatures may be fruitfully 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 the student’s primary concentration. He/she specializes in one historically defined period (e.g., Medieval, Renaissance and Baroque, Neo-classicism and 18th century, Romanticism to Modern), but a general knowledge of the major literature is a prerequisite for the specialization.

In the minor literature, the student focuses on a period comparable to the area of specialization in the major literature. However, it is assumed that the student may not have as much historical depth and breadth in the minor literature as in the major.

Foreign Language Requirements. Literary proficiency in the major and minor literatures is an essential prerequisite for courses and degrees in Comparative Literature. Students are expected to be able to take graduate classes conducted in the languages of their specialization. The candidate should also be able to speak the major foreign language adequately and read literary texts in that language with “literary proficiency,” i.e., with sensitivity to stylistic nuances.

Before completion of the M.A., the student must demonstrate a knowledge of two foreign languages. Proficiency in one of these languages must be certified by completion of two or more upper division and/or graduate literature courses in the appropriate language department. (Students must prove more than elementary language competency in order to enter upper division and graduate literature courses at UCLA.) The second foreign language requirement may be completed either by completion of two years of language classes, by one upper division literature class, or by passing with a score of 600 or higher, the Educational Testing Service foreign language examination administered by the Graduate Division. Translation examinations may be administered by departmental members in languages for which no ETS examination is available.

Course Requirements. Candidates for the M.A. degree specialize in two literatures in which they have taken a total of eight courses; five are taken in the major literature and three in the minor. Four additional courses are taken from those designated as Comparative Literature courses. The following 12 courses are the minimal course requirements. Some students will take extra courses to make up deficiencies.

1. Four courses in Comparative Literature
   a. Comparative Literature 200 — Methodology; theory of literature, bibliography, etc.
   b. One of the following courses: Comparative Literature 201, 202, or 204.
   c. The comparative study of one genre, e.g., the novel, the epic, the lyric, the drama.
   d. The comparative study of one period or movement, e.g., Baroque, Romanticism.

2. Five courses (a minimum of three must be graduate courses; the other two, upper division) in the student’s major literature. The upper division course in the history of the language of that particular literature may be included.

3. Three courses, either graduate or upper division, in the student’s minor literature. The student should be directed to study periods, genres, or problems in the minor literature which lend themselves to comparison with similar elements in his/her major literature.

Of the above required courses, 12 units at most may be 500 series courses. The M.A. degree normally takes seven quarters to complete.

Examination Plan. The examination for the M.A. is both written and oral, testing both historical knowledge and comprehension of methodology. The results of this examination determine the student’s ability to continue toward the Ph.D. degree in Comparative Literature. There are three possible results of the examination: an examination to pass the Ph.D., may be granted a terminal M.A., or may fail the examination altogether. The Program chair appoints a panel of three faculty members to conduct the examination. It is strongly recommended that students take at least one course from each member of their committee.

Time to Degree. It is recommended that the candidate complete the M.A. in seven quarters.

500 Series Course Limitations. 12 units at most may be 500 series courses. 596 and 597 courses given with S/U grades may be offered. Only one of these courses may be counted toward the 5-graduate-course requirement.

Disqualification. Students may be disqualified on the basis of failing below a 3.4 grade point average two quarters in a row. Failure to progress toward the degree at a rate of five courses per year or failure to pass either the written or the oral examinations may lead to disqualification.

Appeals. Students may appeal disqualification by filing a written appeal with the Program Chair. The Chair will appoint a committee which may include the Chair, to review the student’s disqualification and, if necessary, meet with the student. On the basis of that committee’s report, the Chair will make a final decision and report it to the Graduate Division.

The Ph.D. Degree

Admission Requirements. 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 from UCLA are required to pass a Permission to Proceed Examination before being allowed...
to continue toward the Ph.D. degree. This examination establishes that the applicant is at the same level of graduate work in the major and minor literatures as a holder of the Program's M.A. degree. The examination is conducted along lines similar to the M.A. examination described above. It should be taken within the first year of residence.

Advising. Graduate advisers are: Professor Arnold J. Band, Professor Katherine C. King, Professor Kathleen L. Kornar, Professor Lucia Re, and Professor Rosa P. Shidel. They can be contacted at the Comparative Literature Program office, 334 Royce Hall, UCLA.

Students are assigned advisers for their first year; thereafter, changes may be made to suit the student's program of study. Students' records are reviewed on a regular basis by the core committee of the Comparative Literature Program. Any student falling below a 3.4 grade point average is sent a warning by the Chair and may be placed on probation.

Students should meet at least quarterly with their advisers.

Major Fields or Subdisciplines. The student's study plan for the Ph.D. should combine the work in the major and minor literatures by focusing on a limited area in which these literatures may be fruitfully explored. This area may be a literary period (e.g., the late Middle Ages, the 18th century, or the Romantic Age) or a particular aspect common to all three 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 Requirements. The candidate 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, i.e. Romance and Germanic, English and Slavic, etc. If the student intends to offer three literatures written in foreign languages for his/her Ph.D. degree, he/she is 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. degree are to be fulfilled in the same way as those for the M.A. degree.

Course Requirements. Students entering with an M.A. will be required to pass the Permission to Proceed examination and to take a minimum of six graduate courses. However, they may be required to take up to 12 courses. Of the required six, three must be in Comparative Literature and one must be from each of the student's 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, students are strongly advised to take at least two and usually three courses in each of their literatures.

Students who have taken their M.A. in the Comparative Literature Program at UCLA will be required to complete a minimum of six graduate courses. Two of these should be Comparative Literature courses and one of the two should have a theoretical orientation (such as CL 202, 203, 204, etc.) Additional courses may be required up to a maximum of 12. Usually included in these courses will be additional courses in the major and first minor literature. Three courses in the second minor are normally recommended.

Teaching Experience. Teaching experience is not required but is highly recommended for the Ph.D.

Written and Oral 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. The reading list for the major should include texts from the earliest works in the literature through the 20th century. As long as historical depth is demonstrated, the list may emphasize a genre and specific periods. The period of specialization may account for up to half the items on the list. A normal reading list consists of approximately 50 to 60 primary works or items (an item is equivalent to a novel or long play). The reading list for each minor literature focuses on the period of specialization and consists of approximately 25 to 30 primary works. (Works from the M.A. lists may be included but it is assumed that relevant critical texts will be part of the student's knowledge pertaining to those texts). Examples of reading lists are on file in the Program office.

The written examination for the major is divided into two parts, one designed to demonstrate broad historical knowledge, the other to demonstrate a more specific knowledge of the student's special period or problem. Usually two examinations of three to four hours each are taken in the major literature; a three to four hour written examination is taken in each of the minor literatures. The oral examination must be taken within 90 days of the passage of the last written examination.

The oral examination covers three areas:
1. Competence as determined by the reading lists and the written examinations in the major and minor literatures.
2. Both a familiarity with major critical texts pertaining to the reading lists and competence in general literary theory.
3. The proposed dissertation topic based on the prospectus. (A 10 to 12 page prospectus must be submitted to members of the committee in preparation for the oral examination.)

The Program allows a maximum of two attempts to pass the Ph.D. examinations.

Doctoral Committee. The examination committee for the Ph.D. is usually composed of five faculty members from the departments of the major and minor literatures and the Comparative Literature Program (three of the five members are normally associated with the Program). Students are strongly advised to begin choosing possible members of their committee and working with these faculty members from their entrance into the Program.

The Dissertation. The doctoral dissertation must demonstrate original critical work in the field. Although a topic comparing literatures is commonly undertaken, Comparative Literature students may write a dissertation on a single subject in a single field provided that their wide range of knowledge is demonstrated by the quality of the work. The dissertation usually runs between 180 to 250 pages. Precise details concerning preparation and filing of the dissertation should be obtained from the Graduate Division, Student and Academic Affairs Section.

Candidates should regularly submit sections of their dissertation to the three reading members of the doctoral committee. All three members must certify approval of the dissertation.

Final Oral Examination Following Completion of the Dissertation. No final oral examination is required after the filing of the dissertation.

Time to Degree. Ph.D.'s usually take their qualifying examinations six to nine quarters after the M.A., although it is possible to take the examinations as soon as the candidate's doctoral committee feels that he/she is adequately prepared. The doctoral dissertation usually requires an additional three quarters. Normative time-to-degree from admission to graduate status to award of the degree is 18 quarters (six years).

Candidate in Philosophy Degree. Students are eligible to receive the C. Phil degree on advancement to candidacy for the Ph.D.

Disqualification. Students may be disqualified on the basis of falling below a 3.4 grade point average two quarters in a row. Failure to progress toward the degree at a rate of five courses per year or failure to pass either the written or the oral examinations may lead to disqualification.

Appeals. Students may appeal disqualification by filing a written appeal with the Program Chair. The Chair will appoint a committee, which may include the Chair as a member of the committee, to review the student's disqualification and, if necessary, meet with the student. On the basis of that committee's report, the Chair will make a final decision and report it to the Graduate Division.

Graduate Courses

200. The Methodology of Comparative Literature. Prerequisite: consent of instructor. A study of both the methodology of comparative literature and the theory of literature.

*For concurrently scheduled courses ("C" prefix) suitable separate activities and/or standards for performance and evaluation will be applied for graduates and undergraduates.
261. Contemporary Theories of Criticism. Prerequisite: course 200 or its equivalent. An advanced course in the theory of literature focusing upon structuralist, psychoanalytic, and Marxist approaches.

262. Problems in the Theory of Literature. Prerequisite: a reading knowledge of French or German; Comparative Literature 201 or its equivalent. A study of specific topics in the theory of literature for advanced students in criticism and literary theory. May be repeated for credit.

263. Problems of the Sign in Literature. An inquiry into the theoretical bases and implications of the sign as metaphorical, logical and grammatical categories. Many texts central to Western thinking dwell on the sign. This course will focus on the relationship between words and things, language and reality, the linguistic medium in its meaning-producing functions. Excerpts from Plato, Aristotle, Augustine, Locke, Vico and Hegel lead to a discussion of the "sign" problem by Saussure (semiotics) and Peirce (semiotics) and propounded by contemporary theorists such as Barthes, Hjelmslev and Greimas.

Ms. Kao

264. Psychoanalytic Approaches to Literature. Prerequisite: course 200 or the equivalent. A seminar course in English. A study of the development of modern psychoanalytic approaches to literature, with particular stress on affective theories of criticism. Reading and discussion of theoretical and critical writings in psychology, contemporary psychoanalytic critics, contemporary psychoanalytic critics of literature, and modern British and American psychoanalytic theorists (Winnicott, Schacter) whose work is applicable to literary theory. Mr. Hutter

C267. The Classical Tradition: Epic. Seminar, three hours. Prerequisite: reading knowledge of one appropriate foreign language. (May be concurrently scheduled with Humanities C105.) Literary masterpieces, both dramatic and nondramatic, selected to demonstrate the variety of contemporary critical work and to introduce the student to the language and culture represented by selected works. Graduate students will be required to prepare papers based on texts read in the original language. These students will meet as a group one additional hour each week.

Ms. Band

268. The Crisis of Consciousness in Modern Literature. Prerequisite: reading knowledge of one appropriate foreign language. (May be concurrently scheduled with Humanities C107.) The Iliad, the Odyssey, the Aeneid, the Germanerse Liberia, and Paradise Lost will be analyzed both in relation to their contemporary literary and historical milieu and in relation to the questions of how poets build upon the work of their predecessors. Graduate students will be required to prepare papers based on texts read in the original language. These students will meet as a group an additional hour each week.

Ms. King

269. The Crisis of Consciousness in Modern Literature. Prerequisite: reading knowledge of one appropriate foreign language. (May be concurrently scheduled with Humanities C107.) The Iliad, the Odyssey, the Aeneid, the Germanerse Liberia, and Paradise Lost will be analyzed both in relation to their contemporary literary and historical milieu and in relation to the questions of how poets build upon the work of their predecessors. Graduate students will be required to prepare papers based on texts read in the original language. These students will meet as a group an additional hour each week.

Ms. Komar

271. The Lyric: Classical to Modern. Prerequisite: some knowledge of either Latin or Greek. A study of the genre of the genres and conventions of Greek and Roman lyric poetry and its influence on subsequent European poetry.

C272. Archetypal Heroes In Literature. Prerequisite: reading knowledge of one appropriate foreign language. (May be concurrently scheduled with Humanities C129.) Survey and analysis of the function and appearance of such archetypal heroes as Ares, Ulysses, Prometheus and Odysseus in literature from antiquity to the modern period. Graduate students will be required to prepare papers based on texts read in the original language and will meet as a group an additional hour each week.

270. Translation Workshop. Prerequisite: a solid reading knowledge of at least one foreign language and consent of instructor. The theory and practice of literary translation. Analyses of significant theoretical contributions to the subject and other technical factors affecting the translation technique with genres, periods, and authors at the discretion of the participants. Open to qualified undergraduates with proper language preparation.

Mr. Heim

C279. Early Medieval Literature. Four lectures; discussion, one hour. Prerequisite: reading knowledge of one appropriate foreign language. (May be concurrently scheduled with Humanities C140.) The course will consist of a survey of the Latin and Germanic literatures of the early Middle Ages to the beginning of the Twelfth Century. Graduate students will be required to write papers based on texts read in the original languages, and may meet as a group an additional hour each week.

Mr. Calder

C236. The Lyric: Epic. Prerequisite: reading knowledge of one appropriate foreign language. (May be concurrently scheduled with Humanities C140.) The seminar will consist of five medieval epics: Beowulf, El Cid, Chanson de Roland, Niebelungenlied, and Njalssaga. There will be two objectives: the understanding of each work, and second; an understanding of the nature of epic literature. Assignments will consist of an extended seminar paper and short oral reports. Graduate students will be required to prepare papers based on texts read in the original languages.

Mr. Condren

C245. Renaissance Drama. Prerequisite: reading knowledge of one appropriate foreign language. (May be concurrently scheduled with Humanities C145.) The course offers a broad introduction to the subject matter and types of plays in the Renaissance. Historical and literary influences on the plays will be considered. Readings will include works of such dramatists as: Tasso, Machiavelli, Moliere, de la Pogne, Jonson; Shakespeare. Graduate students will be required to prepare papers based on texts read in the original language and will meet as a group one additional hour per week.

Mr. Braunmuller

C276. The Symbolist Tradition in Poetry. Prerequisite: reading knowledge of one appropriate foreign language. (May be concurrently scheduled with Humanities C170.) A study of the symbolist tradition in English, French and German poetry. Graduate students will be required to prepare papers based on texts read in the original language and may be required to meet as a group an additional hour each week.

Mr. Shideler

C291. Poetry and Poetics of the Post-Symbolist Period. Prerequisite: reading knowledge of either French or German. (May be concurrently scheduled with Humanities C180.) A study of the symbolist tradition in English, French and German poetry. Graduate students will be required to prepare papers based on texts read in the original languages and may be required to meet as a group one additional hour per week.

Mr. Shideler, Ms. Komar

292. The Psychological Novel. Prerequisites: major in literature and reading knowledge of French. A comprehensive course in French and German novels which will both precede and follow the development of psychoanalysis. Selected readings of Freud will be assigned in addition to the required fiction. Mr. Hutter

C287. The Mystery Novel. Prerequisite: reading knowledge of one appropriate foreign language. (May be concurrently scheduled with Humanities C180.) A study of the mystery as a popular genre with special emphasis on the works of Stendhal, Tolstoy, Verne, Proust and contemporaries like Vital, Grass, Garcia Marques. Use of fictional methods by historians may also be analyzed.

Mr. Re, Mr. Pasinetti

C280. The Symbolist Tradition in Poetry. Prerequisite: reading knowledge of French or German. (May be concurrently scheduled with Humanities C180.) A study of the symbolist tradition in English, French and German poetry. Graduate students will be required to prepare papers based on texts read in the original language and may be required to meet as a group an additional hour each week.

Mr. Shideler

274. The Search for Organic Forms. Prerequisite: reading knowledge of French or German. A seminar devoted to theories of the "organic" in the eighteenth and nineteenth centuries, with special emphasis on Rousseau and Goethe. A large part of the course will be given to studies of the transition made between theories of nature and theories of state.

Mr. Manipis

C275. The Nineteenth Century Novel. Prerequisite: reading knowledge of French or German. (May be concurrently scheduled with Humanities C170.) A comparative study of the 19th century novel in England and on the continent. Novels will be selected so as to allow the seminar to concentrate on a particular tradition. Mr. Lehan

C276. Fiction and History. Prerequisite: reading knowledge of one appropriate foreign language. (May be concurrently scheduled with Humanities C176.) The course analyzes the use of historical events, situations, and characters in works of fiction and the necessarily "historical novels." Texts and individual assignments range from nineteenth-century authors such as Stendhal, Tolstoy, Verge, to Proust and contemporaries like Vital, Grass, Garcia Marques. Use of fictional methods by historians may also be analyzed.

Mr. Heim
Computer Science

At UCLA, the Department of Computer Science is a unit of the School of Engineering and Applied Science. The Department offers graduate programs leading to the M.S. and Ph.D. in Computer Science. For further information, please refer to the section on Engineering and Applied Science.

Dance

(Office, 205 Women's Gym)

Elise Dunin, M.A., Professor of Dance.
Pia Gilbert, Professor of Dance.
Alma M. Hawkinson, Ed.D., Professor of Dance (Emeritus).
Carol Soothorn, M.A., Professor of Dance (Chair of the Department).
Marion Scott, Professor of Dance.
Allegre Fuller Snyder, M.A., Professor of Dance.
Emma Lewis Thomas, Ph.D., Professor of Dance.
Emma Alperzon, Ph.D., Associate Professor of Dance.
Doris Siegel, Associate Professor of Dance.
Sune Serlin, Ph.D., Acting Assistant Professor of Dance.
Judy Sisulo, Assistant Professor of Dance.

Charles Berliner, M.F.A., Lecturer in Dance.
Gloria Bowen, Lecturer in Dance.
Bill De Young, M.A., Lecturer in Dance.
Gary Faltico, Ph.D., Lecturer in Dance.
Angelina Faller, M.A., Lecturer in Dance.
Katherine Howard, M.A., Lecturer in Dance.
Martha Kalman, M.A., Lecturer in Dance.
Margaret Oved Marshall, Lecturer in Dance.
Barbara Mattingly, Lecturer in Dance.
Emilo Pulido-Holzner, B.A.C., Lecturer in Dance.
Mia Smolenska, Lecturer in Dance.
Suenobu Togi, Lecturer in Dance.
Martin Tracy, M.A., Lecturer in Dance.
Melinda Williams, M.A., Lecturer in Dance.
Medha Vaid, M.A., Lecturer in Dance.

The Master of Arts Degree

Admission Requirements. A baccalaureate degree with an undergraduate major in dance or equivalent experience. Some of this experience may have been gained outside the academic setting through such avenues as studio work.

Prospective students may write to the Department of Dance, WG 205, University of California, Los Angeles, California 90024, for departmental brochures which give additional information on the graduate program. The Department has one additional application form in addition to those used by Graduate Admissions. (see below).

Three letters of recommendation are required.

The audition will look at the technical proficiency and creative potential of each applicant, 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, the sense of form and forming. Because the Department recognizes the importance of diversity and specialization at the graduate level, each applicant will be evaluated according to his/her primary focus, i.e., performance-choreography, education, therapy or ethnology.

The audition is in several parts: Part One will be a practical session in which the applicant will participate in a technique class.

Part Two will give the candidate the opportunity to show a work of his/her own choreography of not more than four minutes with accompaniment. For the ethology candidate, the composition may be in a movement style of his/her choice and is not limited to modern.

Part Three is an interview with faculty. The purpose of the interview is threefold: To give the interviewee detailed information about the program, to let the faculty know the candidate as a person, and discuss his/her aims and interests, so as to help determine whether this program will fulfill the prospective student's expectations and needs.

For therapy students there will be an additional movement session.

In order to establish the equivalency, the applicant is asked to fill out the "M.A. Candidate Graduate Evaluation Form" which describes in detail the requirements of our undergraduate program. This form may be obtained by writing to the Department directly.

Although not all graduates who enter the program have filled all deficiencies, the greater the approximation, the more likely a candidate is for consideration for the program.

These requirements apply to all applicants even though their focus at the graduate level may be a specialization in therapy, ethology, education, or performance and choreography.

These requisites are based on the support of several general faculty members who indicate to the Chair that a reexamination seems warranted.

Major Fields or Subdisciplines. There are four major areas of specialization recognized by the Department: Choreography/Performance; Dance Therapy; Dance Education, and Dance Ethology. There is also the possibility of doing thesis work in such areas as Dance History, Philosophy and Criticism, Dance Kinesiology, Dance Production, Dance and Media, Music for Dance, and Dance Notation. Programs in these special areas may be set up on the advice of the Chair or an adviser after the student has been in the graduate program for several quarters and has identified a unique interest and competence in one of these areas.

Foreign Language Requirement. There is no foreign language requirement. It is, however, recommended for students specializing in Dance Ethnology who will be engaged in field work that during the course of their graduate study or in preparation for it, they gain a working knowledge of the language of the area where they will do their research.

Course Requirements. Requirements for graduation: nine courses, 36 units.

a. All students are required to take Dance 202.

b. Four courses, or 16 units, in the Department at the graduate level. These courses will bear a 200 number.

c. Four courses, or 16 units, in or outside the Department at upper division or graduate level. These may not be classes that are being taken to fulfill deficiencies. Technique and ethnic performance classes may also not be used in this category.

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 or Comprehensive Examination Plan. Under the Thesis Plan the student will prepare a thesis which is a report of the results of his or her original research or creative work. Before beginning work on the thesis, the student must obtain approval of the subject and general plan from the Graduate Faculty Committee consisting of all tenured faculty in the Department. This presentation is usually made four or five quarters after the commencement of graduate work. If the Thesis Plan is accepted, a thesis committee will be formed. The thesis committee consists of three faculty members, two from the Department of Dance and one from an outside department. If a student fails in his/her first presentation, he or she may be reexamined. Conditions for reexamination are based on the support of several faculty members who indicate to the Chair that a reexamination seems warranted.

Under the Comprehensive Examination Plan the course requirements are the same as those for the thesis with the addition of one course. This plan would include an independent study project and a final examination. Because of the nature of the discipline, the Comprehensive Examination Plan is rarely followed.
800 Series Course Limitations.

<table>
<thead>
<tr>
<th>Course</th>
<th>Unit</th>
<th>Type of Grading</th>
<th>Be Repeated</th>
</tr>
</thead>
<tbody>
<tr>
<td>596A</td>
<td>2-8</td>
<td>Letter</td>
<td>No limit</td>
</tr>
<tr>
<td>598R</td>
<td>2-8</td>
<td>S/U</td>
<td>No limit</td>
</tr>
</tbody>
</table>

Eight units of 500 series may apply toward total requirement.

Four units of 500 series may apply toward minimum graduate course requirement.

Disqualification and Appeal of Disqualification. Reasons for disqualification in the past have been failure to maintain a grade point average of 3.0. Because of the audition for entrance and the close advising process, students and administration have either worked out ways to make student achievement suitable, or they have mutually agreed on separation.

Other Relevant Information. While field work is not a requirement for those specializing in the area of Dance Ethnology, it is strongly suggested as a part of the student’s program. The specialization in Dance Therapy requires field experience or internship to provide an orientation to the hospital setting and experience as a movement therapist. This requires one-half day of internship each week throughout the first year. 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.

The graduate dance-movement therapy program received approval from the American Dance Therapy Association in 1978. An M.A. in this field is a prerequisite for registry from A.D.T.A.

Upper Division Courses Which May Be Used As Credit Toward the M.A. Degree:

111C. Analysis of Human Movement.

118B. Improvisation in Dance.

127. Foundation of Dance Education.

140A, 140B, 140C. Dance Cultures of the World.

142-144. Dance in the Balkans, India, Indonesia, Japan, Latin American.

152C. Advanced Studies in Dance Theater Lighting.

155. Form and Structure in Choreography.

156. Advanced Dance Notation.

159A. Creative Dance for Children.

159A. B. C. Movement Dynamics and Personality Growth.


191. Repertory Dance Tour.

*Graduate Courses

200. Dance Notation. (½ course) Prerequisite: course 159. Advanced study of dance notation.

202. Research Methods and Bibliography in Dance. Mr. Fattico, Mrs. Thomas.

204A-204B, 204C. Advanced Choreography. (½ course, 1 course, ½ course) Prerequisite: course 153C or the equivalent. Theoretical and creative aspects of advanced choreography.

205A-205B, 205C. Advanced Dance Therapy. (½ course, 1 course, ½ course) Prerequisite: consent of instructor. Theoretical and practical aspects of advanced dance therapy.


208. Principles of Dance Theater. Prerequisite: course 152A-152B. Principles which serve the presentation of dance.

210. Aesthetics of Dance. Prerequisite: course 156B. A critical analysis of aesthetic concepts related to dance.

211A. Kinesiology for Dance. Lecture, four hours. Prerequisite: consent of instructor. The scientific basis for movement for dance. A study of the anatomical, physiological and physical principles and demands of dance.

220. Dance in the 20th Century. Prerequisite: course 151A-151B. A study of the development of ballet in its various stages: Renaissance, Baroque, Romantic Period; stylistic influences in Italy, France, Spain, and England; influence of the other arts and problems of ballet as an art form.

223. Renunciation Dance. Prerequisite: course 151A-151B. The development of ballet in its various stages: Renaissance, Baroque, Romantic Period; stylistic influences in Italy, France, Spain, and England; influence of the other arts and problems of ballet as an art form.


227A-227B. Advanced Studies in Dance Education. Prerequisite: consent of instructor. Course 227A must be completed before enrollment in 227B. A) Theory in the areas of movement, creativity and learning applied to the development of a framework for teaching dance as an art form. B) Establishment of dance in higher education with consideration for the body of knowledge, curriculum development and administration.

249. Clinical Practicum Supervision. (2 courses) Lecture, one hour; discussion, two hours. This course is a group supervision teaching course which includes seminars, workshops and apprentice teaching. May be repeated once for credit. Graded S/U.

251A, 251B, 251C. Dance Movement Therapy. (½ course, 1 course, ½ course) Prerequisite: Graduate Standing and consent of instructor. Group Seminar, 1 hour and Field Study (min. 2 hours). Directed field study to provide teaching experience in a community school or other approved site. Includes weekly group seminar. Graded S/U. No more than 4 units may be applied to elective requirements for M.A. Degree.

252A-252C. Seminar in Movement Therapy. (½ course, 1 course, ½ course) Prerequisite: courses 251A-251B and 251C or course 596R. Lecture, two hours; laboratory, two hours. Prerequisite: consent of instructor. A one year sequential course which encompasses the interdisciplinary theoretical foundations and methodology of dance-movement therapy. Special emphasis given to adult clinical populations.

254A, 254B, 254C, 254D. Directed Individual Study or Research. (½ to 2 courses). Directed field study to provide teaching experience in a community school or other approved site. Includes weekly group seminar. Graded S/U. No more than 4 units may be applied to elective requirements for M.A. Degree.

257. Preparation for the Comprehensive Examination for the Master's Degree. (No Credit)

260. Research and Preparation of the Master's Thesis. (½ to 2 courses)

C254. Music as Dance Accompaniment. Lecture, four hours. Prerequisite: course 35, or consent of instructor. Piano and percussion improvisation for dance. Choreography-composer relationships. History of music for the dance with emphasis on contemporary trends. Music for the dance performance. Graduate students must complete two additional assignments. May be concurrently scheduled with course C154. Dance C254 is not to be counted toward the M.A. Degree.

285. Philosophical Bases and Trends in Dance. Prerequisite: course 150C. Critical analysis of dance as a creative experience and the role of professional and educational dance in our society. Research and intensive reading in contemporary philosophical literature. Study of present-day concepts and their relationship to other art forms and cultures. Evaluations of graduate students will be based on extended reading list and term papers. This course counts toward the Master's degree.

Ms. Gilbert

Professional Courses

498. Preparation for the Teaching of Dance In Higher Education. (½ course) Prerequisite: Graduates Standing and consent of instructor. Study of problems involved in teaching dance which includes seminars, workshops and apprentice teaching. May be repeated once for credit. Graded S/U.

Ms. Williams

499. Directed Field Study in Dance Education. (½ to 2 courses) Prerequisite: Graduate Standing and consent of instructor. Group Seminar, 1 hour and Field Study (min. 2 hours). Directed field study to provide teaching experience in a community school or other approved site. Includes weekly group seminar. Graded S/U. No more than 4 units may be applied to elective requirements for M.A. Degree.

Ms. Williams

497A-497F. Clinical Practicum Supervision. (2 courses) Lecture, one hour; discussion, two hours. This course is a group supervision teaching course which includes seminars, workshops and apprentice teaching. Clinical concerns related to the graduate student's clinical internship. Issues related to therapeutic goals, the psychotherapeutic process and the clinical environment are discussed, particularly as they relate to supervision of group and individual patients. Must be taken concurrently with 251A or 252B and 596R.

Graded S/U.

Ms. Serlin

Individual Study and Research

596A. Directed Individual Study or Research. (½ to 2 courses)

596R. Directed Study or Research in a Hospital or Clinic. (½ to 2 courses)

597. Preparation for the Comprehensive Examination for the Master's Degree. (No Credit)

598. Research and Preparation of the Master's Thesis. (½ to 2 courses)

Dentistry

The School of Dentistry

The UCLA School of Dentistry, which occupies facilities in the Center for the Health Sciences, offers a D.D.S. degree program (Doctor of Dental Surgery), a number of postdoctoral programs, and an Oral Biology M.S. degree program. (See Oral Biology)

D.D.S. Degree Program*

If you are interested in further details about the academic program leading to the D.D.S. degree or if you wish to make application to the*

*The requirements for the D.D.S. degree are not stated in this catalog.
program, you are urged to get a copy of the Announcement of the School by writing to: Office of Student Affairs and Admissions, UCLA School of Dentistry, Los Angeles, CA 90024.

The D.D.S. program is a 4-year program where students undertake a comprehensive course of study in the biological and technological sciences to foster the highest standards of clinical competence in the practice of dentistry. The School is on the quarter system and admits 96 students each fall.

**Admission Guidelines.** The School of Dentistry encourages applications from students who demonstrate academic capability in undergraduate studies at an accredited 4-year university or college. Potential for study in dental science is judged on the basis of:

1. Scholastic record.
2. Aptitude for science demonstrated by academic record and by performance on the American Dental Association Aptitude Test (DAT). Information on application and for the DAT can be obtained by writing to: Division of Educational Measurements, Council on Dental Education, American Dental Association, 211 East Chicago Avenue, Chicago, Illinois 60611.
3. Academic and manual aptitude indicated by performance on the DAT, which must be taken the year prior to the year for which application is made. In order to avoid delay of application processing, it is advisable that the student take this examination during the April testing period.
4. Manner in which scholastic record was achieved; i.e., course load, standing of school attended, breadth of the course of study, extracurricular activities and work experience.

The applicant must satisfactorily complete a minimum of 135 quarter units (90 semester units) of instruction, including all predental requirements. A maximum of 70 semester or 105 quarter units of junior college work is applied in the calculation of the total. It is significant to note that the majority of applicants admitted to the School of Dentistry have had more than three years of college experience and most possess a bachelor's degree. Since UCLA is a state-supported institution, California and WICHE certified applicants are given considerable preference.

### Semester Units Quarter Units

1. English 6 8
2. Inorganic chemistry with lab 8 12
3. Organic chemistry with lab 6 8
4. Physics with lab 8 12
5. Biology with lab 8 12
6. Introductory psychology 1 course 1 course

These are minimal requirements; students are encouraged to gain facility with these and related courses. All of the above requirements must be completed prior to matriculation into the School of Dentistry; however, application for admission may be submitted prior to their completion. The Committee on Admissions, in exceptional circumstances, may consider students who only partially fulfill these prerequisites.

Interviews are not generally used in assessing the suitability of an applicant to the UCLA School of Dentistry; however, the Committee on Admissions, in certain circumstances, may request interviews with individual applicants and additional tests, such as a manual dexterity examination, may be required of applicants as a criteria for admissions. Letters of recommendation are not required by this school, but will be considered if submitted. Applicants wishing to submit additional information not covered in the application form, which may be helpful, may do so in a letter to the Committee on Admissions in no more than two typewritten (double spaced) pages.

**Application Procedure.** UCLA participates in the American Association of Dental Schools Application Service (AADSAS). Application materials are available April 15-October 15 and may be obtained from: AADSAS, P.O. Box 1003, Iowa City, Iowa 52240. Completed applications for UCLA are accepted by AADSAS no later than October 15 of the year prior to that in which the student wishes to enroll. At the time of application, a check for $20.00 payable to The Regents of the University of California should be forwarded to: Office of Student Affairs and Admissions, UCLA School of Dentistry, Los Angeles, California 90024. Notice of acceptance, rejection or alternate status will be sent to the applicant following completion of the formal evaluation by the Admissions Committee, beginning December 1 of any given year. Notification of rejection does not necessarily imply similar Committee action on subsequent applications.

An applicant receiving a letter of acceptance to the School of Dentistry must submit a deposit of $50.00 (applicable to registration fees) within 30 days, unless otherwise indicated, in order to reserve a place in the class. This deposit is refundable for a period of six weeks following acceptance upon written notice to the Admissions Committee that the student wishes to withdraw his or her application. After this time period, the deposit is refundable only if the candidate's acceptance is rescinded by the School of Dentistry.

### Postdoctoral Programs

Specialty Education. The School of Dentistry offers the following opportunities for postdoctoral study:

- a 1-year General Practice Residency Program;
- a 1-year Residency in Maxillofacial Prosthetics;
- a 3-year Oral & Maxillofacial Surgery Residency Training Program;
- a 3-year combined Orthodontic-Pediatric Dentistry Program; and
- 2-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, California 90024.

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**Earth and Space Sciences**

(Office: 3806 Geology)

10. Onorato Anderson, Ph.D., Professor of Geochemistry.
11. Arthur L. Boettcher, Ph.D., Professor of Geochronometry and Geophysics.
12. Friedrich H. Busse, Ph.D., Professor of Geophysical Fluid Dynamics.
13. Donald C. R. List, Ph.D., Professor of Geology and Mineral Resources.
14. John M. Christie, Ph.D., Professor of Geology.
15. Paul J. Coleman, Jr., Ph.D., Professor of Geophysics and Space Physics.
16. Wayne A. Dollase, Ph.D., Professor of Geology.
17. W. Gary Ernest, Ph.D., Professor of Geology and Geophysics (Chair of the Department).
18. Clarence A. Hall, Jr., Ph.D., Professor of Geology.
19. David D. Jackson, Ph.D., Professor of Geophysics.
20. Isacc R. Kaplan, Ph.D., Professor of Geology and Geochronometry.
22. Margaret G. Kivelson, Ph.D., Professor of Space Physics (Chair of the Department).
23. Helen Taan Hoplobch, Ph.D., Professor of Paleontology.
24. Robert L. McPhee, Ph.D., Professor of Space Physics and Geophysics.
25. Clemens A. Nelson, Ph.D., Professor of Geophysics.
26. Gerhard Oertel, Dr. rer. nat., Professor of Geology.
27. John L. Rosenfield, Ph.D., Professor of Geology.
28. J. William Schapir, Ph.D., Professor of Paleobotany.
30. Ronald L. Shreve, Ph.D., Professor of Geophysics and Geology.
31. John T. Watson, Ph.D., Professor of Geochemistry and Chemistry.
32. Kenneth B. Watson, Ph.D., Professor of Geochemistry and Earth and Space Sciences.
33. Robert E. Holzner, Ph.D., Emeritus Professor of Geology.
34. George Peter Bird, Ph.D., Associate Professor of Geophysics and Geology.
35. Donald J. DePaolo, Ph.D., Associate Professor of Geochemistry and Geology.
36. Walter E. Reed, Ph.D., Assistant Professor of Geology.
37. Paul M. Davis, Ph.D., Assistant Professor of Geophysics.
38. Michael J. DeNiro, Ph.D., Assistant Professor of Geochemistry.
39. William I. Newman, Ph.D., Assistant Professor of Planetary Physics.
40. William M. Bruner, Ph.D., Adjunct Professor of Geology.

- Mario E. Baue, Ph.D., Professor of Chemistry.
- Kyle D. Bays, Ph.D., Professor of Chemistry.
- Lawrence C. Bonham, Ph.D., Lecturer of Petroleum Geology.
- Robert E. Jones, B.S., Lecturer in Geology.
- Leon Knopoff, Ph.D., Professor of Geophysics and Physics.
- Alfred R. Loebl, Ph.D., Adjunct Professor of Paleontology and Geology.
- Ajit Kal, M.D., Ph.D., Professor of Engineering and Applied Science.
- Paul M. Merrifield, Ph.D., Lecturer in Engineering and Environmental Geology.
- Malcolm F. Nicoll, Ph.D., Professor of Chemistry.
- Everett C. Olson, Ph.D., Emeritus Professor of Chemistry.
- Louise R. Saul, M.S., Senior Museum Scientist.
- Floyd F. Sabins, Jr., Ph.D., Lecturer in Geology.
- Gerhard Stummer, Ph.D., Lecturer in Geology.
Programs and Major Fields. 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 Geochemistry 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 geomorphology, glaciology, micropaleontology, mineral deposits, mineralogy, non-renewable natural resources, organic geochemistry, paleobiology, petrology, sedimentology, stratigraphy, structural geology, tectonophysics, and other fields. The program in Geophysics and Space Physics offers study in 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.

Admission. Application may be made for admission to any Quarter. Students who wish to apply for fellowships or teaching assistantships should be aware that these are allocated in March for the following academic year; in order to allow sufficient time for processing, complete applications should therefore be received by February. Graduate Record Examination scores are required of all applicants; 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, UCLA, Los Angeles, California 90024. In addition to the University application form, a separate Departmental application form is required. This form, and a brochure giving information about the Department, may be obtained from the Graduate Adviser.

Admission is based on the likelihood of success in the program requested, as judged from the materials submitted with the applications. The more important criteria considered are: (a) the appropriateness of the program to the applicant's stated objectives and background; (b) the applicant's academic record, especially in the relevant basic sciences; (c) the applicant's Graduate Record Examination scores in verbal, mathematical and analytical ability, and in the relevant advanced test; (d) the applicant's statement of purpose, which should deal more with intellectual goals and motivations than with occupational ones; and (e) the three required letters of recommendation, which should be from people familiar with the applicant's intellectual and motivational qualifications for academic pursuits.

Advising. Entering students choose or are assigned a faculty adviser or advisory committee just prior to the first quarter of enrollment. With the approval of the Graduate Adviser the advising committee may be reconstituted at any time to fit developing interests or other circumstances. At the beginning of each quarter each student's program must be reviewed and approved by his or her faculty adviser before submission for official approval by the Graduate Adviser.

The Graduate Student Affairs Committee, a faculty committee chaired by the Graduate Adviser, annually reviews the progress of each student (generally in late May or early June). These reviews become part of the student's departmental record and are transmitted in writing both to students and their faculty advisers. Students whose scholarship or progress are insufficient are subject to dismissal.

The normal minimum course load is 12 units per quarter.

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.

Disqualification. Process of reaching termination decision: periodic, but at least annual review of the progress of all graduate students by the Graduate Affairs Committee. Specific conditions leading to the recommendation of termination:

(a) Failure to register or give adequate reasons for leave of absence as judged by the Graduate Affairs Committee.
(b) Failure of Written or Oral Qualifying Examinations or Final Oral Examination. Recommendation is at the option of the examining committee.
(c) Failure to meet requirements agreed upon between the student and the Graduate Affairs Committee or the student's advising committee regarding course scheduling and deadlines for examinations or completion of degree.
(d) Failure to maintain minimum progress toward degree goal as specified in "Time to Degree."" under each separate program, given below.

Normally, a warning would precede a recommendation of dismissal.

Appeals. The student may appeal such a recommendation by means of a letter to either the Graduate Adviser or the Department Chair.

Program in Geochemistry

Admission. A bachelor's degree in chemistry, geology, physics, or related field is required. Applicants must have outstanding records in the basic sciences, physics, chemistry and mathematics. The Graduate Record Examination Advanced Test may be in any appropriate field of science.

General Graduate Course Requirement. Each course of study is worked out individually by the advising committee in consultation with the student. All students are expected to attain, either through their previous training or through prescribed coursework, a common mastery of the subject matter of courses 51A, B, and C, M130, M131, 234B and Chemistry 110A and B, as well as more advanced courses in particular fields, and some familiarity with the methods of field geology. All students are required to register in 235A, B, or C each quarter.

Master of Science (M.S.) in Geochemistry

Course Requirements. A minimum of nine courses is required for the degree, at least six of which must be graduate level courses. Apart from the general graduate course requirements stated above, there are no specific courses required for the M.S. degree.

Thesis Plan. The thesis must be approved by the student's research director (who usually will be the chair of his/her advising committee) as well as by the other members of his/her advising committee. No examination is required of students who write a thesis.

Comprehensive Examination Plan. The advising committee will prepare and administer the final examination (which will normally be oral). In the preparation for this examination the committee will take proper recognition of the fact that some students will be better qualified in chemistry and others in geology. However, it will be required that a distinct competence in one of these fields will be matched by at least an adequate performance in the other. In most cases, a failed final examination can be repeated one additional time.

Time to Degree. A student making normal progress and whose undergraduate training is not deficient should receive the M.S. degree after about four to seven quarters.

500 Series Course Limitations. These may be taken with the approval of the chairperson of the student's advising committee. The following courses are acceptable:

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<th>Course No.</th>
<th>Unit Value</th>
<th>Type of Grading</th>
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<td>2–12</td>
<td>S/U or letter</td>
<td>No limit</td>
</tr>
<tr>
<td>597</td>
<td>2–8</td>
<td>S/U</td>
<td>Not more than one</td>
</tr>
<tr>
<td>598</td>
<td>2–12</td>
<td>S/U</td>
<td>No limit</td>
</tr>
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</table>

Sixteen units of 500 series courses may be applied toward the total course requirement for the M.S. in Geochemistry. Twelve units may be applied toward the minimum graduate course requirement.
Doctor of Philosophy (Ph.D.) in Geochemistry

Course Requirements. There are no course requirements, apart from general graduate course requirements as stated above. Students are, however, expected to complete at least the minimum number of courses which are required for the M.S. degree.

Written and Oral Qualifying Examinations.

A. Written Qualifying Examination. This examination covers the field of geochemistry and related areas in geology and chemistry. It may include an oral part at the discretion of the advising committee. If failed, it can be repeated at the discretion of the advising committee.

B. Oral Qualifying Examination. After passing the Written Qualifying Examination the student must nominate his or her doctoral committee and arrange a time for the examination. At least a week before the examination, he or she must provide each member of the doctoral committee with a written prospectus of his or her proposed dissertation research. The subject matter covered in the examination includes, but is not limited to, the proposed research. Repetition of a failed examination is at the option of the doctoral committee.

Final Oral Examination Following Completion of the Dissertation. The Final Oral Examination is normally required.

Time to Degree.

A. The Written Qualifying Examination will normally be taken in the student's fifth or sixth quarter of residence.

B. The Oral Qualifying Examination should be taken as soon after the Written Qualifying Examination as practical. A nominal time would be the sixth or seventh quarter.

C. The dissertation and Final Oral Examination should be completed by the 12th to 15th quarter.

Candidate in Philosophy Degree. The Candidate in Philosophy (C.Phil.) degree is offered to students upon advancement to candidacy for the Ph.D.

Program 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.

General Graduate Course Requirements. Each course of study is worked out individually by the advising committee in consultation with the student. It may include appropriate courses offered by other departments. All students except those who have already passed course 111C are required to take either course 195G or the sequence 111A-111B-111C in their first year of residence. Depending upon their performance in 195G, students may subsequently be required to take all or part of the 111 sequence.

Master of Science (M.S.) in Geology

Master of Science (M.S.) in Geology with Specialization in Non-Renewable Natural Resources

Course Requirements. 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 4 units must be a geology seminar (courses 251 through 260, 283). Except for courses 597 and 598, courses graded on an S/U basis are not applicable toward the requirements. The advisory committees may require additional courses in light of individual educational objectives and backgrounds.

Specialization in Non-Renewable Natural Resources: The objective of this program is to prepare students for professional careers in the geology of metallic, non-metallic, and fossil energy resources. Because of the diverse backgrounds of students entering the specialization, individual courses of study will be arranged in consultation with the Committee for Graduate Study in Non-Renewable Natural Resources. Particularly relevant courses include 128A, B, 129, M130, M131, 132, 135, 136A, 136C, 137, 138, 140, 144, 150, 227, 235A, B, C, 258, 268 and 283, 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 committee consists of the 3-member advising committee, whose chair is the supervisor of the thesis research. One member of the committee may be from another department. 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, on the basis of the student's academic performance, recommend either termination of graduate study or further coursework or research or both leading to submission of 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 is administered by the student's 3-member advising committee and one additional member who is appointed by the Graduate Adviser following consultation with the student. It consists of a 6-hour written part and a subsequent oral part. The written part covers the student's major field of study, whereas the oral part may be more general in scope. If the examination is failed, the committee may on the basis of the student's academic performance recommend either termination of graduate study or further coursework followed by another examination. Reexamination is not normally permitted more than once.

Time to Degree. From graduate admission to conferral of degree, normal progress is six quarters.

500 Series Course Limitations. These may be taken with the approval of the chairperson of the student's advising committee. The following courses are acceptable:

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<tr>
<th>Course</th>
<th>Units</th>
<th>Grade</th>
<th>Limitation</th>
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<tbody>
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<td>596</td>
<td>2-12</td>
<td>S/U</td>
<td>No limit</td>
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<tr>
<td>597</td>
<td>2-8</td>
<td>S/U</td>
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</tr>
<tr>
<td>598</td>
<td>2-12</td>
<td>S/U</td>
<td>No limit</td>
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</tbody>
</table>

Eight units of 500 series courses may be applied toward the total course requirement for the M.S. in Geology. Four units may be applied toward the minimum graduate course requirement.

Doctor of Philosophy (Ph.D.) in Geology

Course Requirements. There are no course requirements, apart from general graduate course requirements as stated above. Students are, however, expected to complete at least the minimum number of courses which are required for the M.S. degree and must take a geology seminar each year.

Written and Oral Qualifying Examinations.

A. Written Qualifying Examination. This examination must be taken before the end of the first year of the doctoral program if the student has a master's degree; otherwise, it must be taken before the end of the second year of enrollment. It is administered by the advising committee augmented by a fourth member who is appointed by the Graduate Adviser in consultation with the student and serves as chair of the examining committee. It is given in either a question-answer format or a proposal-proposition format, which the student may select. The question-answer format consists of a 2-part examination. The first part is written, takes six hours, and can cover any aspect of geology in which the student has had training, including general background, current emphases, and in-depth focus on the student's special field. The second part is oral, is taken no later than a week after the first part, and can cover subjects from the written part, the field of the proposed dissertation, and specifics of the proposed research, although it is not limited to these topics.

The proposal-proposition format consists of an oral examination based on three written independent research proposals or scientific propositions in any combination, which must be submitted to the examining committee at least 10 days before the examination. One of the essays must specify the intended dissertation research. The examination is concerned with the originality and soundness of the proposals.
and propositions, the depth and breadth of thinking they display, their scientific significance, and the quality of their elucidation and defense, although it is not limited to these topics.

B. Oral Qualifying Examination. After passing the Written Qualifying Examination, the student must nominate his or her doctoral committee and arrange a time for the examination. At least a week beforehand, he or she must provide each member of the doctoral committee with a written prospectus of his or her proposed dissertation research. The subject matter covered in the examination includes, but is not limited to, the proposed research. Repetition of a failed examination is at the option of the doctoral committee.

Final Oral Examination Following Completion of the Dissertation. The Final Oral Examination is normally required.

Time to Degree

A. The Written Qualifying Examination is normally taken during or prior to the sixth quarter of graduate work.

B. The Oral Qualifying Examination should be taken as soon as possible after successful completion of the Written Qualifying Examination and no later than the end of the 11th quarter.

C. The dissertation should be completed and the Final Oral Examination (defense of dissertation) taken by the 12th to 15th quarter.

Candidate in Philosophy Degree. The Candidate in Philosophy (C. Phil.) degree is available after successful completion of the Oral Qualifying Examination.

Program 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 Advanced Test scores are preferable in physics, although mathematics or geology are also acceptable. Qualified students may proceed directly toward the Ph.D. degree, although most must obtain the M.S. degree in the process.

Master of Science (M.S.) In Geophysics and Space Physics

Course Requirements. Courses applied toward the 36-unit minimum requirement must include courses 200A, B and C and at least 12 additional units of 200 series (graduate level) courses, of which at least half must fall within a single field of concentration (earth's interior, geophysical fluid dynamics, planetology, or space physics) selected by the student with approval of his or her faculty adviser and the remainder must contribute to his or her general competence in geophysics and space physics. Courses from the 500 series and courses graded on an S/U basis do not apply toward the minimum requirement.

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 not so rigorous. The examination is on the level of the introductory courses 200A, B, C. 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.

Time to Degree. From graduate admission to award of degree: five quarters.

500 Series Course Limitations. These courses do not apply toward the degree.

Doctor of Philosophy (Ph.D.) In Geophysics and Space Physics

Course Requirements. There are no specific requirements.

Written and Oral Qualifying Examinations

A. Written Qualifying Examination. In this program this 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, after entering the program are subject to dismissal.

(1) Fundamental Physics Examinations. Students must attain an average grade of 3.4 on a 4.0 scale in at least three fundamental physics examinations. These examinations may be the final examinations for any of the following courses: (a) ESS 201 (Classical Mechanics); (b) ESS 202 (Continuum Mechanics), (c) ESS 203 (Electrodynamics), (d) Physics 210A (Electromagnetic Theory I), (e) Physics 210B (Electromagnetic Theory II), (f) Physics 215A (Statistical Physics), (g) Physics 220 (Advanced Classical Mechanics), (h) Physics 231A (Mathematical Physics). Exceptions are that students may not get credit for both examinations in the following pairs, due to overlap of subject matter: ESS 201 and Phys. 220; ESS 203 and Phys. 210A; ESS 203 and Phys. 210B.

In addition to the above listed courses, a student may petition to count toward this requirement the final examinations in either or both of Phys. 221A (Quantum Mechanics I) and Phys. 221B (Quantum Mechanics II). Approval of a petition depends on relevance of quantum mechanics to more advanced study and research planned by the student.

A student may also petition to substitute the final examination of another graduate course of a physical science or engineering department for any of the above list. Approval of the petition depends on the substituted examination being of similar fundamental character and having greater relevance to the student's planned research and advanced study.

The fundamental physics examinations must all be passed prior to undertaking the field examination.

(2) Comprehensive Examination. This is a 6-hour written examination on the level of the introductory courses 200A, B and C 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. It must be passed before the Field Examination may be attempted.

(3) Field Examination. This examination must be first attempted within a year of passing the comprehensive examination. It consists of a 3-hour written part (which may be waived by mutual agreement of both student and examining committee) followed by an oral part. It tests the student's general knowledge of his or her field of concentration (earth's interior, geophysical fluid dynamics, planetology, or space physics) as defined by the student in a written statement to which he or she must obtain the examinating committee's concurrence before arranging the examination. The examining committee consists of three or more faculty members appointed by the Graduate Adviser in consultation with the student, of whom at least three must be from the Department and one must be from outside the student's field of concentration.

B. Oral Qualifying Examination. After passing the Field Examination, the student must nominate the doctoral committee and arrange a time for the examination as soon after the Field Examination as possible. The examination determines the suitability of the chosen problem for the Ph.D. dissertation and the capability of the student to pursue research on the problem, but it is not limited to these topics. Repetition of a failed examination is at the option of the doctoral committee. Students not passing this examination within five years after entering the program are subject to dismissal.

Final Oral Examination Following Completion of the Dissertation. This examination is required.
A student who has not passed an examination within the maximum time listed above is subject to dismissal, even though he/she may have a satisfactory grade point average.

Graduate Courses:

200A. Introduction to Geophysics and Space Physics 1: The Solid Earth and Planets. Prerequisite: Physics 105A, 110A, 112A, 131 or consent of instructor. Geochemistry, cosmochemistry, and petrology; geodynamo; gravity field; seismology; heat transfer; thermal and mechanical evolution of the mantle; the core and geomagnetism; lunar and planetary interiors. Mr. Newman (F)

200B. Introduction to Geophysics and Space Physics 2: Oceans and Atmosphere. Prerequisite: Physics 105A, 110A, 112A, 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; the ocean's role in biogeochemical cycles; the atmosphere's impact on climate. Mr. Schubert (W)


203. Electrodynamics. Prerequisite: upper division electromagnetic theory 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 and diffraction. Mr. Coleman (W)

204. Inverse Theory and Data Interpretation. Prerequisites: Mathematics 115, 150. This course addresses the inverse modelling problem: to determine model parameters consistent with experimental data, considering the effects of random errors and nonuniqueness. Linear and quasi-linear problems will be emphasized, but nonlinear problems will be discussed. Tools to be used include matrix theory, quadratic forms, orthogonal rotations, statistics, the principal axis transformation for regular matrices, Backus-Gilbert resolving kernels, and Lagrange multipliers. Examples will be taken from a broad range of physical sciences.

205. Geohlectrics. Lecture, two and one-half hours; discussion, one-half hour. Prerequisites: Mathematics 133A or consent of instructor. Basic concepts of transfer applied to seismology in elastic, hydrodynamic, and geothermal problems. Problems discussed include: continental heat flow, cooling of oceanic lithosphere, solidification of magmas, thermal and subsidence history of sedimentary basins; mantle heating on fault zones, mantle geotherms, temperature in descending slabs, thermal convection in geothermal regions. G. Schubert

210. Advanced Paleobiology. Prerequisite: course 115 or advanced standing in biological science. Lectures will emphasize evolutionary, ecological, stratigraphic, and taxonomic aspects of fossil invertebrates. Field work and laboratory will be devoted to various projects, provide field trips, past, present, and future, may vary from year to year. May be repeated for credit.

211. Hydrodynamic Instabilities and Turbulence. (Same as Mathematics M263.) An introduction to the theories of hydrodynamic instability and the non-statistical description of turbulence; stability bounds by the energy method; linear theory of instability; finite amplitude theories of post-instability flows by variational techniques. Mr. Busse

212. Paleobiology. Prerequisite: course 115 or advanced standing in biological science. How and where animals and plants lived in the past; study of habitats and habits of animals, changes in habitats and communities, and the distribution of animals through time and space. Content will vary from year to year. May be repeated for credit.

214. Geophysical Fluid Dynamics. Prerequisite: consent of instructor. Dynamics of stationary and transient oceanic and atmospheric flows; Ekman boundary layer theory; inertial oscillations; Biocenotic approximation; Rossby waves; theory of thermally induced motions; applications to flow phenomena in planetary atmospheres, in the oceans, and in the earth's core. Mr. Davis (W)

215. Paleobiology of Plant Microorganisms. Prerequisite: course 115 or advanced standing in biological science. Survey of morphology, evolution and diversification, environmental interactions, and stratigraphic value of bacteria, algae, and fungi, with emphasis on dinoflagellates and acritarchs, eubacteria and diatoms, diasterococci, and coelocibothorids. (Alternates yearly with course 215.) Mrs. Loeblisch (F)

216. Micropaleontology. Prerequisite: course 115 or advanced standing in biological science. Survey of micro fossils of the animal kingdom, their systematics, morphology, ecology, evolutionary history and stratigraphic value. Traditional emphasis on foraminifera, radiolarians, chitinozoans, tintinnids, ostracods, and saccoccladons. (Alternates yearly with course 216.) Mrs. Loeblich (F)


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 nonrigidity and energy dissipation. Mr. Kaula

220. Principles of Paleobiology. Prerequisites: graduate standing in science; qualified undergraduate in biological and physical sciences admitted with permission of instructor. Current problems in paleobiology, with emphasis on interdisciplinary problems involving aspects of biology, geology, organic geochemistry and cosmochemistry. Course content to vary from year to year. May be repeated for credit.

222. Introduction to Sedimentology. Types of seismic waves; travel-time seismology; epicenter location; amplitude variations; seismograph theory; explosion seismology; seismicity; focal conditions; surface wave analysis; microseisms and taumaturgy.

M224A. Elastic Wave Propagation I. (Same as Engineering ME257A.) Prerequisite: Engineering 158A or 159A or consent of instructor. Elastic wave equation and elementary solutions; elementary theory of higher space and time; reflection and refraction of elastic waves; surfaces waves; vibrations of rods and plates. Mr. Knopoff, Mr. Mai (W)

M224B. Elastic Wave Propagation II. (Same as Engineering ME257B.) Prerequisite: consent of instructor. Wave propagation in anisotropic media; Green's function for various geometries; diffraction and scattering of elastic waves; attenuation; inversion problems. Mr. Knopoff, Mr. Mai (Sp)

225A. Physics and Chemistry of Planetary Interiors 1. Chemical compositions of the earth and planets; high-pressure 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 2. Lateral inhomogeneities in the earth: seismic velocities, petrology, geothermal and gravitational variations; evidences of motion; remanent magnetism, seismic motions; post-glacial rebound; plate tectonics; rheology of mantle; thermal convection.

226. Theoretical Geomorphology. Prerequisite: Mathematics 33A and one course in elementary probability theory, or consent of instructor; recommended, Geography M102. Analysis of the fundamental equations and objectives of modern geomorphology and their applications to present theories of river profiles, slope processes, and channel networks. Reading and discussion of original sources. Preparation of term paper. Offered approximately every third year. Mr. Shreve (Sp)

227. Resource Evaluation Field Methods. Prerequisite: course 112A or 1226 or 120 or consent of instructor. Techniques of mapping, sampling, appropriate laboratory studies, economic and socio-economic evaluation of a variety of non-renewable natural resources; preparation of reports.

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, pole wandering, geomagnetic field and space geomagnetic symmetries. EARTH AND SPACE SCIENCES / 115

229. Planetary Surfaces and Atmospheres. Prerequisite: course 200A-200B. Study of planetary observations toward determining the evolutionary history and current active processes. Surface and atmosphere heat balance, volatile budgets; condensation, sublimation, and radioactive heating; habitable habitats; periodic and secular variations. Current observations and theories will be critically discussed.

230. X-Ray Crystallography. Prerequisite: course 51C. Point, translation, and space group symmetry, diffraction of X-rays, reciprocal lattice theory, single crystal x-ray methods, diffraction symmetry and elementary crystal structure analysis. (Alternates yearly with course 231.) Mr. Dollase (Sp)

231. Crystal Chemistry and Structure of Minerals. Prerequisite: course 51C. Bonding, interatomic configurations, polymorphic transformations, isomorphism, thermal and positional disorder; survey of the structures of the common minerals, and relation of physical and chemical properties to crystal structure. (Alternates yearly with course 230.) Mr. Dollase (Sp)

232. Thermodynamics of Crystals. Prerequisite: Physical Chemistry (including thermodynamics and some chemical quantum mechanics) and course 233; or consent of instructor. Application of fundamentals of thermodynamics to the interpretation of experimental data. Systematic variations in thermodynamic functions with crystal structure. Given alternate years.
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**Origin and Evolution of the Solar System.** (Same as Astronomy M258.) Dynamical problems of the solar system; chemical evidences from geochemistry, meteorites, and the solar atmosphere; nucleosynthesis; solar origin, evolution, and termination; solar nebula, hydrodynamical processes, formation of the planets and satellite systems. Content will vary from year to year. May be repeated for credit. Graded S/U.

289A-289B-289C. Seminar In Planetology. (½ course each) Problems of current interest concerning the moon, planets, and meteorites. To be graded S/U only. May be repeated for credit.

287A-287B-287C. Seminar In Seismology and the Earth's Interior. (½ course each) Problems of current interest in seismology and the earth's interior. To be graded S/U only. May be repeated for credit.

288A-288B-288C. Seminar In Space Physics. (½ course each) Problems of current interest concerning particles and fields in space. To be graded S/U only. May be repeated for credit.

290A-290B-290C. Seminar In Fluid Dynamics. (½ course each) Problems of current interest in fluid dynamics and emphasis on geophysical applications. To be graded S/U only. May be repeated for credit.

Mr. Sabin (SP)

290. Seminar In Time Series Analysis. (½ course) Discussion of recent research in spectral estimation, filtering, and signal detection applied to geophysical problems. To be graded S/U only. Mr. Jackson (Sp)

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295. Earth and Space Sciences Colloquium. (1/3 to 1/6 course) Reading and discussion in the frontiers of earth and space sciences.

297. Advanced Techniques In Geological Research. (½ to 1 course) Graded S/U.

298. Topics In Earth and Space Sciences. (½ to 1 course) Mr. Sabins (Sp)

501. Cooperative Program. (1 to 2 courses) Pre-requisites: approval of UCLA Graduate Adviser and Department Chair. Approval of 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. To be graded S/U.

Individual Study and Research

596. Directed Individual Study and/or Research. (1 to 3 courses) To be graded S/U only.

597. Preparation for Master’s Comprehensive Examination or Doctoral Qualifying Examination. (1 to 2 courses) To be graded S/U only.

598. Master’s Research and Thesis Preparation. (1 to 3 courses) To be graded S/U only.

599. Doctoral Research and Dissertation Preparation. (1 to 3 courses) To be graded S/U only.

**Economics**

(Office, 2263 Bunche Hall)

Aram A. Ablanon, Ph.D., Professor of Economics. William R. Aller, Ph.D., Professor of Economics. Robert W. Clower, D.Litt., Professor of Economics. Michael R. Darby, Ph.D., Professor of Economics. Harold Demsetz, Ph.D., Professor of Economics. George W. Hinton, Ph.D., Professor of Economics. William Z. Hirsch, Ph.D., Professor of Economics. Jack Hirshleifer, Ph.D., Professor of Economics. Michael D. Intriligator, Ph.D., Professor of Economics and Political Science. Benjamin Klein, Ph.D., Professor of Economics. Edward E. Learner, Ph.D., Professor of Economics. Axel Leijonhufvud, Ph.D., Professor of Economics (Chair of the Department). John J. McCull, Ph.D., Professor of Economics. John G. Riley, Ph.D., Professor of Economics.

Lloyd S. Shapley, Ph.D., Professor of Economics and Mathematics. Harold M. Somers, Ph.D., Professor of Economics. Thomas Sowell, Ph.D., Professor of Economics. Earl A. Thompson, Ph.D., Professor of Economics. Finis R. Welch, Ph.D., Professor of Economics. John F. Barron, Ph.D., Emeritus Professor of Economics. Paul A. Dodd, Ph.D., L.L.D., Emeritus Professor of Economics. Earl J. Miller, Ph.D., L.L.D., Emeritus Professor of Economics. Dudley F. Pegram, Ph.D., Emeritus Professor of Economics. Bryan C. Elickson, Ph.D., Associate Professor of Economics. George S. Murphy, Ph.D., Associate Professor of Economics. Joseph M. Ostrow, Ph.D., Associate Professor of Economics. Robert F. Cotterman, Ph.D., Assistant Professor of Economics. Sebastian Edwards, Ph.D., Assistant Professor of Economics. Daniel Friedman, Ph.D., Assistant Professor of Economics. David K. Levine, Ph.D., Assistant Professor of Economics. Steven S. Widman, Ph.D., Assistant Professor of Economics. Benjamin Yu, Ph.D., Assistant Professor of Economics. Sean R. Beckett, M.A., Acting Assistant Professor of Economics. Mark W. Plante, Ph.D., Assistant Professor of Economics. Jack S. Robinson, A.B., Acting Assistant Professor of Economics. Kenneth L. Sokoloff, M.A., Acting Assistant Professor of Economics.

Admission Requirements. Applicants for graduate study who satisfy the University minimum requirements are eligible to apply. It is strongly recommended that the student have undergraduate training in economics, mathematics and statistics. Applicants must also submit a full record of prior university experience, three letters of reference and their scores in the Graduate Record Examinations (the General Aptitude and Advanced Economics tests).

The Department admits students only for the Fall quarter of each academic year. The deadline for submitting the admission/fellowship application is December 31st.

Advising. All graduate advising is handled by the Chair of the Graduate Committee (Room 2263 Bunche Hall). All students are urged to formulate a year's program before the Fall Quarter and to see a faculty adviser at that time. Subsequent meetings with the adviser are urged during the course of the academic year whenever doubts or questions arise about a student's proposed program or educational goals. All students failing to meet University minimum standards are evaluated by the Graduate Chair on a quarterly basis.

Major Fields or Subdisciplines. Economic Theory; Economic Development; Urban and Regional Economics; Public Finance; Mathematical Economics; Statistics and Econometric-}

ics; Labor Economics; Money and Banking; Industrial Organization; Economic Institutions; International Economics.

Disqualification and Appeal of Disqualification. An annual review of each student's record is made by the Chair of the Graduate Committee. A student not appearing to make satisfactory progress toward the degree will be notified to meet with the Graduate Chair who will determine whether or not to recommend termination to the Graduate Committee. The latter will carefully review the student's record and make the final recommendation. Should the student question the reasons for termination, an appeal by petition must be addressed to the Graduate Committee.

Other Relevant Information. All inquiries concerning admission or general information may be addressed to the Graduate Adviser, Department of Economics, UCLA, Los Angeles, CA 90024.

The Master of Arts Degree

Course Requirements. Candidates for the degree of Master of Arts in Economics have completed normally the equivalent of an undergraduate major in economics. In addition to the general University requirements (see University Minimum Standards), the departmental requirements are nine upper division and graduate level courses in economics completed in graduate status at UCLA. These courses must include:

1. Economics 101A-101B (Intermediate Microeconomic Theory) with a grade of at least B.
2. Economics 102 (Intermediate Macroeconomic Theory) with a grade of at least B.
3. Economics 107 (History of Economic Thought) with a grade of at least C.

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.

Students are also required to have completed, if not previously taken, three courses in mathematics and statistics consisting of 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, candidates 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. This will not, however, relieve the student from taking five graduate economics courses.

Advising. All graduate advising is handled by the Chair of the Graduate Committee (Room 2263 Bunche Hall). All students are urged to formulate a year's program before the Fall Quarter and to see a faculty adviser at that time. Subsequent meetings with the adviser are urged during the course of the academic year whenever doubts or questions arise about a student's proposed program or educational goals. All students failing to meet University minimum standards are evaluated by the Graduate Chair on a quarterly basis.

Major Fields or Subdisciplines. Economic Theory; Economic Development; Urban and Regional Economics; Public Finance; Mathematical Economics; Statistics and Econometric-
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 half or the 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. A student who achieves a B+ average in Econ. 246B and 246C automatically receives a satisfactory (S) grade in the Quantitative Methods exam.

4. The macro and micro parts of the Theory Exam 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. For the Ph.D. degree, the overall Theory grade will be the lower of the grades on each part, 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.

Time to Degree. From graduate admission to completion of required courses will normally take three to five quarters. From graduate admission to conferral of degree will take three to six quarters. These estimates vary due to the student’s previous preparation, the number of courses taken per quarter while registered, and promptness in fulfilling the comprehensive requirement.

500 Series Course Limitations. Students may offer up to 4 units of Economics 596 (“Indi
dividual Study”) toward the master’s degree. Such a 4-unit course counts as one course toward the minimum graduate course requirement.

The 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 Oral Qualifying Examination. If the language option is chosen, the student shall 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 chosen, a student 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. Courses in advance probability and mathematical statistics fulfill the spirit of the requirement. Specifically, the courses in UCLA Mathematics Department numbered 32 and 110 or above fulfill the requirement.

Course Requirements

The specific course requirements which must be fulfilled prior to taking the Oral Qualifying Examination are the following:

A. Quantitative Methods. The requirement may be satisfied in any of the following ways:

1. Achieving a B+ average in Econ. 246B and 246C;

2. Achieving a B average in at least two quarters of the advanced econometrics sequence (247, 248, 249);

3. Passing the Quantitative Methods Waiver Examination which is administered at the beginning of the Fall Quarter.

B. U.S. or European Economic History. Students must take one upper-division undergraduate course in either United States or European economic history with a grade of B or better. The course Econ. 181 (“Development of Economic Institutions in Western Europe”) or Econ. 183 (“Development of Economic Institutions in the United States”) may be taken to satisfy this requirement.

C. History of Economic Theory. Students must take one upper-division undergraduate course in the history of economic theory with a grade of C or better. Econ 107 (“History of Economic Theory”) may be taken to satisfy this requirement.

Students may petition the Graduate Committee to substitute any one of the above requirements with comparable coursework taken at a previous institution.

Written and Oral Qualifying Examinations.

I. All doctoral students are expected to take the Theory Comprehensive at the end of the Spring Quarter of the first year or in the beginning of the Fall Quarter of the second year.

II. During the second and third years, students shall pass further written examinations in three elective fields.

III. Written examinations are graded “S” (Satisfactory Pass), “C” (Conditional Pass), and “U” (Unsatisfactory). A student is considered to have completed his/her Theory and elective field examinations when he/she has earned at least three S grades and one C grade. A student cannot be advanced to candidacy with more than one conditional grade on his/her record.

IV. The macro and micro parts of the Theory Exam 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. For the Ph.D. degree, the overall Theory grade will be the lower of the grades on each part, 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.

V. Students may sit for no more than six examinations in the following four comprehensives: Theory and three elective fields.

VI. A special grading rule applies to the Theory Comprehensive. A grade of C+ will be counted as if it were in the Satisfactory range, IF the student has achieved an A− (3.700) average or better in the six theory courses.

VII. The written examinations are offered twice a year, near the beginning of the Fall Quarter and near the end of the Spring Quarter.

VIII. A student, upon petition to the Graduate Committee, may substitute a “special field” for one of the three elective fields. That is, with the consent of the instructors and approval of the chair of the Graduate Committee, a student may combine three related courses (not necessarily in the Department) into a field (e.g., Econ. 245A, 241A, and 241B). Overall evaluation of the student’s performance in the field is determined by the instructors, who will consider the three course grades and a related paper which must be completed no later than one year after completion of the sequence. The paper becomes a part of the student’s official record.

IX. An Oral Qualifying Examination, administered by the student’s doctoral committee which is approved by the Dean of the Graduate Division, will be scheduled only after the successful completion of all the written examinations and other course requirements, the foreign language requirement, and on the submission of a written dissertation proposal. The Oral Qualification will focus on, but not be limited to, the dissertation proposal.

Final Oral Examination Following Completion of the Dissertation. A Final Oral Examination on the doctoral dissertation is required unless the members of the committee supervise the dissertation waive it at the time of advancement to doctoral candidacy.

Time to Degree. The Department has established a 5-Year normative time-to-degree plan which is divided into a 3-year precandidacy period and a 2-year candidacy period. Because of differences in previous preparation, work and other commitments at the University and outside it, and innate capacity, the amount of time necessary to complete the degree has been found to vary widely among the students. The following breakdown by quarters reflects this variance: from graduate admission to Written Qualifying Examinations may take four to six quarters; from graduate admission to dissertation proposal and Oral Qualifying Examination may take six to nine quarters; from admission to award of degree may take 12 to 18 quarters.

Candidate In Philosophy Degree. A student who has been advanced to candidacy is eligible to receive the C.Phil. degree.
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 will be given particular emphasis.

Mr. Ellickson, Mr. Hirsch

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 will be given particular emphasis.

Mr. Ellickson, Mr. Hirsch


Mr. Somers


Mr. Somers

233. Topics in Public Finance. Lecture, three hours. After a discussion of tax incidence and optimal tax theory, various tax instruments will be examined: personal income, corporate income, property, capital gains, consumption, and windfall profits. Both the excess burden and the incidence of these tax policies will be examined, with emphasis placed 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 Management M220.) Prerequisites: rudiments of economic theory, calculus, and probability and statistics; course M203A, or consent of instructor. Introduction to and development of advanced problem-solving methods in economic theory. Emphasis on solution techniques developed by modern economists for problems with non-linear, non-straightforward solutions.

Mr. Thompson

M241A-241B-241C. The Economics of Uncertainty and Information. Prerequisite: calculus and introductory probability. This sequence of courses 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 covered include signals, forecast markets, signalling and rational expectations. Third, the emphasis switches from event uncertainty to market uncertainty. Topics will include price searching, queueing, Brownian motion and auction design.

Mr. Intriligator, Mr. McCullough, Mr. Riley

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242A-242G. Game Theory. Lecture, three hours. Prerequisites: Economics 245A or suitable mathematics courses. Elements of the theory of cooperative and non-cooperative games, with applications to economic models, strategic and coalition games, minimax, Nash-Cournot equilibrium, bargaining theory, the core, value, and other solution concepts; applications to oligopoly, general exchange and production economies, allocation of joint costs.

Mr. Shapley


Mr. Intriligator, Mr. Ostrov, Mr. Riley

244. Economic Modeling. Course designed to help students learn to switch back and forth from the precise language of mathematics they analyze economic phenomena. Emphasis is given to the techniques of multi-variate constrained optimization. Modeling skills are developed by considering a sequence of economic issues, e.g., peak load pricing, regulation monopoly, capital allocation, Pareto efficiency.

Mr. Riley, Mr. McCall

245A-245B-245C. Advanced Theory and Mathematical Economics. Prerequisite: course 201C or its equivalent elsewhere or consent of instructor. Selected advanced theoretical topics of current interest and an introduction to modern mathematical economics (including general equilibrium theory).

Mr. Intriligator, Mr. Ostrov, Mr. Riley

248B. Introduction to Theory of Econometrics. Linear regression, generalized least squares, serial correlation, error variables, simultaneous equations, multicollinearity.

Mr. Intriligator

246C. Applications of Econometrics. Selected econometric studies of consumption, investment, asset demand production functions, goods markets, factor markets and labor, public finance, international trade. Course includes instruction on use of computer.

Mr. Cotterman

247. Single Equation Econometrics. Linear regression, specification error, autocorrelation, non-normality, non-linear estimation, outliers, qualitative dependent variables, aggregation structural change.

Mr. Learner


Mr. Intriligator, Mr. Learner

249. Special Topics in Econometrics. Prerequisite: Macroeconomics 201. Advanced topics in the area of econometrics.

Mr. Intriligator, Mr. Learner, Mr. McCall

251. Labor Economics I. Analysis of wage determination in competitive labor markets. Equilibrium analysis of labor supply and demand, with emphasis on the determination of the equilibrium wage rate.

Mr. Welch

252. Labor Economics II. Prerequisite: Econ 251. Modern labor economics emphasizing the role of government in labor markets, including general equilibrium analysis of labor markets, and comparison of labor markets across countries. Emphasis on theoretical analysis of the behavior of workers, employers, and the government.

Mr. Welch

253. Labor Problems. Seminar, three hours. Prerequisite: consent of instructor. Seminar on current labor market issues of interest to the students.

Mr. Welch


Mr. Welch

256. Monetary Economics I. Prerequisites: course 202A-202B-202C. The existence of money; financial institutions and markets; supply of money; demand for money; money and inflation; interest rates; international monetary arrangements; monetary policy.

Mr. McCall

262. Monetary Economics II. Prerequisites: course 202A-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. Cleaver, Mr. Leijonhufvud, Mr. Thompson

For concurrently scheduled courses ("C" prefix) suitably separate activities and/or standards for performance and evaluation will be applied for graduates and undergraduates.
Mr. Allen, Mr. Learner

292. Dissertation Research Seminar in Economics. Prerequisite: Advancement to doctoral candidacy. Discussion of research topics and results by dissertation writers and their supervisors. May be taken more than once for credit.

401. The Teaching of Economics 1. (½ course) Prerequisite: enrollment will generally be limited to teaching assistants handling one or more of the quiz sections in Economics 1. Approximately 20 hours divided between meetings of instructor with all section heads to discuss problems of exposition and structuring of course materials, etc., and visits of instructor to the sections of each teaching assistant. S/U grading only. The 2 units of credit will not count towards degree requirements. Student may receive credit no more than twice for the course.

402. The Teaching of Economics 2. (½ course) Prerequisite: enrollment will generally be limited to teaching assistants handling one or more of the quiz sections in Economics 2. Approximately 20 hours divided between meetings of instructor with all section heads to discuss problems of exposition and structuring of course materials, etc., and visits of instructor to the sections of each teaching assistant. S/U grading only. The 2 units of credit will not count towards degree requirements. Student may receive credit no more than twice for the course.

Individual Study and Research

556. Individual Study. (½ to 2 courses) Directed individual study or research. S/U grading.


Education

(Office, 244 Moore Hall)

Barbara K. Keogh, Ph.D., Professor of Education.
Frances C. Kinzer, Ed.D., Professor of Education.
Marlyn H. Kourilsky, Ph.D., Professor of Education.
Thomas J. La Belle, Ph.D., Professor of Education.
John D. McNeil, Ed.D., Professor of Education.
C. Robert Pace, Ph.D., Professor of Education.
W. Anthony Mitchell, Ed.D., Professor of Education.
Richard J. Shavelson, Ph.D., Professor of Education.
Harry F. Silverman, Ed.D., Professor of Education.
Rodney W. Skager, Ph.D., Professor of Education.
Lewis C. Solomon, Ph.D., Professor of Education.
A. Garth Sorenson, Ph.D., Professor of Education.
Louise L. Tyler, Ph.D., Professor of Education.
Carl Weinberg, Ed.D., Professor of Education.
Charles Z. Wilson, Ph.D., Professor of Education.
Mildred B. Brock, Ph.D., Professor of Education.
Melvin L. Barlow, Ed.D., Emeritus Professor of Education.
Jessa A. Bond, Ed.D., Emeritus Professor of Education.
Watson Dickerman, Ph.D., Emeritus Professor of Education.
Wilbur H. Dutton, Ed.D., Emeritus Professor of Education.
Claude W. Fawcett, Ph.D., Emeritus Professor of Education.
Clarence Fieistra, Ph.D.," Emeritus Professor of Education.
John C. Hackett, Ph.D., Emeritus Professor of Education.
David F. Jackey, Ph.D., Emeritus Professor of Education.
B. Lamar Johnson, Ph.D., Emeritus Professor of Education.
Wendell P. Jones, Ph.D., Emeritus Professor of Education.
George F. Kneller, Ph.D., Litt.D., L.D.Sc., Emeritus Professor of Education.
Dorothy M. Leahy, Ed.D., Emeritus Professor of Education.
Eric L. Lindman, Ph.D., Emeritus Professor of Education.
William H. Lucio, Ph.D., Emeritus Professor of Education.
F. Dean McClusky, Ph.D., Emeritus Professor of Education.
Lyne C. Monroe, Ed.D., Emeritus Professor of Education.
Frances M. Obst, Ed.D., Emeritus Professor of Education.
Rosenfield Park, Ph.D., L.L.D., Litt.D., L.H.D., Emeritus Professor of Education.
Paul H. Sheats, Ph.D., L.L.D., Emeritus Professor of Education.
Lorraine M. Sherer, Ed.D., Emeritus Professor of Education.
Samuel J. Wanous, Ph.D., Emeritus Professor of Education.
Leigh Burstein, Ph.D., Associate Professor of Education.
Simon Gonzalez, Ed.D., Associate Professor of Education.
John N. Hawkins, Ph.D., Associate Professor of Education (Vice Chair of the Department).
Charles W. Healy, Ph.D., Associate Professor of Education.
Antoinette Kruptski, Ph.D., Associate Professor of Education.
David O. Shea, Ph.D., Associate Professor of Education and Sociology.
Romelia Tidwell, Ph.D., Associate Professor of Education.
James W. Trent, Ph.D., Associate Professor of Education.
Richard C. Williams, Ph.D., Associate Professor of Education.
James W. Caterall, M.A., Assistant Professor of Education.
Frederick S. Elliott, Jr., Ph.D., Assistant Professor of Education.
David P. Ericson, Ph.D., Assistant Professor of Education.
Carolee Howes, Ph.D., Assistant Professor of Education.
Admission Requirements.

General Requirements.

Qualifications for admission to a program of study in Education leading to an advanced degree, in addition to the currently specified University requirements for admission to the Graduate Division are:

a. A minimum total score of 1000 on the combined quantitative and verbal sections of the Graduate Record Examination. (NOTE: The Miller Analogies and Doppelt Mathematical Reasoning Test may be substituted for the Graduate Record Examination; minimum scores are 48 and 19 respectively)

b. Acceptance in a particular specialization is dependent upon the availability of openings in that study field; additionally, 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 status 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 (B in upper division and prior graduate study) and/or Graduate Record Examination score requirements may be admitted to the Graduate School of Education on the basis of other indicators of special promise such as relevant work experience, accomplishments, or public service. Full documentation of the foregoing in the form of recommendations and other types of evidence is essential if these indicators are to be given consideration.

Specialized Requirements by Degree.

a. Master of Education Degree (Requirements applicable in accordance with selected specialization).

(1) Administrative and Policy Studies in Education
Possession of a valid teaching credential is preferred. Persons 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; i.e., completion of a specific program of study including student teaching. Classroom experience — as a teacher or aide — for at least two years, at any level of schooling. Evidence of the applicant’s professional competence and conscientiousness, as well as the necessary second-language proficiency.

(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.

b. Master of Arts Degree
(No specialized requirements.)

c. Doctor of Education Degree

(1) A Master of Education Degree or the equivalent.

(2) At least two years of successful professional experience in education or the equivalent. (Must be completed prior to advancement to candidacy.)

d. Doctor of Philosophy Degree

(1) A master’s degree, or the equivalent, in either education or the cognate field in which the student proposes to work.

Letters of Recommendation.

Letters of recommendation, while not required, may prove useful in documenting an applicant’s qualifications and/or professional experiences.

Brochures.

Departmental brochures may be secured from the following address: Office of Student Services, Graduate School of Education, Moore Hall 201, UCLA, 405 Hilgard Avenue, Los Angeles, California 90024.

Application Forms.

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 Graduate Admissions. Application forms may be obtained from the Education Office of Student Services (address shown above).

Advising

Graduate Adviser.

Joan Wolfgang, Office of Student Services, Moore Hall 202, Graduate School of Education.

For information regarding specialization offerings, the prospective student should consult the Graduate Adviser. All procedural questions should be directed to the Office of Student Services. A general orientation meeting for all advanced degree students is held each quarter during the registration period.

Academic Adviser.

At the time of admission to the Graduate School of Education, students are assigned an Academic Adviser within their selected specialization. This assigned Academic Adviser is retained throughout the degree program unless the student changes the field of specialization.

Major Fields or Subdisciplines

Fields of specialization which may be selected in completion of the specific degree programs are indicated below. The applicant is directed to the Education Office of Student Services for information regarding the appropriate 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 Degree:

(a) Administrative and Policy Studies in Education

(b) Bilingual/Cross-Cultural Education

(c) Curriculum and the Study of Schooling

(d) Teacher Education

Master of Arts Degree:

AREA I — SOCIAL AND PHILOSOPHICAL STUDIES IN EDUCATION

(a) Philosophy of Education

(b) Education and the Social Sciences

AREA II — EDUCATIONAL PSYCHOLOGY

(a) Counseling

(b) Early Childhood Development

(c) Learning and Instruction

(d) Research Methods and Evaluation

(e) Special Education

AREA III — ORGANIZATIONAL AND ADMINISTRATIVE STUDIES IN EDUCATION

(a) Education and Work

(b) Higher Education

Doctor of Education Degree:

AREA II — EDUCATIONAL PSYCHOLOGY

(a) Early Childhood Development

(b) Learning and Instruction

(c) Research Methods and Evaluation

(d) Special Education

AREA III — ORGANIZATIONAL AND ADMINISTRATIVE STUDIES IN EDUCATION

(a) Administrative and Policy Studies in Education

(b) Curriculum and the Study of Schooling

(c) Education and Work

(d) Higher Education
NOTE: No specialization fields in Area I, Social and Philosophical Studies in Education, are approved for major study in the Doctor of Education degree program.

Since the Ed.D. program is oriented toward key concepts and issues in education, study will include specialized content in the selected field of specialization as well as content from related specializations and the major Area of study.

Doctor of Philosophy Degree:

AREA I — SOCIAL AND PHILOSOPHICAL STUDIES IN EDUCATION
(a) Comparative and International Education
(b) Philosophy and History of Education
(c) Education and the Social Sciences

AREA II — EDUCATIONAL PSYCHOLOGY
(a) Counseling
(b) Early Childhood Development
(c) Learning and Instruction
(d) Research Methods and Evaluation
(e) Special Education

AREA III — ORGANIZATIONAL AND ADMINISTRATIVE STUDIES IN EDUCATION
(a) Administrative and Policy Studies in Education
(b) Curriculum and the Study of Schooling
(c) Education and Work
(d) Higher Education

FOREIGN LANGUAGE REQUIREMENT
There is no foreign language requirement in the Master of Education, the Master of Arts, or the Doctor of Education degree programs.

For the Doctor of Philosophy Degree, there is a foreign language requirement in some specialization fields. Detailed information may be procured from the Graduate Adviser in the Office of Student Services, Moore Hall 202.

Course Requirements

Master’s Degrees:

Total number of courses required: A minimum of nine upper division and graduate courses (36 units). Required upper division courses: None.

Master of Education Degree:

Number of graduate courses required for the degree: At least five (20 units) in professional Education (400 series) courses.

Information regarding specific course requirements in a selected M.Ed. specialization may be obtained from the Office of Student Services.

Master of Arts Degree:

Number of graduate courses required for the degree: six courses (24 units) in the 200/500 series; no more than two courses (8 units) may be in the 500 series.

Required graduate courses: Two courses must be selected from:

- 200A Historical Research and Writing
- 200B Survey Research Methods in Education
- 210A Basic Concepts in Educational Research
- 210B Experimental Design in Educational Research

Additional courses to complete the 36-unit requirement may be selected from offerings of Education and other departments upon approval of the student’s advisor.

Doctoral Degrees:

(a) A minimum of three courses beyond the baccalaureate degree in research methods or formal processes of inquiry. Such courses may be taken within or outside of the Department of Education, but must be approved as acceptable for the research methods requirement; at least two courses must be completed in this University.

(b) A minimum of one approved breadth course, including a final examination, in each of four specified breadth categories.

(c) Additional coursework as specified by the student’s advisor.

Doctor of Education:

A field experience minimally approximating a 1-course requirement.

Doctor of Philosophy:

(a) A coherent program of a minimum of five graduate courses, or their equivalent, in an approved UCLA cognate department. The five courses constituting a particular cognate sequence shall be determined by the academic adviser in consultation with the student and approved by the Committee on Graduate Degrees, Admissions, and Standards.

NOTE: The necessity for cognate courses in addition to the stated minimum shall be determined by the student’s academic adviser in consideration of the individual’s academic preparation.

(b) A research internship minimally approximating a 1-course requirement.

Before the written qualifying examination for a doctoral degree may be taken, the student must have completed all required coursework, or have in progress during the quarter in which the examination will be taken, no more than one required course and one practicum (for Ed.D., Education 499 — Advanced Directed Field Experience; for Ph.D., Education 299 — Research Practicum in Education). The student's academic record must be clear of Incomplete grades or Incomplete grades turned to F.

Teaching Experience

Master of Education Degree:

For some M.Ed. specializations, teaching experience is required. Specific information may be obtained from the Office of Student Services, Moore Hall 202.

Master's Degree Thesis or Comprehensive Examination Plan

Comprehensive examinations for master's degrees are offered twice yearly, once in the Fall Quarter and once in the Spring Quarter at a place designated by the Committee on Graduate Degrees, Admissions, and Standards. For each field of specialization, a comprehensive examination committee comprised of a minimum of three specialization faculty members is appointed by the Specialization Head to prepare and read the examinations for all students in that specialization. The specialization examination committees, as required, are appointed following established deadlines for student admission to the comprehensive examinations.

Master of Education Degree:

No thesis plan is offered in the M.Ed. degree program.

Required examinations:

(a) A comprehensive written examination designed to assess:

1. Comprehension of the professional knowledge basic to the selected field of specialization including key concepts and principles, major theoretical positions, and fundamental issues.

2. Understanding of the broad educational context in which the selected professional field resides.

(b) A performance examination designed to assess the student’s competency in the solution of problems in the selected professional field; a test not of what the student knows, but whether knowledge can be applied in a real or simulated professional setting.

Information regarding examination foci for any selected M.Ed. specialization may be secured from the assigned academic adviser.

Master of Arts Degree:

Under the Thesis Plan, the student will prepare a thesis which is a report of the results of original investigation. Before beginning work on the thesis, the student must obtain approval of the subject and general plan from the Graduate School of Education as well as from the resident Education faculty member who has agreed to serve as chair of the thesis committee and who will direct the research and writing of the thesis. Normally, agreement of the faculty member to serve as chair is secured by the student at the completion of two quarters of coursework.

A thesis committee must be formed and a "Petition for Advancement to Candidacy for the Degree Master of Arts" must be filed not later than one quarter prior to completion of course requirements for the degree. The thesis committee consists of three faculty members nominated by the student, recommended by the Department of Education, and appointed by the Dean of the Graduate Division. These three
faculty members may all be from the Department of Education, or one of the three may be from UCLA faculty outside of the Department of Education.

The Manuscript Adviser for Theses and Dissertations and the Graduate Division publication, Standards and Procedures for Theses and Dissertations provide guidance in the final preparation of the manuscript. The Department of Education does not require a formal examination in connection with the Thesis 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 the student's knowledge as well as ability to focus that knowledge on specific problems.

For a Master of Education or Master of Arts degree, the comprehensive examination may be taken a maximum of two times. After a second failure of this examination, a student will be allowed to continue in the Graduate School of Education only in highly unusual circumstances. A third attempt to pass an examination will require the consent of the field of specialization and approval of the Committee on Graduate Degrees, Admissions, and Standards. No fourth attempt is possible under any circumstances.

After three failures in the examination, the student must be dropped from the Graduate School of Education at the end of the quarter in which the third failure occurs.

Each examination application requires the written approval of the student's adviser.

Written and Oral Qualifying Examinations for Doctoral Degrees

For the Doctor of Education degree, the student must complete the following written and oral qualifying examinations:

(a) A written examination in the specialization concerned with key concepts and issues in the profession; will draw from specialized content as well as from content of related specialization and the major Area of study.

(b) A professional competency performance examination; includes 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.

(c) An oral examination conducted by the student's doctoral committee employing topics from education which are related to the student's research proposal.

For the Doctor of Philosophy degree, the student must complete the following Written and Oral Qualifying Examinations:

(a) A written examination in the major Area of study. Half of the examination will be concerned with central topics in the selected Area as a whole; half will focus on the specialized field of study selected within the Area.

(b) An oral examination conducted by the student's doctoral committee employing topics from both education and the cognate discipline which are related to the student's research proposal.

NOTE: For a doctoral degree, research methodology, breadth, and Ph.D. cognate field examinations will be those given in connection with individual courses.

Faculty members in a student's selected specialization and major Area form the doctoral examination committee; typically, the committee membership averages five. Each member of the committee submits questions to the Head of the specialization and participates in determination of the final content of the major examination. Examinations are read and scored by at least two faculty members from the specialization. An additional member is designated to serve as arbiter in the event of disagreement regarding examination results. The written examination is administered through the Committee on Graduate Degrees, Admissions, and Standards; the performance examination for the Doctor of Education degree is administered by the professional examination committee.

The written major examination is offered twice yearly, once in the Fall Quarter and once in the Spring Quarter, at a place designated by the Committee on Graduate Degrees, Admissions, and Standards. This examination is not administered at any other time or place. The examination may be taken only by eligible students who have been recommended by their advisers and who have been admitted to the examination by the Committee on Graduate Degrees, Admissions, and Standards.

Any written qualifying examination may be taken a maximum of two times. After a second failure of an examination, the student will be allowed to continue in the Graduate School of Education only in highly unusual circumstances. A third attempt to pass an examination will require the consent of the field of specialization and approval of the Committee on Graduate Degrees, Admissions, and Standards. No fourth attempt is possible under any circumstances.

After three failures in any specific examination, the student must be dropped from the Graduate School of Education at the end of the quarter in which the third failure occurs.

Each examination application requires the written approval of the student's adviser.

Time to Degree

Master's Degree programs:

Graduate admission and admission to a master's program are simultaneous. From graduate admission to completion of required courses, normal progress is from one to two years (3-6 quarters).

From graduate admission to award of the degree, normal progress is from one to two years (3-6 quarters).

The comprehensive examination may be taken during the last quarter of coursework or during a quarter subsequent to completion of coursework.

For the Master of Arts degree, the thesis (if elected in lieu of the Comprehensive Examination Plan) would be written subsequent to completion of coursework.

Doctoral Degree Programs:

From doctoral-program admission to the Written and Oral Qualifying Examinations: three to four years (9-12 quarters).

From doctoral-program admission to the approval of the dissertation prospectus: three to four years (9-12 quarters).

From approval of dissertation prospectus to the Oral Qualifying Examination: same quarter.
From advancement to candidacy to the Final Oral Examination: one year (3 quarters).
From doctoral-program admission to the awarding of the degree: five years (15 quarters).

500 Series Course Limitations for Master’s Degrees

Master of Education Degree:
No 500 series courses may be applied toward the Master of Education degree. Education course 597 is available to the M.Ed. student, to be taken on an optional basis. (Maximum credit, 12 units. To be graded S/U.)

Master of Arts Degree:

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Unit Value</th>
<th>Type of Grading</th>
<th>Maximum Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>596</td>
<td>2-8</td>
<td>Letter grade</td>
<td>12 units</td>
</tr>
<tr>
<td>597</td>
<td>4</td>
<td>S/U</td>
<td>12 units</td>
</tr>
<tr>
<td>598</td>
<td>4</td>
<td>S/U</td>
<td>12 units</td>
</tr>
</tbody>
</table>

Number of 500 series courses that may be applied toward the divisional course minimum: 2 courses (8 quarter units)

Number of 500 series courses that may be applied toward the graduate course minimum: 2 courses (8 quarter units) (The minimum graduate course requirement in the Graduate School of Education is six courses.)

Disqualification

Recommendations for termination of graduate status originate with the Committee on Graduate Degrees, Admissions, and Standards or with the faculty of a specialization. The student's adviser will be given the opportunity to review and respond to recommendations for terminating which originate with the Committee.

Specific conditions which may lead to termination include:
- Failure to maintain specified required progress toward the degree;
- Failure to maintain a grade point average of 3.0 or higher;
- For a master's degree, failure of the comprehensive or performance examination, or failure to complete a satisfactory thesis, as applicable;
- For a doctoral degree, failure of a qualifying or a required final oral examination.

Instances of suspected infractions of the Academic Senate regulations regarding classroom honesty would be forwarded, following review by the Committee on Graduate Degrees, Admission, and Standards, to the appropriate administrative officer of the University for consideration of disciplinary proceedings against the student.

Appeals

Grievances pertaining to policy and procedures of the School may be formally presented to the Committee on Graduate Degrees, Admissions, and Standards for decision; final appeal of any decision would be to the Dean of the School. Beyond the School setting, instances of continued complaint would be referred to the Dean of the Graduate Division.

Other Relevant Information

Master of Education Degree:
The Master of Education degree is a professional master's degree designed to meet the needs of the individual 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.

A field experience minimally approximating one course is required for all M.Ed. specializations.

Master of Arts Degree:
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 for the Ph.D. degree program.

Doctor of Education Degree:
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. Emphasizes include practice, applied studies, and knowledge related to professional skills.

Doctor of Philosophy Degree:
The Doctor of Philosophy degree in Education is an academic degree designed to meet the needs of the individual preparing for a career in basic research or college level instruction. Emphasizes include theory, research methodology, basic studies, and indepth knowledge in education and a cognate field.

Graduate Courses

Area I:
Social and Philosophical Studies in Education

Fields of Specialization:
Comparative and International Education
Philosophy and History of Education
Education and the Social Sciences

Comparative and International Education

204A. Topics and Issues in International and Comparative Education. Analysis of basic topics and issues in comparative and international education. Emphasis is placed on topics and issues that cut across national boundaries and at the forefront of educational policy and practice in both developed and developing nations.

Mr. Hawkins, Mr. LaBelle, Mr. Rust

204B. Introduction to Comparative Education. An examination of conceptual and methodological questions underlying comparative education. Particular attention is given 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. LaBelle, Mr. Rust

204C. Education and National Development. Application of social science 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 Staff

204D. Minority Education in Cross-Cultural Perspectives and Historical Analyses. An examination of educational policies with regard to ethnic, religious, and linguistic minorities through selected national and international case studies. Introduction to cross-cultural education in representative countries in relation to social, political, and economic systems.

Mr. Hawkins, Mr. LaBelle

204E. International Efforts 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 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 schools. The types of programs studied include, among others, consciousness raising, community action, skills training, literacy, and extension programs.

Mr. Hawkins, Mr. LaBelle, Mr. Rust

204G. Planning Educational Language Policy Internationally. Analysis of programs and issues involved in formulating a language education policy. Particular attention is given to planning for the use of vernacular languages in education as well as analyzing models and research for multilingual/bilingual education in various countries.

Mr. Hawkins, Mr. LaBelle, Mr. Rust

253A. Seminar: Current Problems in Comparative Education.
253B. Seminar: African Education.
253C. Seminar: Asian Education.
253D. Seminar: Latin American Education.
253E. Seminar: European Education.
253F. Seminar: Education in Revolutionary Societies. A multidisciplinary and comparative study of socialist educational theory is examined through the writings of Marx, Lenin, Mao, and others. The implementation of this theory in specific case studies along with comparative assessments of noncapitalist nations will be explored.

Mr. Hawkins, 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 to work transition, the language and culture question.

Mr. Hawkins
**Philosophy and History of Education**

206A. Historical Research and Writing. Techniques of historical research and writing. For students who are or who will be engaged in research, and report or paper or thesis writing, regardless of their field of interest. Mr. S. Cohen

201A. History of Western Education. The rise of the Western educational concept from the 17th Century to the Civil War. The emergence of the public education system in the context of social, intellectual and political change. Mr. S. Cohen

201B. History of American Education to 1850. Development of American education from the 17th Century to the Civil War. The emergence of the public school system in the context of social, intellectual and political change. Mr. S. Cohen

201C. History of American Education. (Same course as History 204.) The aim is to depict the social forces impinging on American education from the 17th through the present, and to analyze the relationship between these social forces and the philosophy, curriculum, structural organization, and functions of education at all levels. Mr. S. Cohen

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. Ellett, 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. Ellett, Mr. Weinberg

206C. Philosophy of Education: Logic and Language. Conceptual analysis of recurrent and contemporary themes in the field. Emphasis is on the development of logical and linguistic skills used in the analysis of educational problems and issues. Mr. Ellett, Mr. Weinberg

206D. Philosophy of Education: Ethics and Values. A study of ethical foundations of ethics and the study of values. Mr. Ellett

206E. Philosophy of Education: Introduction to Humanism in Education. Examines the philosophical foundations of humanism and their relationships to educational practice. Mr. Ellett

250A. Seminar: History of Education. Selected topics in History of Education: discussion, research, and writing. Mr. S. Cohen

250B. Seminar: History of Education. To be given alternate years. Advanced seminar in bibliography and historiography in history of education. Mr. S. Cohen

251A. Seminar: Philosophy of Education, Epistemology. Prerequisite: consent of instructor. Mr. Weinberg

251B. Seminar: Philosophy of Education, Behaviorism. Prerequisite: consent of instructor. Mr. Weinberg

251C. Seminar: Philosophy of Education, Behavioral Science Problems. Prerequisite: course 206C or consent of instructor. Mr. Ellett, Mr. Weinberg

251D. Seminar: Philosophy of Education, Problems in Ethics and Values. Prerequisite: course 206D or consent of instructor. Mr. Ellett


**Education and the Social Sciences**

M108. Sociology of Education. (Same as Sociology M143.) Prerequisite: Sociology 1A or 101. Study of social processes and interaction patterns in educational organizations; the relationships 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

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. Three class hours, two hours of laboratory. Prerequisite: course 200B. Introduction to techniques of processing and analyzing non-experimental and quasi-experimental quantitative data. Mr. O'Shea

203. Educational Anthropology. Prerequisite: Anthropology 22 recommended. Study of education through the research and method of the cultural anthropologist. Interdependence of culture and education with emphasis placed on cross-cultural studies of enculturation, schooling, values, cognition, language, and cultural change. Mr. O'Shea

207. Politics and Education. Course explores the political dimensions of both formal and informal educational enterprises in a national and international perspective. Political theory will be explored in the context of such educational issues as policy formulation, pressure groups, and public and private utilities. Mr. Hawkins and Staff

208A. Perspectives on the Sociology of Education. Designed to introduce students to sociological perspectives on current issues in educational policy and practice. Issues addressed include desegregation; decentralization, equality of educational opportunity, structure of educational organization, teacher-student relationships, reform in education at the elementary, secondary, post-secondary levels. Mr. Gordon, Mr. O'Shea, Ms. Wrigley

208B. Issues in Education: Sociological Perspectives. Prerequisite: course 208A or equivalent. Exploration of educational issues, and the structure and processes of formal schooling, from a sociological perspective. Such topics as functionalism, conflict, symbolic interactionism, ethnomethodology, and critical sociology. Mr. O'Shea

252A. Seminar: Educational Organizations. Prerequisite: course 208A or consent of instructor. Mr. O'Shea, Ms. Wrigley

252B. Seminar: Education and Social Change. Prerequisite: course 208A or consent of instructor. Mr. LaBelie, Mr. O'Shea

275. Seminar: School Desegregation. Prerequisite: consent of instructor. Analysis of the social-political 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 inter-racial attitudes, Mr. Wrigley

M281A-281B-281C. Seminar: Selected Topics in Human Ethology. (Same as Psychiatry M279A-279B-279C and Anthropology M229A-229B-229C.) Ethologists now use successful animal behavior methodology to study human behavior. Prerequisite: what can it contribute? Each quarter will cover one level of analysis: describing and recording behavior; causation; development; especially longitudinal studies; adaptation; evolutionary origins. Mr. Burton-Jones

**Fields of Specialization:**

**Counseling**

**Early Childhood Development**

**Learning and instruction**

**Research Methods and Evaluation**

**Special Education**

**Counseling**

213A. Fundamental of Student Personnel Work. Prerequisite: graduate student 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; relations of evidence, memory and personality; case studies in the implications of personal values in counseling situations. Mr. Berry, Mr. Sorenson

213C. Group Process in Education. Group productivity, leadership, social perception and attitude formation, decision-making, determination of group interaction variables and the effect of behavior changes in individuals and groups. Mr. Berry, Mr. Sorenson

214A. Counseling Theory and Practice. Application of concepts drawn from cognitive psychology to the non-academic 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. Prerequisite: limited to candidates for advanced degrees 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

214D. Vocational Guidance. Depth study of current interests and needs in vocational guidance; principles, problems and practices of vocational guidance. Mr. Berry, Mr. Healy

216. Counseling Models from a Cross-Cultural Perspective. Prerequisite: course 213A or 211A and 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 will be systematically covered. Mr. Berry

257. Seminar: Pupil Personnel Services. Mr. Berry, Mr. Healy, Ms. Tidwell

413A-413B-413C. Internship in School Psychology. Prerequisite: consent of instructor; courses 413A-413B-413C must be completed in three consecutive quarters; limited to students enrolled in the Counseling specialization. Two class hours, sixteen hours of field experience. Working in public schools or comparable setting performing duties of a school psychologist — psychodiagnosis, integrating case material, staffing cases, developing educational plans, working with teachers and parents, and establishing evaluative criteria. Ms. Healy, Ms. Tidwell

**Area II:**

Educational Psychology

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415A. The Appraisal of Intelligence. Prerequisites: courses 216A and 211A. Concepts and theories lead- ing to development of individual cognitive assess- ment instruments; issues and implications relating to the application and current practices of utilizing such tests in a multi-cultural society. Laboratory experi- ence includes administration and interpretation of standardized instruments; case studies. Ms. Healy, Ms. Tidwell

415B. Human Appraisal in School Counselling and School Psychology. Prerequisites: course 415A and consent of instructor. Survey and demon- stration of issues of cognitive, affective and achievement appraisal and their applicability to problems found in the school setting. Research and theoretical issues concerned with appraisal will also be discussed. Ms. Tidwell

Early Childhood Development

217A. Child Development and the Educational Process. Biological and familial, school, and other influences on the child; development in the context of current research and theoretical models; consider- ations for the integration of theoretical issues on the family, peer group, and school; application of de- velopmental theory and research to educational prac- tice. Ms. Feshbach, Ms. Howes

217B. Cognitive Development and Education. Theories of cognitive development, including Piaget, and, application of cognitive de- velopmental theory to educational practice, preschool through high school. Ms. Stipek

217C. Personality Development and Education. (Same as Psychology M245A). A review of research and theory of critical content areas in personality de- velopment that bear upon school performance: self- concept, aggression, sex differences, empathy, and other social behaviors; review of the status of emotional behavior in personality theory and develop- ment. Ms. Feshbach, Ms. Stipek

217D. Language Development and Education. Re- search and theory on how children develop their first language; sociolinguistic and psycholinguistic issues in preschool and primary years; bilingual and dialectic- al issues. Ms. Dorr

217E. Developmental Problems in Early Childhood. Prerequisites: Two core courses in devel- opment and learning. Problems of atypical develop- ment during early childhood viewed from an interactional position which considers affective, cognitive, and impact of learning, impact of dis- ability on parent-child interactions, and early inter- vention programs. Ms. Howes, Ms. Keogh

217F. Human Development and the Educational Process. Learning and cognitive-developmental the- ories of human development and learning; cultural, family and schooling influences on human develop- ment; application of developmental theory and re- search to educational practice. Mr. Howes, Ms. Stipek

255B. Seminar: Special Topics in Development. Prerequisite: consent of instructor.

281A. Seminar: Early Childhood Education. Pre- requisite: courses 421A-421B.

421A. Programs, Models and Research in Early Childhood Education. Prerequisite: one course in the development series and one quarter field place- ment. Introduction to programs and research in early childhood; observation of preschool programs (cooper- ative nurseries, Headstart, private nurseries, Mon- tessori preschools, day care centers); the organiza- tion and evaluation of research and its relation to goals of early childhood education.

421C. Research and Evaluation of Early Childhood Programs. Prerequisite: course 421A or equivalent, or by consent of the instructor. Critical review of evaluation of the various preschool and remedial programs for the young child; analysis of relevant research findings and methodological issues, with a focus on early childhood education programs.

421D. Parents and Community Agents in Childhood Development. Prerequisite: two courses from 210A, 212A, and 212B or equivalent by consent from early childhood education, or equivalent. A critical review of the theoretical basis and effectiveness of training programs for parents of young and elementary school-aged children; the relation of preschool parent programs to family development and the role of the programs in the community.

421F. Current Perspectives in Early Childhood Development for the Professional. Prerequisite: recommended for professionals in Early Childhood Education. Critical issues and recent developments in the field and practice of Early Childhood; organization, curricula, and program evaluation; policy and legislative factors; day care; parent programs; com- munication with other agencies; role of parents in early childhood education.

Learning and Instruction

113. Instructional Psychology. Major psychological approaches to teaching. Processes of learning and motivation in the instructional setting. The psycholo- gy of teaching methods. Issues in the design and evaluation of instruction. Mr. Keislar

205. Computer's in the Educational Process. Intro- duction to the theory, experimentation, evaluation and applications of computer-aided instruction with an emphasis on computer-assisted instruction (CAI), computer-managed instruction (CMI), and the use of computers by educational administrators for scheduling, students records, and student performance as- sessment.

212A. Learning and Education. Models of learning, modeling, reinforcement, motivation, encoding, memory, transfer, individual differences and instruc- tion. Mr. Silberman, Mr. Wittrock

212B. Motivation and Learning in the Educational Pro- cess. Prerequisites: courses 210A and 212A. A re- view of the theoretical and empirical literature on motivational factors in school settings and the condi- tions for the acquisition of affective outcomes.

212C. Cognition and Creativity in Education. Pre- requisite: course 212B. A review of the theoretical and empirical literature on cognitive processes in school learning, including concept learning, problem solving, knowledge acquisition, and creativity.

215. Personality, Motivation and Attribution. (Same as Psychology M239). Examines current re- search and theory relating personality variables (e.g. attributional styles, self-esteem) to motivational con- cerns such as persistence, and behavior. Perceived causes of outcomes in achievement and affective domains also are stressed. Mr. Weiner

238. 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 the- ory of models of ability and test development.

239. Principles for Effective Media. Prerequisites: courses 205, 210A, and 212A or consent of instructor. Evaluation of theoretical principles underlying effective- media content and media utilization. Consider- ation of particular differences among print, comput- ers, and audiovisual media, in and out of school. Role of research in development of such materials.

424. Seminar: Special Topics in Media. Prerequisite: consent of instructor.

425. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425A. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425B. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425C. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425D. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425E. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425F. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425G. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425H. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425I. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425J. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425K. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425L. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425M. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425N. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425O. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425P. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425Q. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425R. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425S. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425T. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425U. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425V. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425W. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425X. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425Y. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

425Z. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor.

426. Instructional Analysis. (Formerly numbered 420B). Prerequisite: consent of instructor. Analysis of instructional variables as they relate to the design and evaluation of instructional strategies. The student acquires skills in techniques of conducting instructional research.

419A. Experimentation on Media Communication and Instruction. Prerequisite: course 210A. Analysis of the role of media in the classroom and the effects of its use on learning and instruction.

419B. Experimental Analysis of Instructional Pro- grammes. Prerequisites: courses 210A, 212A, 419A. 210B and 212B or 212C recommended. Advanced problems of methodology and rationale in the plan- ning and conduct of experiments on the effects of instructional variables in instructional pro- grammes; theory and techniques of laboratory and field experiments on instructional media.

433A. Instructional Product Development. Prereq- uisite: consent of instructor. An examination of the planning, development, and evaluation of instructional and of instructional products. Students acquire competencies associated with these procedures.

433B. Technological Development in Educational Research. Prerequisite: course 433A. An introduction to the design and evaluation of instructional systems and their development and implementation. Students are introduced to the design of instructional systems and their development and implementation. A critical study of tests of achievement and-aptitude evaluation and instructional design. Analysis of standards and evaluation criteria.

Research Methods and Evaluation

210A. Basic Concepts in Educational Research. Fundamentals of research. The language of re- search. Basic statistical concepts. Planning of re- search. Interpretation of research outcomes. Intro- duction to descriptive statistics: mean, median, mode and variance. Introduction to normal curve. It is strongly recommended that all students take this background as a minimum.


210C. Experiment Design: Advanced Topics. Prerequisite: course 210B or equivalent work. Com- pletely randomized designs, randomized block de- signs, 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.


211A. The Measurement of Educational Achieve- ment and Aptitude. Prerequisite: course 210A. A critical study of tests of achievement and-aptitude with an emphasis on group tests; the relation of achievement to aptitude; techniques of measurement of intelligence; elements of validity and reliability.

211B. Measurement in Education: Underlying Theory. Prerequisite: course 211A. Measurement theory as applied to testing, focusing primarily on classical test theory; implications of theories for test construction and selection; current status of validity and reliability theory.
211C. Problems in Measurement. Prerequisite: courses 210C and 211B. Generalizability theory and some other statistical theories of mental test scores; implications for the design and interpretation of generalizability and decision studies; advanced topics in validity.

Mr. Burstein, Ms. Webb

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. Quasi-Experimental Models In Educational Research. Prerequisites: course 218A or the equivalent and consent of instructor. Study of the assumption and limitations inherent in quasi-experimental research designs. The time-series intervention design will be stressed. The students will be able to design an appropriate quasi-experiment to assess the impact of a particular educational intervention. Mr. Burstein

218C. Causal Models in Non-Experimental Research. Prerequisites: course 218A or the equivalent and consent of instructor. Study of the inferential bases for the construction and validation of causal models in settings where true experiments are not appropriate. Statistical models from sociology, biology, and econometrics will be discussed. Assumptions and limitations of these models will be stressed. Mr. Burstein and Staff

219. Laboratory: Advanced Topics In Research Methodology, (½ course) Provides assistance in the design of research and interpretation of data to advanced students from other specializations. Coverage of special topics not included in other courses on research methodology.

Mr. Burstein, Mr. Shavelson, Ms. Webb

220. Critical Analysis of Empirical Research in Education. Prerequisites: courses 210A and 210B or equivalent background, and consent of instructor. A course examining contemporary empirical research in education and its relevance to educational practice. Designed to develop critical skills in reviewing substantive and methodological aspects of research.

Mr. Burstein, Mr. Shavelson

M222A. A Laboratory for Naturalistic Observations: Developing Skills and Techniques. (Formerly numbered M222.) (Same as Anthropology 236Q and Psychiatry M235.) Prerequisite: consent of instructor. The skills of observing and recording behavior in natural settings will be emphasized. Focus on field training and practice in observing behavior. Some of the uses of observations and their implications for research in the social sciences will also be discussed. Students will develop and integrate observational skills to work into their current research interests. This course may be repeated for credit.

Mr. Levine

222B. Design Issues in Naturalistic Research. Prerequisite: course M222A or consent of instructor. Issues in the 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.

Mr. Levine

222C. Qualitative Data Reduction and Analysis. Prerequisite: course M222A or 222B or consent of instructor. Theory of and practice in qualitative data collection and analysis. Strategies of data storage and retrieval. Techniques of data manipulation, such as coding schemes and products from other studies, and specific analytic perspectives. Interfacing qualitative and quantitative data also emphasized.

Mr. Levine

225. Seminar: Special Topics in Measurement and Research Design. Prerequisite: courses 210C and 211C or consent of instructor.

Mr. Burstein, Mr. Skager, Ms. Webb

410. Criterion-Referenced Measurement. An introduction to the field of criterion-referenced measurement in order as this assessment strategy applies to research, development, and evaluation.

Ms. Baker, Mr. Popham

411A. Introduction to Educational Evaluation. Ways of evaluating the effectiveness of curriculum and instruction, including assessment and improvement of teacher behavior and accomplishment.

Mr. Alkin, Mr. Popham

411B. Evaluation Theory. Course will provide students with a basic understanding of prevalent evaluation theories, with various of the alternative evaluation theories currently being proposed, and with the process of theory development in educational evaluation.

Mr. Alkin, Mr. Ellett

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 considerations in evaluation, framing the decision context, and reporting evaluation results.

Mr. Alkin, Mr. Popham

460. Seminar: Special Issues In Evaluation. Course is offered two or three times per year by different faculty members with different issues taught on a seminar basis. Recent emphasis have included evaluation utilization and cost effectiveness evaluation.

Mr. Alkin, Ms. Baker, Mr. Popham

Special Education

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 and the learning characteristics of exceptional individuals and the application of research and theory to special education problems.

Mr. Hewett

125B. Principles for Teaching Exceptional Individuals. Prerequisite: consent of instructor. Examination of approaches for 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.

Mr. Alkin, Mr. Popham

225A or consent of instructor. Six to eight hours per week field work in the UCLA Neuropsychiatric Institute School, other campus facilities, or public school special education programs.

425. Appraisal of Exceptional Individuals. Prerequisite: courses 225A and 415A or the equivalent. Individual appraisal of exceptional individuals; analysis of tests and diagnostic procedures, case studies.

501. Cooperative Program In Special Education. (½ to 2 courses) Prerequisite: approval of UCLA Graduate Adviser and Graduate Dean. Approval of host campus department chair and graduate dean. Limited to UCLA doctoral students in Special Education. This course is used to record the enrollment of UCLA doctoral students in psychology who are taken under cooperative arrangements with California State University, Los Angeles. To be graded S/U.

Area III:

Organizational and Administrative Studies in Education

Fields of Specialization:

Administrative and Policy Studies in Education

Curriculum and the Study of Schooling

Education and Work

Higher Education

Administrative and Policy Studies In Education

240A. School Administrative Practices Since 1800. An examination of school administration since 1900 as it has responded to social, political, and economic pressures exerted on schools. Development of sensitivity to current pressures and alternatives for administrative response.

Mr. Williams

241. Research Methodology In School Administration. Prerequisite: consent of instructor. Examination of research problems and strategies in school administration.

Mr. Williams
242. Economic Analysis for Educational Policy and Planning. (Formerly numbered 242F.) Prerequisite: Graduate standing. An introductory course in macro and micro-economics and their applications to education. Emphasis will be given to the use of economic models for analysis of issues in educational policy and planning. Techniques addressing educational problems of organization of activities, classification, prediction, optimization, goal setting, and measuring inequities are discussed.

Mr. Bruno

244. Economics of Education. An introductory course in micro- and macro-economic techniques applied to education. Methodologies as marginal analysis, linear programming, Leontief input-output models, Lorenz curve analysis are discussed with application to school finance, underdeveloped countries, equality of educational opportunity and credentialing.

Mr. Bruno, Ms. Salomon

248A. Seminar: Mathematical Modeling in Educational Policy Analysis. Prerequisite: course 242, two years of college level mathematics, knowledge of computer programming, or consent of instructor. Mathematical modeling of educational processes and problems. Deterministic modeling techniques, in addition to stochastic modeling techniques, are discussed. A mathematics review and instruction in the use of the MPS 360 (Mathematical Programming Code) are provided.

Mr. Bruno

249A. Seminar: Operations Research—Systems Analysis in Education. Prerequisite: courses 242 and 248A, two years of college level mathematics, computer programming, or consent of instructor. Advanced topics in the application of quantitative analysis methods to policy decision and planning. Methodologies such as logic models, Bayesian analysis, game theory, differential equation growth models and advanced topics in production and human capital theories will be discussed.

Mr. Bruno

249C. Strategic Planning in Education. Problems of goal formulation; interorganizational competition; and control of environmental forces affecting resource utilization, with particular attention to the utility of open-planning models in providing alternative resource-allocation patterns.

Mr. Bruno

440B. Problems in Educational Government and Finance. (Formerly numbered 240B.) Intensive study of problems and issues affecting the governance and finance of schools.

Mr. Bruno

442A. Administration of the Instructional Program. (Formerly numbered 240C.) Examination of current educational problems in the society and the strategies of their solution through curriculum policy and practice; instructional design and operation; and techniques of planning and training of personnel.

Mr. Bruno

442A. Administration of Large Systems and Individual Schools. (Formerly numbered 242A.) Prerequisite: consent of instructor. Theoretical and functional problems in the administration of large systems and decentralized individual schools.

Mr. Bruno

442B. Legal Aspects of Educational Management and Practice. Examination of the structures and kinds of law governing educational systems in the United States: constitutional dimensions of church/state separation; legal aspects of hiring, firing, and negotiating procedures; student attendance, control, and civil rights.

Ms. Pope

442D. Educational Finance. (Formerly numbered 242D.) Historical and theoretical background of educational finance; considers principles related to federal and state participation in educational finance; considers other economic factors related to the provision and utilization of financial resources in schools.

Mr. Bruno

442E. Administration of In-Service Education. (Formerly numbered 242E.) Emphasis on the development of knowledge, skills, and attitudes essential to exercising leadership in the facilitation of the professional growth of teachers, school administrators, and other educational personnel, especially as such growth contributes to instructional improvement and relevant curriculum development.

Mr. Bruno

443. Introduction to Policy Analysis in Education. Prerequisite: consent of instructor. An overview of the process of policy design and the logic of educational policy formation. Included in this examination will be issues that impact on minorities; e.g., bilingual education, desegregation, affirmative action, the role of subordinates in the policy-making process.

Ms. Pope

444A. Legal Aspects of Access to a Public Education. Prerequisite: course 442 or consent of the instructor. A study of access to public education focused on the issues of affirmative action, testing, tracking, bilingual/bicultural education, special education, correctional education, and malpractice suits.

Ms. Pope

447. Seminar: Educational Policy and Planning, Special Studies. (Formerly numbered 247.) Prerequisite: consent of instructor.

Ms. Pope

448A. Urban School Leadership. Prerequisite: consent of instructor. Analysis of the problems of urban school leadership. Emphasis is on the changing nature of the urban principalship; however, considerable attention is given to the role of other school and community agencies that interact with the urban school leader.

Mr. Williams

448B. Urban Leadership Laboratory. Prerequisite: consent of instructor. Analysis of and opportunity to practice human and technical skills required for success as an urban school leader. Topics include negotiations, conflict resolution, applied computer technology, and effective communication. Activities include gaming, simulation, computer programming and group development.

Mr. Williams

470A. Seminar: Large Systems and Individual Schools. (Formerly numbered 270A.) Prerequisite: consent of instructor.

Ms. Pope

470B. Seminar: Educational Government. (Formerly numbered 270B.) Prerequisite: consent of instructor.

Mr. McNeil, Ms. Tyler

Curriculum and the Study of Schooling

220A. Inquiry Into Schooling: Organization and Change. Critical analysis of issues in the reconstruction of schooling; concepts of function and structure of schooling; organization theory; system approach to organization of development and change. Miss Crabtree, Mr. Goodlad, Mrs. Tyler


Miss Crabtree, Mr. Goodlad, Mrs. Tyler

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 grant goals, models, typologies, and effectiveness.

Ms. Valadez

280. Seminar: Principles of Curriculum and Instruction. Mr. Goodlad, Mr. McNeil, Mrs. Tyler

281B. Seminar: Elementary Education. Mr. McNeil, Mr. Silberman, Mr. Wright

281C. Seminar: Secondary Education. Mr. McNeil, Mr. Silberman

282A. Seminar: The Social Studies. Miss Crabtree

282B. Seminar: Reading. Mr. McNeil

282D. Seminar: Language Arts and English. Mr. McNeil

282F. Seminar: Research Topics in Bilingual/Multicultural Education. Prerequisite: consent of instructor.

Ms. Valadez

282J. Seminar: Economic Education. Ms. Kourlisky

285. Seminar: Instructional Analysis. Prerequisite: course 420A. Critical examination of theories of instruction; problems in conceptualizing and analyzing related instructional, learner, and social-system variables in classroom learning; problems in instructional decision-making and change.

Mr. Silberman, Mrs. Tyler

240A. Principles of Curriculum Development. Critical examination of the basic concepts underlying the determination of objectives, the selection and organization of learning experiences, and the evaluation process.

Miss Crabtree, Mr. McNeil, Mrs. Tyler

240D. Curriculum: Principles and Practice. An examination of curriculum and the application of various curricular perspectives to questions of purpose, learning opportunities and evaluation.

Mr. McNeil, Mrs. Tyler

242. Inquiry Into Schooling: Basic Issues. Critical examination of basic issues and problems in the organization and reconstruction of precollege schooling. Consideration of historical development and changing functions of schooling in American society; school organization; schooling alternatives; problems in the management of educational change.

Mr. Goodlad, Mr. McNeil, Mrs. Tyler


Mr. Weinberg

244A. 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 science, with emphasis on experimental study of instructional programs.

Miss Crabtree

244B. Reading in the Curriculum. Prerequisite: course 210A. Study of reading and instructional procedures, with emphasis on the rationale and research underlying their development and the research comparing their effectiveness.

Mr. McNeil

244C. Language in the Curriculum. Advanced study in the school language curriculum; application to the improvement of the curriculum in the field.

244F. Curriculum Design for Multicultural Education. Prerequisite: course 224 or consent of instructor. Critical analysis of curriculum models currently implemented in schools. The course will provide a framework for developing and evaluating multicultural curricula. Examination of teaching strategies to meet multicultural needs.

Ms. Valadez

244G. Curriculum Design for Bilingual Education. Prerequisite: course 224 or consent of instructor. Advanced study in curriculum design for bilingual educational programs. Philosophical basis for bilingual programs; theories of learning and instruction applied to the bilingual learner; language assessment; development of instructional component; program evaluation.

Ms. Valadez

437A. Principles of Curriculum in Economic Education. Theories, principles and concepts relating to an understanding of the business and economic system; their application to teaching in the secondary school.

Ms. Kourlisky

Education and Work

214C. Principles of Career Planning. Examination of the nature of careers across ages and ethnic and socioeconomic lines and the implications of career planning in post-industrial society.

Mr. Healy

2231. The Structure of Occupations. (Same as Sociology 2231.) Will explore shifts in the occupational structure of the United States, changing skill requirements for jobs, the effects of automation, work environments, and the role of formal and informal education in preparing people for occupations.

Mr. O'Shea, Ms. Wrigley
315. Basic Principles of Curriculum and Instruction. Prerequisite: consent of instructor. Analysis and practice of instructional concepts and strategies for conducting and evaluating units of curriculum and instruction. Emphasis on the study and utilization of a variety of instructional strategies, and their application to the elementary school. Mr. Keislar

316A-316B. Principles and Methods for Teaching Reading for Multiple Subject Instruction. (1½ course each) (Same as 315C.) Prerequisite: consent of instructor. 316A is prerequisite to 316B. 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. Both 315A and 315B are required for all teams other than "L." Mr. Keislar

315C. Principles and Methods for Teaching Reading for Multiple Subject Instruction. (Same as 315A-315B.) Prerequisite: consent of instructor. Required for Team "L" students ONLY. 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. Mr. Keislar

318A-318B. Principles and Methods for Teaching Reading for Single Subject Instruction. (1½ course each) Prerequisite: consent of instructor. 318A is prerequisite to 318B. 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. Mr. Keislar

320A-320B. Principles and Methods for Single Subject Instruction. (1½ course each) Prerequisites: consent of instructor. 320A is prerequisite to 320B. 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. Mr. Keislar

*324A. Observation and Participation: Single Subject Instruction (1 to 1½ courses) Prerequisites: course 324A and consent of instructor. Practice teaching under the daily supervision of a teacher in a classroom in which multiple subjects are taught, normally in an elementary school. Mr. Keislar

*324B. Supervised Teaching: Multiple Subject Instruction (1 to 1½ courses) Prerequisites: course 324A and 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. Mr. Keislar

*330A. Observation and Participation: Single Subject Instruction (1 to 1½ courses) Prerequisites: course 330A and 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. Preparation for supervised teaching. Mr. Keislar

330B. Supervised Teaching: Single Subject Instruction (1 to 1½ courses) Prerequisites: courses 330A and 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. Mr. Keislar

*330C. Supervised Teaching: Single Subject Instruction. (1 to 1½ courses) Prerequisites: course 330B and 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. Mr. Keislar

*330D. Supervised Teaching: Single Subject Instruction. (1 to 1½ courses) Prerequisites: course 330C and 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. Mr. Keislar

480. Learning and Development in Childhood and Adolescence. Prerequisite: consent of instructor. Preparation of alternative solutions for the teaching of reading instruction, and psychology of child and adolescent development applied to practical issues in classroom teaching. Emphasis on intellectual and cognitive development, achievement motivation, self-concept, cognitive learning, problem solving, and individual differences. Mrs. Feshbach, Mr. Wittrock

481. Knowledge and Inquiry in the Classroom. Prerequisite: consent of instructor. Examines the logical features of instruction, and demonstrates their application to inquiry techniques in teaching and learning. Analyzes various conceptions of truth, belief, fact and opinion, and studies their application to classroom learning situations. Mr. Elliott, Mr. Weinberg

482. Society and the Organization of School and Classroom. Prerequisite: consent of instructor. Analysis and resolution of problems of socialization in the classroom. Case study methods will be used to examine the cognitive, social and affective factors involved in the diagnosis and interpretation of classroom teaching problems. Mr. Gordon, Mr. O'Shea

483. Cognitive Processes in Reading. Critical analysis of scholarly studies, theoretical and applied, treating relationships between reading and the mind. Consideration of opportunities for student interaction with other students in the field, whose studies represent the "growth edge" of research. Mrs. Valadez

484. The Enhancement of Motivation in the Classroom. Comparative study of motivation in school including behavioristic, cognitive, developmental, humanistic approaches. Critical review, with special reference to teaching of reading, of (1) motivational motivation; (2) student performance; (3) procedures to foster enduring patterns of constructive motivation in the school. Mr. Keislar

489. Instructional Strategies in Education. Prerequisites: consent of instructor. Analysis of instructional methods, including research and active participation in the advisory approach, forms of debate, role playing, interaction process analysis, and feedback instruments. Practical emphasis on social sciences and humanities instruction. K-12. Mrs. Kourilsky

490A. Instructional Decision-Making. (1 to 1½ courses) Prerequisite: consent of instructor. Analysis of instructional models relevant to public school education. Assumptions, procedures, and constraints of each strategy considered in terms of learner and task variables. Laboratory experiences in classroom settings permit students systematically to apply and evaluate alternative instructional strategies. Mrs. Baker, Mrs. Kourilsky

490B. Supervised Teaching: Classroom Teaching (1 to 1½ courses) Prerequisites: course 330D and 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. Mr. Keislar

491A. Curricular Decision-Making. (1 to 1½ courses) Prerequisite: consent of instructor. Examination of alternative solutions to the practical problems that classroom teachers face in making curricular decisions. Analysis of the influence of psychological, sociopolitical, and societal factors in curricular decisions. Miss Crabtree

482. Evaluation of Teaching and Learning. Prerequisite: consent of instructor. Examines relationships between appraisal instruments and information required for making decisions about teachers, pupils and materials. Introduces recent developments in the evaluation of teaching and learning, and demonstrates the use of modern appraisal techniques in classroom settings. Mr. McNeil, Mr. Popham, Mr. Skager

Independent Study, Research, and Internship

199. Special Studies. (1 to 2 courses) Prerequisite: senior standing and consent of instructor. Independent study and research problems. 299A-299B-299C. Research Practicum in Education. May be repeated once for credit. 498A-498B-498C. Directed Field Experience. May be repeated once for credit. 499A-499B-499C. Advanced Directed Field Experience. May be repeated once for credit.

596. Directed Independent Study (1 to 2 courses) Individual study or research for graduate students. Maximum credit, 12 units.

597. Preparation for the Master's Comprehensive Examination or the Doctoral Qualifying Examination. (1 to 3 courses) Individual study for master's degree comprehensive examination or for qualifying examinations on the Ph.D., or Ed.D. Maximum credit, 12 units. To be graded S/U.

598. Thesis Research. (1 to 3 courses) Research for and preparation of the master's thesis. Maximum credit, 12 units. To be graded S/U.

599. Dissertation Research. (1 to 3 courses) Research for and preparation of the doctoral dissertation. Maximum credit, no limit. To be graded S/U.

Engineering and Applied Science

(Office of the Dean, 7400 Boelter Hall)

Russe1 R. O'Neill, Ph.D., Dean
Ahmed R. Wazzan, Ph.D., Associate Dean
Alfred C. Ingersoll, Ph.D., Associate Dean
William E. Kastenberg, Ph.D., Associate Dean
Richard Stern, Ph.D., Assistant Dean

Chemical, Nuclear, and Thermal Engineering Department

(Office, 5405 Boelter Hall)

Douglas N. Bennion, Ph.D., Professor of Engineering and Applied Science
Harry Buchberg, M.S., Professor of Engineering and Applied Science
Hans Christ, Ph.D., Professor of Engineering and Applied Science
Robert W. Conn, Ph.D., Professor of Engineering and Applied Science
Arthur F. Pillsbury, Engineer, Emeritus Professor of Engineering and Applied Science.

Bonham Campbell, E.E., Associate Professor of Engineering and Applied Science.

Michael K. Steenstrom, Ph.D., Associate Professor of Engineering and Applied Science.

Norman C. Dalkey, Ph.D., Adjunct Professor of Engineering and Applied Science.


Julius Glott, M.S., Adjunct Associate Professor of Engineering and Applied Science.

Alfred C. Ingersoll, Ph.D., Professor of Engineering and Applied Science.

Kenneth R. Shabaik, Ph.D., Ph.D., Professor of Engineering and Applied Science.

Alfred C. Ingersoll, Ph.D., Professor of Engineering and Applied Science.

Michel M. Ruskin, Ph.D., Professor of Engineering and Applied Science.

IlDintan F. Bunshah, Ph.D., Professor of Engineering and Applied Science.

H. Leipold, Ph.D., Emeritus Professor of Engineering and Applied Science.

Bruce L. Miller, Ph.D., Professor of Engineering and Applied Science.

Norman C. Dalkey, Ph.D., Professor of Engineering and Applied Science.

Michael K. Steenstrom, Ph.D., Associate Professor of Engineering and Applied Science.

Dr. Darel Rosenthal, Ph.D., Professor of Engineering and Applied Science.

M. J. Wagner, Ph.D., Dr. rer. nat., Professor of Engineering and Applied Science.

Michael K. Steenstrom, Ph.D., Associate Professor of Engineering and Applied Science.

D. Lewis Mingori, Ph.D., Professor of Engineering and Applied Science.

Rokuro Muki, Ph.D., Professor of Engineering and Applied Science.


Lucien A. Schmitt, Jr., M.S., Professor of Engineering and Applied Science.

George H. Sines, Ph.D., Professor of Engineering and Applied Science.

Richard Stern, Ph.D., Professor of Engineering and Applied Science.

Russell A. Westman, Ph.D., Professor of Engineering and Applied Science.

Joseph S. Beggs, D.Ing., Emeritus Professor of Engineering and Applied Science.

Martin Dupe, M.S., Emeritus Professor of Engineering and Applied Science.

Walter C. Hurty, M.S., Emeritus Professor of Engineering and Applied Science.

Tung Hua Lin, D.Sc., Emeritus Professor of Engineering and Applied Science.

Antony J.A. Morgan, Ph.D., Emeritus Professor of Engineering and Applied Science.

Edward H. Taylor, M.S., Emeritus Professor of Engineering and Applied Science.

William T. Thomson, Ph.D., Emeritus Professor of Engineering and Applied Science.

Resident at Santa Barbara.

Lewis P. Felton, Ph.D., Associate Professor of Engineering and Applied Science.

Paul V. Lade, Ph.D., Associate Professor of Engineering and Applied Science.

Dixon Rea, Ph.D., Associate Professor of Engineering and Applied Science.

Sanford B. Roberts, Ph.D., Associate Professor of Engineering and Applied Science.

Lawrence G. Selna, Ph.D., Associate Professor of Engineering and Applied Science.

Peter A. Monkewitz, Ph.D., Assistant Professor of Engineering and Applied Science.

Robert A. Engler, Ph.D., Adjunct Associate Professor of Engineering and Applied Science.

George J. Ruzic, Ph.D., Adjunct Associate Professor of Engineering and Applied Science.

Edward A. Westman, M.S., Emeritus Professor of Engineering and Applied Science.

Stephen E. Jacobsen, Ph.D., Professor of Engineering and Applied Science.

Nhan Levan, Ph.D., Professor of Engineering and Applied Science.

Bruce L. Miller, Ph.D., Professor of Engineering and Applied Science.

Jimmy K. Omura, Ph.D., Professor of Engineering and Applied Science.

Izhak Rubin, Ph.D., Professor of Engineering and Applied Science.

Paul K. C. Wang, Ph.D., Professor of Engineering and Applied Science.

Donald M. Wilberg, Ph.D., Professor of Engineering and Applied Science.

Kung-Yee Yen, Ph.D., Professor of Engineering and Applied Science.

Richard E. Mortensen, Ph.D., Associate Professor of Engineering and Applied Science.

George J. Ruzic, Ph.D., Adjunct Associate Professor of Engineering and Applied Science.

Eduardo J. Subelman, Ph.D., Assistant Professor of Engineering and Applied Science.

Denham S. Ward, Ph.D., Assistant Professor of Anesthesiology and Engineering and Applied Science.

The M.S. and Ph.D. Programs

Requirements for Admission

In addition to meeting the requirements of the Graduate Admissions Section of the Graduate Division, applicants for the graduate Engineering programs are required to take the Aptitude Test and Advanced Test of the Graduate Record Examination in engineering, mathematics, or a related area. Applicants for the graduate Computer Science programs are required to take the Graduate Record Examination Aptitude Test and Advanced Test in mathematics or computer science.

A student entering the Engineer/Ph.D. program normally will be expected to have completed the requirements for the master's degree with a scholarship record equivalent at least to a 3.25 grade point average (based on a 4.0 maximum) 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.

Application for Admission forms, including a departmental supplement to the application, may be obtained by writing to the Assistant Dean for Graduate Studies, School of Engineering and Applied Science, UCLA, Los Angeles, CA 90024.

Graduate Students Admitted Provisionally. Graduate students admitted provisionally because of inadequate preparation, are advised that their academic records will be reviewed at the end of each quarter, for a specified period of time. Provisional admission normally requires enrollment in 8 units per quarter of 100/200 series courses in the School of Engineering and Applied Science with no grade lower than a B in any course. If at the end of three quarters of work, or earlier, they fail to show promise as graduate students, or fail to maintain the required minimum grade point average, they will be dismissed from the School. Students who have maintained University and School scholarship requirements, and who

Materials Science and Engineering

(Office, 6531 Boelter Hall)

Alan J. Arendt, Ph.D., Professor of Engineering and Applied Science.


David L. Douglass, Ph.D., Professor of Engineering and Applied Science.

Winston J. Rosenthal, Ph.D., Professor of Engineering and Applied Science.

John D. Stack, Ph.D., Professor of Engineering and Applied Science.

Karl B. Ono, Ph.D., Professor of Engineering and Applied Science.

Aly H. Shabaik, Ph.D., Professor of Engineering and Applied Science.

Thomas J. Wagner, Dr. rer. nat., Professor of Engineering and Applied Science.

Allred S. Yue, Ph.D., Professor of Engineering and Applied Science.

David Rosenthal, Ph.D., Emeritus Professor of Engineering and Applied Science.

William Klement, Jr., Ph.D., Associate Professor of Engineering and Applied Science.

Samuel B. Baldorf, Ph.D., Adjunct Professor of Engineering and Applied Science.

Bruce B. Dunn, Ph.D., Visiting Associate Professor of Engineering and Applied Science.

David L. Douglass, Ph.D., Professor of Engineering and Applied Science.

Frederick F. Lange, Ph.D., Adjunct Professor of Engineering and Applied Science.

Martin H. Lippold, Ph.D., Adjunct Professor of Engineering and Applied Science.

Morriss A. Steinberg, D.Sc., Adjunct Professor of Engineering and Applied Science.

Mechanics and Structures

(Office 5732 Boelter Hall)

Andrew F. Charvat, Ph.D., Professor of Engineering and Applied Science.

Julian D. Cole, Ph.D., Professor of Engineering and Applied Science.

Hector G. Fattorini, Ph.D., Professor of Mathematics and Engineering and Applied Science.

System Science

(Office, 4532 Boelter Hall)

A. V. Balakrishnan, Ph.D., Professor of Engineering and Applied Science and Mathematics (Chair of the Department).

Hector G. Fattorini, Ph.D., Professor of Mathematics and Engineering and Applied Science.

Stanley B. Dong, Ph.D., Professor of Engineering and Applied Science.

Steven Dubowsky, Sc.D., Professor of Engineering and Applied Science.

Kurt Forster, Ph.D., Professor of Engineering and Applied Science.

Michael E. Fournier, Ph.D., Professor of Engineering and Applied Science (Chair of the Department).

Gary C. Hart, Ph.D., Professor of Engineering and Applied Science.


Chung-Yen Liu, Ph.D., Professor of Engineering and Applied Science.

Ajit K. Mal, Ph.D., Professor of Engineering and Applied Science.

William G. Meacham, Ph.D., Professor of Engineering and Applied Science.

D. Lewis Mingori, Ph.D., Professor of Engineering and Applied Science.

Rokuro Muki, Ph.D., Professor of Engineering and Applied Science.


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Edward A. Westman, M.S., Emeritus Professor of Engineering and Applied Science.

Harold T. Yura, Ph.D., Emeritus Professor of Engineering and Applied Science.
have met any additional requirements that may have been assigned to them may continue in graduate status in the School of Engineering and Applied Science.

A candidate whose academic background is judged to be deficient may be required to undertake certain remedial coursework. A candidate whose academic background is judged to be deficient may be required to undertake certain remedial coursework.

Each department in the School of Engineering and Applied Science has a Graduate Adviser. A current list of Graduate Advisers can be obtained from the office of the Assistant Dean for Graduate Studies, Room 6730 Boelter Hall, School of Engineering and Applied Science.

Departmental guidance for Computer Science majors may be obtained by addressing inquiries directly to the Computer Science Department: Departmental Administrator, Computer Science Department, Room 3731 Boelter Hall, Telephone: (213) 825-6396, School of Engineering and Applied Science.

Each graduate student is assigned a faculty adviser upon admission to the School. New students should arrange an appointment as early as possible with their faculty advisers.

The contents of six undergraduate courses are required provisionally, or to students on probation. If a candidate's academic background is judged to be deficient, the candidate may be required to undertake certain remedial coursework.

Each graduate student is assigned a faculty adviser upon admission to the School. Each graduate student is assigned a faculty adviser upon admission to the School.

A candidate whose academic background is judged to be deficient may be required to undertake certain remedial coursework. A candidate whose academic background is judged to be deficient may be required to undertake certain remedial coursework.

Candidates for the M.S. or Ph.D. degrees 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 Computer Science related subjects chosen from the following two groups:

- Group 1 (four required courses or equivalents): CS 141, CS181, CS151A, CS151B
- Group 2 (two required courses or equivalents): CS 111; CS 112; CS 130* or CS 131 or CS 132; CS 171 or CS 174; Math 141B or CS 172 or CS 173

Computer Science Breadth Requirement

Candidates for the M.S. or Ph.D. degrees 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 Computer Science related subjects chosen from the following two groups:

- Group 1 (four required courses or equivalents): CS 141, CS181, CS151A, CS151B
- Group 2 (two required courses or equivalents): CS 111; CS 112; CS 130* or CS 131 or CS 132; CS 171 or CS 174; Math 141B or CS 172 or CS 173

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- Group 1 (four required courses or equivalents): CS 141, CS181, CS151A, CS151B
- Group 2 (two required courses or equivalents): CS 111; CS 112; CS 130* or CS 131 or CS 132; CS 171 or CS 174; Math 141B or CS 172 or CS 173

Competence in any or all courses may be demonstrated in one of three ways. These are:

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 a 2.0 unit Computer Science Seminar, CS201, for credit.

(Grade "S" for each degree.)

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.

Disqualification and Appeal of Disqualification

Termination of studies is recommended under the following circumstances:

Master of Science Degree (M.S.)

1. Failure to maintain a grade point average of 3.0 both overall and in the 200 level courses.
2. Failure to maintain a grade point average of 3.0 in any two consecutive quarters.
3. Failure of the Comprehensive Examination twice.
4. Failure of the thesis committee to approve the thesis.
5. Failure to satisfy the Computer Science Breadth Requirement (for degrees in Computer Science).
6. Unsatisfactory progress toward the degree within the 3-year time limitation for completing all degree requirements.

Doctor of Philosophy (Ph.D.) Degree

1. Failure to maintain a grade point average of 3.25 both overall and in any two consecutive quarters.
2. Failure of the Major Field Written Examination.
3. Failure of the Oral Preliminary Examination.
4. Failure of a Written Minor Field Examination after failing to attain a grade point average of 3.33 in the minor field coursework.
5. Failure of the Oral Qualifying Examination.
6. Failure of the Final Oral Examination.

7. Upon recommendation by an examining committee that an examination should not be repeated.
8. Failure to satisfy the Computer Science Breadth Requirement (for degrees in Computer Science).
9. Unsatisfactory progress toward the degree within the described time limits.

Master of Engineer (M. Engr.) Degree

1. Failure to maintain a grade point average of 3.0 overall.
2. Failure of the Comprehensive Examination.
3. Unsatisfactory progress toward the degree within the described time limits.

Upon receipt of a written notice of termination, usually preceded by an interview with the Assistant Dean for Graduate Studies or the Departmental Graduate Adviser, the student may appeal to the Graduate Policy Committee of the School of Engineering and Applied Science. The student will submit a written statement to the chair of the Graduate Policy Committee, who will then present the case to the entire committee in one of its regular meetings during the academic year. The Graduate Policy Committee's decision will be considered final by the School of Engineering and Applied Science. Further appeal may be made to the Dean of the Graduate Division (see procedures on Disqualification and Appeal of Disqualification at the beginning of this catalog).

Prerequisite and Other Undergraduate Courses

Not Applicable Toward Graduate Degrees

Engineering

5. Computer Literacy and Appreciation
10C. Introduction to Programming
10F. Introduction to Programming
105. Introduction to Programming
11. Patterns of Problem Solving
12. Applied Patterns of Problem Solving
15. Introduction to Manufacturing Engineering
100. Electrical and Electronic Circuits
100B. Engineering Electromagnetics
100L. Circuit Analysis Laboratory
102. Mechanics of Particles and Rigid Bodies
103A. Elementary Fluid Mechanics
104. Introduction to Experimental Techniques
104C-D. Undergraduate Research Laboratory
105A. Introduction to Engineering Thermodynamics
105D. Transport Phenomena
106A. Principles of Engineering Economy
106B. Introduction to Design and Systems Methodology
106C. Experimental Design Laboratory
106D. Experimental Systems Design Laboratory
106. Introduction to Mechanic of Deformable Solids
109. The Engineer and Society
121C. Systems and Signals
124A. Applied Numerical Computing
127B. Elements of Probability and Information
1998-G. Special Studies

*Courses subject to approval.
individual departments within the School of Engineering may impose certain restrictions on the applicability of other undergraduate courses toward graduate degrees. Please consult with your Departmental Graduate Adviser on departmental requirements and restrictions.

The Master of Science Degree

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 either the Engineering or the Computer Science major. In the Thesis Plan, seven of the nine courses must be formal courses, including at least four 200 series graduate courses. The remaining two courses may be Individual Study (Engr 598) involving work on the thesis. In the Comprehensive Examination Plan, at least five of the nine courses must be 200 series graduate courses; the remaining four courses may be either 200 series graduate or upper division undergraduate courses. No units of 500 series may apply toward the Comprehensive Examination Plan requirements.

Thesis Plan. The thesis must either describe some original piece of research that the student has done, usually, but not necessarily under the supervision of the thesis committee, or else provide a critical exposition of some topic lying in the student's major field of study. The thesis committee is established when the student, in consultation with the faculty adviser, has formulated a thesis research program. All members of the thesis committee are faculty members of the School of Engineering and Applied Science (no outside member is required). The student normally starts to plan the thesis at least one year before the award of the M.S. degree is expected. There is no examination for a student doing a thesis.

Comprehensive Examination Plan. The comprehensive examination committee is comprised of the student's adviser, and two other School of Engineering and Applied Science faculty members chosen by the student and the adviser. Final appointment is made by the Assistant Dean for Graduate Studies. The Comprehensive Examination, which is offered every quarter, is required in written form only. It is recommended that the comprehensive examining committee conduct an oral query of the candidate after review of the written examination. The M.S. program is centered around one major field. Candidates who fail the Comprehensive Examination may be reexamined once, with the approval of the Assistant Dean for Graduate Studies.

Time to Degree. The average length of time for students in the M.S. program is five quarters.

The maximum time allowed for completing the M.S. degree is three years from the time of admission to the M.S. program in the School of Engineering and Applied Science.

Major Fields or Subdisciplines. The major fields and subdisciplines offered at the M.S. level parallel those listed below for the Ph.D. program. A student is free, however, to propose to the School any other field of study, with the support of his/her adviser.

The Ph.D. Degree

The Engineer (Engr.) Degree

Course Requirements. There is no formal course requirement for the Ph.D. degree, and a student may, theoretically, substitute the coursework by examinations. Normally, however, the student will take courses to acquire the body of knowledge needed for preparation for the Ph.D. Written and Oral Preliminary Examinations. The basic program of study for the Ph.D. degree in Engineering or in Computer Science 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 the student's 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 a student fails to satisfy the minor field requirements through coursework, a minor field examination may be taken. Under these circumstances, the minor field examination may be taken only once.

Written and Oral Qualifying Examinations. When the student has mastered the body of knowledge defined in the three fields, the student will take a Written Preliminary Examination in the major field. When this examination is successfully passed, and all coursework completed, the student will proceed to take an Oral Preliminary Examination which encompasses the major and minor fields. The Preliminary Examinations (Written and Oral) should be completed within the first two years of full-time enrollment in the Ph.D. program. A candidate may not take an examination (written or oral) more than twice.

After the student has demonstrated competence in the three fields, the School will notify the Graduate Division of the student's readiness for the Oral Qualifying Examination. The details of the Oral Qualifying Examination are at the discretion of the doctoral committee but ordinarily will include a broad inquiry into the student's preparation for research. The doctoral committee also reviews the prospectus of the dissertation at the Oral Qualifying Examination. All members of the committee shall be present and the candidate is considered to have passed if not more than one member votes "not passed".

Time to Degree.

a. From admission to the Ph.D. program to the completion of the Preliminary Examinations: six quarters.

b. From the completion of the Preliminary Examinations to the award of the Ph.D. degree: five quarters.

c. From admission to graduate status (includes M.S. degree) to award of the Ph.D. degree: 15 quarters (normative time-to-degree).

Final Oral Examination Following Completion of the Dissertation. A Final Oral Examination is required of all candidates.

Major Fields or Subdisciplines

Chemical Engineering
Heat and Mass Transfer
Nuclear Science and Engineering
Computer Science Department
Computability and Algorithms
Computer Science Theory
Computer Methodology: Biological Systems
Computer Methodology: Cognitive and Knowledge-Based
Computer Methodology: Physical Systems
Computer System Architecture
Computer Programming Languages and Systems
Computer Network Modeling & Analysis

Electrical Engineering Department
Applied Plasma Physics
Circuits
Electromagnetics
Quantum Electronics
Solid State Electronics

Engineering Systems Department
Applied Dynamic Systems Control
Water Resource Systems Engineering

Materials Science & Engineering Department
Ceramics and Ceramic Processing
Metallurgy and Metal Processing
Science of Materials

* A student is free to propose to the School any other field of study with the support of his/her adviser. Instructions on the definition of acceptable ad hoc fields and procedures for their approval are available in the Engineering Graduate Studies Office.

** Established Minor Field only.

1 Computer Science majors may pursue additional relevant minor fields of study offered by the School of Engineering and Applied Science.
Mechanics and Structures Department
Applied Dynamic Systems Control
Dynamics
Earthquake Engineering
Fluid Mechanics
Mechanics of Solids
Soil Mechanics
Structures
System Science Department
Communications Systems
Control Systems
Operations Research
School-Wide Fields
**Applied Mathematics
Man-Machine-Environment Systems
School-Wide Programs
Biocybernetics
Manufacturing Engineering

The Engineer (Engr.) Degree
The School of Engineering and Applied Science offers an Engineer degree at a level equivalent to completion of preliminaries in the Ph.D. program. The Engineer (Engr.) degree program has been established to offer a degree which represents a considerable advanced training and competence in the Engineering field, but which 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 for two differences:

1. The Engineer degree is based on coursework. The minimum requirement is 15 (at least nine graduate) courses beyond the bachelor's degree, distributed in the same pattern as in the Ph.D. program: At least six courses in the major field (minimum four graduate courses), and at least three in each minor field (minimum two graduate courses in each).

2. The time limitation for completing the Engineer degree is three years (nine quarters) from the time of admission.

The Ph.D. and Engineer degree programs are administered interchangeably 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, and 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 will also count toward the minimum residence requirement and time limitation for the other program.

The Master of Engineering Degree
Admission Requirements. In addition to the University minimum requirements, the following is required: (a) Five years of responsible full-time professional experience in Engineering;

(b) Some formal study in statistics; (c) The Aptitude and Advanced Test of the Graduate Record Examination in engineering, mathematics or a related field. A screening interview with the Coordinator of the Engineering Executive Program is required.

The School of Engineering and Applied Science has a supplement to the Application for Admission which may be obtained at this address: Engineering Executive Program, Room 6288 Boelter Hall, School of Engineering and Applied Science.

Advising. Name and address of Graduate Adviser: Coordinator of the Engineering Executive Program, Room 6288 Boelter Hall, School of Engineering and Applied Science; or Assistant Dean for Graduate Studies, Room 6730 Boelter Hall, School of Engineering and Applied Science.

The Coordinator of the Engineering Executive Program guides the student in completing the prescribed program. The Coordinator holds meetings with the students at least once a year.

Major Field or Subdisciplines. Engineering Management.

Course Requirements. A total of 12 graduate level courses are required for the Master of Engineering degree. They are as follows: Engineering 470A, 470B, 470C, 471A, 472A, 471B, 472B, 471C, 472C, 473A, 473B.

Comprehensive Examination. The comprehensive examining committee is appointed by the Coordinator of the Engineering Executive Program and consists of three faculty members. The Comprehensive Examination, which is offered once a year and is general in scope, is given in written and oral form. A student who fails this examination may be reexamined once.

Time to Degree. From graduate admission to the conferral of the degree, normal progress is six quarters.

Requirements for the Graduate Certificate of Specialization in Engineering and Applied Science
A certificate of specialization is available in all areas offered by the School of Engineering and Applied Science except Computer 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, 200 series. No work completed for any previously awarded degree or credential can be applied to the certificate. Successful completion of a certificate program requires an overall minimum B average in all courses applicable to the graduate Certificate of Specialization in Engineering and Applied Science. 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 the Engineering Graduate Studies Office, 6730 Boelter Hall.

Courses completed for a Certificate of Specialization in Engineering and Applied Science may subsequently apply toward master's and/or doctoral degrees.

Other Relevant Information. For additional information on the School's teaching and research activities, as well as on the procedures for implementing the above requirements and policies, please refer to the Announcement of the School of Engineering and Applied Science, available in the Engineering Graduate Studies Office, 6730 Boelter Hall.

Graduate Courses
Chemical, Nuclear, and Thermal Engineering
230A. Advanced Engineering Thermodynamics. (Formerly numbered Engineering 230A) Prerequisites: Engineering 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, solids and plasmas.

230B. Nonequilibrium Thermodynamics. (Formerly numbered Engineering 230B) Prerequisite: Chemical, Nuclear and Thermal Engineering 230A. Interpretation of non-equilibrium phenomena in terms of the Fourth Law of Thermodynamics, namely (a) linear interdependence of fluxes and driving forces and (b) Onsager reciprocal relations. Boltzmann transport equation; diffusion; electrical and heat currents; numerical calculation of parameters.

Mr. Robinson
230C. Cryogenics. (Formerly numbered Engineering 230A) Prerequisite: Engineering 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)

Mr. Robinson (Sp)
231A. Convective Heat Transfer Theory. (Formerly numbered Engineering 231A) Prerequisite: Engineering 231A. The conservation equations for flow of real fluids. Analysis of heat transfer in laminar and turbulent, incompressible and compressible flows. Internal and external flows; free convection. Variable wall temperature; effects of variable fluid properties. Analogies among convective transfer processes.

Mr. Caton (W)
239BA-239BZ. Seminar: Current Topics in Transport Phenomena. (1/2 to 1 course) (Formerly numbered Engineering 239B.) Prerequisite: consent of instructor. Lectures, discussions, student presentations, and projects in areas of current interest in transport phenomena. All sections are graded S/U only, and may be repeated for credit.

239CA-239CZ. Seminar: Current Topics in Energy Utilization. (Formerly numbered Engineering 239A.) Prerequisite: consent of instructor. Lectures, discussions, student presentations, and projects in areas of current interest in energy utilization. All sections are graded S/U only, and may be repeated for credit.

239DA-239EZ. Seminars in Chemical Engineering. (1/2 to 1 course) Prerequisite: consent of instructor and additional prerequisites for each offering as announced in advance by the Chemical, Nuclear and Therma1 Engineering Department. Lectures, discussions, student presentations and projects in areas of current interest. All sections are graded S/U only, and may be repeated for credit.

239FA-239FZ. Special Topics in Transport Phenomena. (1/2 to 1 course) Prerequisite: consent of instructor and additional prerequisites for each offering as announced in advance by the Chemical, Nuclear and Therma1 Engineering Department. Advanced study in areas of current interest in nuclear engineering such as reactor safety, risk-benefit trade-offs, nuclear materials, and reactor design. May be repeated for credit when no duplication exists. Mr. Pomraning (F, W, Sp)

239GA-239GZ. Special Topics in Nuclear Engineering. (1/2 to 1 course) Lecture, two to four hours. Prerequisites: consent of instructor and additional prerequisites for each offering as announced in advance by the Chemical, Nuclear and Therma1 Engineering Department. Advanced study in areas of current interest in nuclear engineering such as reactor safety, risk-benefit trade-offs, nuclear materials, and reactor design. May be repeated for credit when no duplication exists. Mr. Pomraning (F, W, Sp)

239HS. Chemical, Nuclear, and Thermal Engineering Department Seminar. (1/4 course) (Formerly numbered Engineering 239S.) Prerequisite: Graduate Standing in the Chemical, Nuclear and Thermal Engineering Department. Graduate students (and undergraduate students by special permission) in the Chemical, Nuclear and Thermal Engineering Department will present topics of current interest in chemical, nuclear, and thermal engineering. The seminar will be graded on a basis. Mr. Pomraning (F, W, Sp)

240. Fundamentals of Aero1 Behavior. Prerequisite: Engineering 137E or equivalent. Physics and chemistry of small particle behavior with applications to aerosol cleaning air pollution and air chemistry. Course is concerned with particles transport and deposition, optical properties and experimental methods, gas-to-particle conversion, and the dynamics of particle size distributions.

Mr. Friedlander (W)


251. Fusion Reactor Analysis. (Same as Electrical Engineering M214D.) Prerequisite: Engineering M118 or consent of instructor. Fusion reactions, fuel and bred ions, reactor physics, reactor safety and reactor design. Methods for burning plasma analysis in e.g., tokamaks, tandem mirrors and laser fusion plasmas. Point plasma kinetics, space-time multifield hydromagnetics, and kinetic theory models. Driven rector plasmas. Atomic reaction processes and plasma-wall interactions. Mr. Pomraning (W)

252. Fusion Reactor Technology and Design. (Formerly numbered CNTE M230G) Same as Electrical Engineering M214E.) Prerequisite: Engineering 135A or consent of instructor. Lectures, discussions, design, magnetic and inertial. Operating conditions, power balance, system Q. Drivers for inerter conflagration, magnet systems; blanket and shield design and analysis, induced radioactivity, tritium breeding and processing. Progress in research into the development of reactor design concepts. Mr. Pomraning (Sp)

253A-2. Special Topics in Fusion Physics, Engineering and Technology. Lecture, four hours. Prerequisites: consent of instructor and additional prerequisites for each offering as announced in advance by the CNTE Department. Advanced treatment of subjects chosen from research areas in fusion science and engineering such as instabilities in plasmas, alternate fusion confinement concepts, inertial conflagration fusion, fusion-fission hybrid systems, and fusion reactor safety. May be repeated for credit when no duplication exists.

Mr. Conn, Mr. Ghoniem, Mr. Pomraning

Computer Science

201. Computer Science Seminar. (1/4 course) Prerequisite: Graduate Standing in computer science. Lectures on current research topics in Computer Science. To be graded on a S/U basis. (May be repeated for credit.) Mr. Berry


212B. Queueing Applications: Scheduling Algorithms and Queuing Networks. (Formerly numbered Engineering M232B.) Prerequisite: Computer Science 212A. (Not open for full credit to students who have taken Computer Science 211A prior to Winter Quarter 1981.) Priority Queueing. Applications to time-sharing scheduling algorithms: FB, Round Robin, Conservation Law, Bounds. Queuing Networks: Definitions, flow balance, product form solutions, local balance, M/M/1, computational algorithms for performance measures, asymptotic behavior and bounds; approximation techniques—differential—iterative—techniques; applications. Mr. Kleinrock (W)

217. Operating Systems. Principles of operating systems, multiprogramming and real-time systems. Mr. Kleinrock (Sp)

218. Advanced Computer Science Seminar. ( Formerly numbered Engineering 225Y.) Prerequisite: Computer Science 131 and 181 (or equivalents) or consent of instructor. Seminar on advanced topics in computer language including design goals of modern languages, levels of abstraction, methodologies for standardization and proposals for new problem-oriented and extensible languages. Enrollment limited to graduate students in the Computer Science Department. Mr. Uzgiris (W)

223A. Operational Semantics of Programming Languages. (Formerly numbered Engineering 225X.) Prerequisite: Computer Science 131 and 181 (or equivalents) or consent of instructor. Seminar on advanced topics in computer language including design goals of modern languages, levels of abstraction, methodologies for standardization and proposals for new problem-oriented and extensible languages. Enrollment limited to graduate students in the Computer Science Department. Mr. Uzgiris (W)

230. Programming Languages. (Formerly numbered Engineering 230.) Prerequisite: Computer Science 131 and 181 (or equivalents) or consent of instructor. Seminar on advanced topics in computer language including design goals of modern languages, levels of abstraction, methodologies for standardization and proposals for new problem-oriented and extensible languages. Enrollment limited to graduate students in the Computer Science Department. Mr. Uzgiris (W)

231A. Advanced Topics in Programming Languages. (Formerly numbered Engineering 225P.) Prerequisite: Computer Science 131. Presentation, analysis and discussion of specialized programming languages. Formerly numbered Programming Language Semantics: information structure models, Vienna definition language, lambda calculus, LISP definition, interpreter equivalence and correctness. Mr. Melkanoff (Sp)

231B. Advanced Topics in Computer Language Design. Prerequisites: Computer Science 132, 141, 181 (or equivalents) or consent of instructor. Seminar on advanced topics in computer language including design goals of modern languages, levels of abstraction, methodologies for standardization and proposals for new problem-oriented and extensible languages. Enrollment limited to graduate students in the Computer Science Department. Mr. Uzgiris (W)

232A. Operational Semantics of Programming Languages. (Formerly numbered Engineering 225X.) Prerequisite: Computer Science 131 and 181 (or equivalents) or consent of instructor. Seminar on advanced topics in computer language including design goals of modern languages, levels of abstraction, methodologies for standardization and proposals for new problem-oriented and extensible languages. Enrollment limited to graduate students in the Computer Science Department. Mr. Uzgiris (W)

232B. Semantics of Programming Languages. (Formerly numbered Engineering 225Y.) Prerequisite: Computer Science 131 and 181 (or equivalents) or consent of instructor. Seminar on advanced topics in computer language including design goals of modern languages, levels of abstraction, methodologies for standardization and proposals for new problem-oriented and extensible languages. Enrollment limited to graduate students in the Computer Science Department. Mr. Uzgiris (W)

234A. Correctness Proofs. Prerequisite: consent of instructor. Theoretical and practical aspects of correctness proofs. Partial correctness, total correctness, and termination. Axiomatic semantics and proof systems. Abstraction and correctness of implementations. Formulation, execution, and assessment of correctness proofs. Topics of current research interest. Mr. Martin (W)

234C. High Level Language Computer Architecture. Prerequisite: Computer Science 131 or 181. Computer Science 232A or 232B. A study of machine architectures to facilitate direct or nearly direct execution of high level languages: Algol-like machines including Burroughs B6700, microprogramming and microprogramming techniques for use in peripheral processors and their use in architecture design. Mr. Berry (Sp)
24A. Current Topics in Computer Science—Programming Languages and Systems. (1% to 4 courses) (Formerly numbered Engineering 222Z.) Prerequisite: consent of instructor. Review of current literature in an area of computer science—programming language and system architecture in which the instructor has developed special proficiency as a consequence of research interests. May be repeated for credit, provided no duplication exists.

241A. Data Management Systems. (Formerly numbered Engineering 2224.) Prerequisites: Computer Science 131 or Management 113A-113B, or equivalent; Computer Science 141 or equivalent. Information and file handling in higher language levels, storage allocation and management, database organization. Models and architecture of data management systems. Logical and physical structures. Query languages. Commercially available generalized file management and data base management systems. Mr. Cardenas, Mr. Munzt, Mr. Popek (F,W,Sp)


242A. Privacy and Security in Computer Information Processing. Prerequisite: Computer Science 111 or consent of instructor. Analysis of the technical difficulties of producing secure computer information systems that provide guaranteed controlled sharing, with emphasis on software models and design. Examination and critique of current systems and practices. Possible certification of such systems. Relevant social issues. Mr. Popek (W)

243A. Relational Data Bases. Prerequisites: Computer Science 131 or Management 113A-113B. The structure of data in computer information systems. Relationship and data base terminology. Relational Data Bases: experimental and commercial design methodology. Mr. Barker (W)

244B. Abstract Data Types and Program Specification. Prerequisites: Computer Science 141, Computer Architecture 115A, and 114B. Data type and abstract program specification permit one to understand how programs manipulate data, independently of their implementations. These topics help in the structuring and verification of the class will include programing exercises.

245. Current Topics in Data Structures. (1% to 3 courses) 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. Student reports on selected topics. May be taken for credit more than once with consent of instructor. (F,W,Sp)

251A. Advanced Computer Architecture. Prerequisites: Computer Science 151A, 151B, and 111, or consent of instructor. Functional and structural models of computer systems. Architecture and organization at microprogramming, machine language and assembly language levels. Memory organization and system control. Arithmetic processors: algorithms and implementation. Storage system organization: hierarchy and management. Communication organization and control. Mr. Avizienis, Mr. Erecogovac (F,W,Sp)

252A. Computer Science Design: Arithmetic Processors. (Formerly numbered Engineering 225A.) Prerequisite: Computer Science 251A or consent of instructor. Concepts of number systems, digital number representation and organization, and digital arithmetic processors; conventional arithmetic; algorithm acceleration; floating-point and significance arithmetic; redundant, signed-digit, residue number systems; error detecting codes for arithmetic circuits; algorithm evaluation by analysis and simulation. Mr. Avizienis, Mr. Erecogovac (W)


253B. Advanced Topics in Fault-Tolerant Computing. Prerequisite: Computer Science 251A. Advanced topics in fault-tolerant computer systems. Emphasis on current research results and new systems in the stages of design and development. May be repeated for credit, provided no duplication exists. Mr. Avizienis, Mr. Rennels (Sp)

254A. Computer Memories and Memory Systems. (Formerly numbered Engineering 225D.) Prerequisites: Computer Science 251A or consent of instructor. Generic types of memory systems; control, access modes, hierarchies and allocation algorithms. Characteristics, system organization and device consideration of fast memories, thin film memories and semiconductor memories.

255A. Distributed Processing and Distributed Data Base Systems. Prerequisite: Computer Science 255A. Interprocess communications, protocol, interface design, distributed systems. Algorithm design, error recovery. Task partitioning, performance optimization, microprocessor based distributed processing system. File allocation, directory design, deadlock, consistency, synchronization, file availability, query optimization, data translation. Examples, tradeoffs, and design experiences. Mr. Chu, Mr. Rennels (F,Sp)

255B. Distributed Processing and Distributed Data Base Systems. Prerequisite: Computer Science 255A. Prerequisite: Computer Science 174 or equivalent. Current topics in interactive computer graphics system design, development, and applications. Mr. Bussell (W)

257A. Computer System Design: Comparative Architecture and Synthesis Methods. (Formerly numbered Engineering 225B) Prerequisite: Computer Science 251A. Advanced topics in Computer System Architecture. Elucidate important properties of computer systems and study methods for modeling, evaluating, and synthesizing them. Mr. Estrin (W)

258A-M258B-M258C. LS1 in Computer System Design. (Formerly numbered Engineering 225B.) Prerequisite: Computer Science 251A. Graduate Standing in Computer Science or Electrical Engineering and consent of instructor. A three quarter interdepartmental graduate course with four units of credit each quarter on LS1 design principles and application in computer systems. Mr. Bussell (M258A,F); M258B,W); M258C (Sp)).

259A. Computer Science Design: Algorithm Organization and Design. (Formerly numbered Engineering 225Z.) 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. Student reports on selected topics. May be repeated for credit, provided no duplication exists.

270A. Computer Methodology: Advanced Numerical Methods. Lecture, four hours. Prerequisites: Graduate Standing in Computer Science or Engineering, and Engineering 124A or Mathematics 141B or comparable experience with numerical computing. Principles of computer treatment of selected numerical problems in algebraic and differential equations, transcendental equations, and statistical theory. Emphasis on concepts pertinent to modeling and simulation and the applicability of contemporary developments in numerical software. Computer exercises. Mr. Carlyle, Mr. Karplus (F,W,Sp)

271A. Computer Methodology: Continuous Systems Simulation. (Formerly numbered Engineering 224A.) Prerequisites: Computer Science courses M124A and 171. The organization, operation and areas of application of electronic computer simulation systems. Error analysis; numerical analysis aspects of digital simulation languages for continuous systems characterized by ordinary differential equations. Mr. Karplus, Mr. Levine (Sp)


271C. Seminar in Advanced Simulation Methods. (1% course) Prerequisite: Computer Science 271A or equivalent. Discussion of advanced topics in the simulation of systems characterized by ordinary and partial differential equations. Topics include among others simulation languages, digital computer hardware and software, and advanced mathematical modeling techniques. Subject to change from quarter to quarter. May be repeated for credit. To be graded on S/U basis.


2724A. Problem Solving and Decision Making. (Same as Engineering Systems M272A.) Prerequisite: Engineering 193A or equivalent. Formal models of digital simulation techniques and modern mechanized problem-solving. Foundations of quantitative coding of qualitative information. Theories of subjective probabilities and utility. Relations between artificial intelligence and decision analysis and in the simulation—formation—process of human decision-making and problem-solving behavior. Mr. Pearl (F)

2724B. Knowledge-Based Systems. (Same as Engineering Systems M274B.) Prerequisite: Engineering Systems M274A. (Computer Science M274A) Computer Science students must have completed M274A or equivalent, or consent of instructor. Machine representation of judgmental knowledge and uncertain relationships. Inference on inexact knowledge bases. Rule-based systems—principles, advantages and disadvantages. Understanding and implementing Automated planning systems. Knowledge acquisition and explanation producing techniques. Mr. Pearl (Sp)

2724C. Computer Methods of Data Analysis and Model-Formation. (Same as Engineering Systems M274C.) Prerequisites: Engineering 193A or equivalent, or consent of instructor. Techniques of using computers to interpret, summarize, and form theories of empirical observations. Mathematical analysis of tradesoffs between the computational costs and benefits of various requirements, and practical implementations of computerized models. Mr. Pearl (Sp)

2724Z. Current Topics in Cognitive Systems. (Same as Engineering Systems M274Z.) Prerequisites: consent of instructor and additional prerequisites for each such 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 when no duplication exists. Mr. Pearl (Sp)

275A. Information Processes in Nervous Systems. (Formerly numbered Engineering 2253.) Prerequisite: Computer Science 225 or consent of instructor. Analysis of acquisition and transfer of information in the nervous system and of the role of computers in the analysis and interpretation of neuropsychological data. Mr. Vidal (W)
276A. Statistical Pattern Recognition. (Formerly numbered Engineering 225M) Prerequisite: Graduate Standing, some background in probability such as Engineering 120A. Mathematics 150A is useful. Computer methodology in the processing of large data sets. Multidimensional measurements. Adaptation and learning the meaning of a normal distribution. Bayesian statistics and loss functions. Learning algorithms and clustering processes. Applications to pattern recognition and presentations. Mr. Klinger (W)

278B. Structural Pattern Recognition. Prerequisite: some background in Computer Science such as CS 141, 181 or consent of instructor. Descriptive methods in computing of pattern sets. Data Picture description languages, primitives, and formal methods for syntactic analysis, abstraction, and recognition. Introductory material on scene analysis and image processing. Application of familiar character, chromosome data, and line drawings. Mr. Klinger (Sp)

276C. Machine Pattern Analysis. (½ course) Prerequisite: Computer Science 276A or equivalent. Advanced research topics in machine processing of patterned data. Topics in pattern recognition and machine processing. Mr. Klinger, Mr. Pearl (F)

279. Current Topics in Computer Science Methodology. (½ to 4 courses) (Formerly numbered Engineering 224Z) 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, provided no duplication exists. Mr. Klinger, Mr. Pearl (F)

280A-280ZZ. Algorithms. (Formerly numbered System Science 228B.) Prerequisite: consent of instructor; and additional prerequisites for each offering as announced in advance by the Department of Computer Science. Selections from: design, analysis, optimization and implementation of algorithms; the general theory of algorithms; algorithms for particular application areas. Subtitles of some current sections: Principles of Design and Analysis (280A); Graphs (280B); Computers and Networks (280C). Examination of instructor, some offerings in this series may be repeated for credit when no duplication exists. Ms. Greibach (W,Sp)

281A. Computability and Complexity. (Formerly numbered System Science 228B.) Prerequisite: Computer Science 123B or 181, or consent of instructor. Concepts fundamental to the study of discrete information systems and theory of computing, with emphasis on: regular sets of strings, Turing-reachable programs, recursively enumerable sets and their closure properties, machine characterizations, nondeterminism, decidability, unsolvable problems, "easy" and "hard" problems. PTIME/NTIME. Ms. Greibach, Mr. Parker (F)

281D. Discrete State Systems. (Formerly numbered System Science 228D.) Prerequisite: consent of instructor; Engineering 128D recommended. Finite-state machines, transducers and their generalizations; regular expressions, transduction relations, realizability; decomposition, synthesis, and design considerations; topics in state and system identification and fault diagnosis, linear machines, probabilistic machines, applications in coding, compression, communication, computing, system monitoring, and automation. Mr. Carlyle (Sp)

284A-284ZZ. Topics in Automata and Languages. (Formerly numbered Computer Science 284XA-284XZ) Lecture. Four hours. Prerequisites: Computer Science 181 and additional prerequisites for each offering as announced in advance by the Computer Science Department. Selections from: families of formal languages, grammars, machines, operators; pushdown automata, context-free languages and their generalizations, parsing, multidimensional grammars, developmental systems; machine-based complexity. Subtitles of some current and planned sections: Context-Free Languages (284A), Parsing Algorithms (284B). With consent of instructor, some offerings in this series may be repeated for credit when no duplication exists. Ms. Greibach (W)

287A. Theory of Program Structure. (Formerly numbered Computer Science M287A) Prerequisite: Computer Science 123B or 161. 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)

289A-289ZZ. Current Topics in Computer Theory. (½ to 3 courses) (Formerly numbered Computer Science 289B, 289C) Prerequisite: consent of instructor. Review of current literature in an area of Computer Science Theory in which the instructor has developed special proficiency as a consequence of research interests. Students report on selected topics. 497E. Field Projects in Computer Science. Prerequisite: consent of instructor. Students will be divided into teams led by the instructor; each team will be assigned an external company or organization which they will investigate as a candidate for possible computerization. They will submit a team report of their findings and recommendations. This course is offered on an In Progress basis which requires students to complete the full two quarter sequence, at the time of which they will be given a specific project of work. Mr. Melkanoff (497D, F; 497E, W)

596. Directed Individual or Tutorial Studies. (½ to 2 courses) Prerequisite: Graduate Standing in Engineering; consent of instructor. Petition forms to request enrollment may be obtained from the Assistant Dean, Graduate Studies. Supervised investigation of advanced technical problems. To be graded on a S/U basis. Mr. Klinger, Mr. Pearl (F)

597A. Preparation for M.S. Comprehensive Exam. (½ to 3 courses) Prerequisite: consent of instructor. Preparation Standing in Engineering; consent of instructor. Petition forms to request enrollment may be obtained from the Assistant Dean, Graduate Studies. Reading and preparation for the comprehensive examination. To be graded on a S/U basis.

597B. Preparation for Ph.D. Preliminary Examinations. (½ to 4 courses) Prerequisite: Graduate Standing in Engineering; consent of instructor. Petition forms to request enrollment may be obtained from the Assistant Dean, Graduate Studies. To be graded on a S/U basis.

597C. Preparation for Ph.D. Oral Qualifying Examination. (½ to 4 courses) Prerequisite: Graduate Standing in Engineering; consent of instructor. Petition forms to request enrollment may be obtained from the Assistant Dean, Graduate Studies. Preparation for Oral Qualifying Examination, including preliminary research on dissertation. To be graded on a S/U basis.

598. Research and Preparation for the Master's Thesis. (½ to 3 courses) Prerequisite: Graduate Standing in Engineering; 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. To be graded on a S/U basis.

599. Research and Preparation for the Doctoral Dissertation. (½ to 4 courses) Prerequisite: Graduate Standing in Engineering; consent of instructor. Petition forms to request enrollment may be obtained from the Assistant Dean, Graduate Studies. To be graded on a S/U basis.

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Electrical Engineering

201. Electrical Engineering Seminar. (½ course) Lecture. Two hours. Prerequisite: Graduate Standing in Engineering. Lectures on current research topics in Electrical Engineering. Graded S/U only.

11OB. Advanced Circuit Theory I. (Formerly numbered Engineering 210A) Prerequisite: Electrical Engineering 210B. Concepts of linear algebra and complex function theory. State equations for linear circuits. Characterization of R-ports and multi-terminal elements. Introduction to, and applications of, the scattering matrix, and related topics. Mr. Orchard (F)


210C. Advanced Network Synthesis. (Formerly numbered Engineering 210C) Prerequisite: Engineering 110C. Theory and practical development of lossless ladder networks. Loss-phase relations in multiport networks and in the design of allpass functions and networks. Design of linear-phase polynomials. Mr. Orchard, Mr. Temes (W)

210D. Active, Passive, and Digital Filters. (Formerly numbered Engineering 210D) Prerequisite: Electrical Engineering 210B. Prerequisites: Electromechanical filters and passive and active network theory. Realization of passive filters. Electro-mechanical filters. Active filters with lumped and/or distributed elements. Switched and digital filters. Mr. Orchard, Mr. Temes (Sp)


213A. Quantum Electronics I. Prerequisite: Engineering 115A or consent of instructor. (Not the same as ESE 213A prior to Fall 1979; not open to students who have taken ESE 215A prior to Fall 1979.) Review of quantum mechanics, approximation methods, interaction of radiation and matter. Mr. Casperson, Mr. Stafso (Fall)

213B. Quantum Electronics II. Prerequisite: Electrical Engineering 213A or consent of instructor. Properties of lasers and semiconductor devices. Computer simulations. Optical frequency modulation, optical coherence, optical memory, and optical quantum mechanical effects, and behavior of high gain laser media. Mr. Casperson, Mr. Stafso (Sp)

213C. Quantum Electronics III. (Formerly numbered Engineering 213C) Prerequisite: Electrical Engineering 213B or consent of instructor. Properties of lasers at different wavelengths including laser action, applications of quantum mechanics and semiconductor devices, applications in communications and information processing systems. Mr. Casperson, Mr. Stafso (Fall)

213D. Quantum Electronics IV. Prerequisite: Electrical Engineering 213B or consent of instructor. (Not open for credit to students who have taken Electrical Sciences and Engineering 213B prior to Fall 1979.) Optical fibers and resonators, interaction of light with atoms including amplification and saturation, properties of lasers including power output and mode effects. Mr. Casperson, Mr. Stafso (Winter)

213E. Quantum Electronics V. (Formerly numbered Engineering 213E) Prerequisite: Electrical Engineering 213C. Prerequisites: Electrical Engineering 213B or consent of instructor. Properties of lasers at different wavelengths including laser action, applications of quantum mechanics and semiconductor devices, applications in communications and information processing systems. Mr. Casperson, Mr. Stafso (Winter)


216D. Electrical Sciences and Engineering: Physics of Semiconductor Devices I. (Formerly numbered Engineering 215D.) Prerequisite: Engineering 115D. Physical principles and device presentations of junction devices. Mr. Allen, Mr. Vianwanathan (F).

216E. Electrical Sciences and Engineering: Physical Electronics. (Formerly numbered Engineering 215E.) Prerequisite: Engineering 115D. Principles and design considerations of field effect devices, and charge-coupled devices. Mr. Vianwanathan (Sp).

216A. Analog Integrated Circuits. (Not the same as Electrical Engineering 216A prior to Fall Quarter 1981.) High speed linear amplifiers: circuit design for optimum high frequency response. Operational amplifiers, improved input impedance and slew rate, power supply rejection, circuit design techniques for optimum SNR. Voltage multipliers, D/A's and A/D's converters. Mr. K. Martin, Mr. Willis (F).

216B. Advanced Digital Integrated Circuits. (Not the same as Electrical Engineering 216B prior to Winter 1981.) Pre requisite: Engineering 116C. Modern logic families (description, analysis and comparison). MSI digital circuits (flipflops, registers, counters, PLA's, etc.). VLSI memories (ROM, RAM and scan memories, EPROM's, EEPROM's) and VLSI systems (micro-computers, PIA's, CAIA's, etc.). Mr. K. Martin (Sp).

216C. Advanced Integrated Circuit Design. Prequisite: Engineering 116C. Design of improved ICs. Topics include: Waveform synthesis and control, power amplifiers, circuit optimization, and computer-aided circuit design project. Mr. K. Martin (Sp).


216E. Communication Feedback Circuits. Prerequisite: Engineering 110B. Either Engineering 186D or 120B. (Not the same as Electrical Engineering 216E prior to Fall Quarter, 1982.) Analysis and applications of AGCs (Automatic Gain Control) and feedback circuits. Design of AGCs and feedback circuits. Mr. Stafsudd (F), Mr. Casperson (Sp).


217C. Microwave Circuits. (Formerly numbered Engineering 217C.) Prerequisite: Engineering 117A. Transmission line review; application to strip line and microstrip. Multiprot microwave networks; scattering and immittance matrices; devices, inhomogeneously filled guides. Surface guides. Excitation of guided waves. Periodic structures and filters. Mr. Elliott, Mr. Schott (Sp, odd years).


219A. Seminars on Advanced Topics in Electromagnetics. (Formerly numbered Engineering 219A.) Prerequisite: Engineering 117A, 117B or equivalent. Current topics in electromagnetics, such as waves interaction with flemes, moving media, data processing antennas, waves in statistically varying media, numerical methods applied to electromagnet problems, holograms and partially coherent waves. May be repeated for credit. Mr. Casperson (F), Mr. Stafsudd (Sp).

219B. Seminars on Advanced Topics in Solid State Electronics. (Formerly numbered Engineering 219B.) Prerequisite: Electrical Engineering 215A, 215B. Current research areas, such as fabrication effects in semiconductor devices, diffusion in semiconductor devices, nonlinear optics, and electron emission.

219D. Special Topics in Electric Circuit Theory. (Formerly numbered Engineering 219D.) Prerequisites: Electrical Engineering 214A, 214B or consent of instructor. Advanced treatment of topics chosen from research areas in electric circuit theory.

219E. Special Topics in Quantum Electronics. (Formerly numbered Engineering 219E.) Prerequisite: Electrical Engineering 213A or consent of instructor. Advanced treatment of topics chosen from research areas in quantum electronics such as guided wave optics, unconventional lasers, optical detection, and optical coherence. May be repeated for credit.

219X. Advanced Electrical Science and Engineering Seminar. (W or S/F or SP) (Formerly numbered Engineering 219X.) Prerequisites: passing of the Ph.D. major field examination or instructor’s approval. Seminar on current research topics in solid state and quantum electronics (Section 1) or in electronic circuit theory and applications (Section 2). Each student will report on a tutorial topic and on a research topic in his dissertation area. May be repeated for credit. To be graded on S/U basis.

Mr. Viswanathan (W,F,Sp).

M258A-M258B-M258C. LSI in Computer System Design. (Same as Computer Science M258A-M258B-M258C.) Prerequisites: Graduate Standing in Computer Science or Electrical Engineering and consent of instructor. A one-quarter interdepartmental graduate course with four units of credit each quarter on LSI/VLSI design principles and applications in computer system. Mr. Vianwanathan (M258A); M258B (W); M258C (Sp).

Engineering Systems

270A. Synthesis of Industrial Engineering Systems. (Formerly numbered Engineering 270A.) Prerequisites: design background and Engineering 173 or equivalent. The logic and quantitative formulations for the transdisciplinary design of engineering systems that meet advanced performance requisites in rapidity, productivity, profitability, environments, and resource conservation. Facilities, energy, processes, equipment, operations, cost, benefit, and safety considerations. Application areas will vary from year to year. Credit. To be graded on S/U basis.

Mechanics and Structures

250A. Foundations of Fluid Dynamics. (Formerly numbered Engineering 250A) Prerequisite: Engineering 150A or consent of instructor. The course develops and applies the fundamental theorems of fluid dynamics. Ideal fluids, potential flow, vortex motion, and energy concepts. The history of fluid dynamics is illustrated with problems drawn from mechanics, aerodynamics, and geophysics. Mr. Kelly (F)

250B. Viscous and Turbulent Flows. (Formerly numbered Engineering 250B) Prerequisite: Engineering 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 numbers: subcritical, transition, and turbulent shear flows. Mr. Meacham (W)

250C. Compressible Flows. (Formerly numbered Engineering 250C) Prerequisite: Engineering 150A or 150B or consent of instructor. Effects of compressibility in viscous and inviscid flows. Steady and unsteady inviscid subsonic and supersonic flow methods; characteristics; small disturbance theories (linearized and hypersonic); shock dynamics. Mr. Charwat (Sp)

251A. Stratified and Rotating Fluids. (Formerly numbered Engineering 251A) Prerequisite: Engineering 150A or equivalent; Engineering 150A 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 waves, internal waves, body oscillations, blocking phenomena. Viscous effects. Instabilities. Turbulent shear flows, wakes, plumes, and gravity currents. Mr. Kelly (F, even years)

251B. Marine Hydrodynamics. (Formerly numbered Engineering 251B) Prerequisite: Engineering 150A or equivalent; Engineering 150A or consent of instructor. Basic hydrodynamics; small amplitude and shallow water theories; waves on beaches; ship waves; mathematical hydrodynamics; breaking waves. Mr. Kelly (W, odd years)

251C. Fluid Dynamics of Pollution. (Formerly numbered Engineering 251C) Prerequisite: Engineering 150A or consent of instructor. The course is designed to introduce to engineers and/or scientists of various disciplines the fluid mechanical aspect of pollution problems. The lectures will discuss in depth the fluid dynamics of physicalchemical smog, oil slicks and pollution, and pollution in waterways. Mr. Kelly (W, odd years)

252A. Stability of Fluid Motion. (Formerly numbered Engineering 252A) Prerequisite: Engineering 150A or equivalent or consent of instructor Mechanisms by which laminar flows can become unstable, instability theory, thermal, centrifugal, and shear instabilities; boundary layer instability. Nonlinear aspects: sufficient criteria for stability, subcritical instabilities, supercritical states, transition to turbulence. Mr. Kelly (W, odd years)

252B. Statistical Theory of Turbulence. (Formerly numbered Engineering 252B) Prerequisite: Engineering 150A or consent of instructor. The course develops statistical methods of wide utility in engineering. Topics include turbulence theory; thermal, centrifugal, and shear instabilities; boundary layer instability. Nonlinear aspects: sufficient criteria for stability, subcritical instabilities, supercritical states, transition to turbulence. Mr. Meacham (Sp, even years)

253A. Advanced Engineering Aerodynamics. (Formerly numbered Engineering 253A) Advanced studies in Engineering Acoustics includes: three-dimensional wave propagation; propagation in bounded media; Ray acoustics; attenuation mechanisms in fluids. Mr. Stern (F)

Materials Science and Engineering


240B. Principles of Materials Science B (Structure of Materials). Prerequisite: Engineering 145A or equivalent. Atomic, electronic, and crystalline structure of materials; particles and waves, free electron model, band theory, atomic bonding and structure, and reciprocal lattices; amorphous solids, kinematical theory of scattering, electrons in a periodic potential, pseudopotentials, conduction of electrons in solids. Mr. Wagner (W)

241. Oxidation of Metals. (Formerly numbered Engineering 241) Prerequisite: Engineering 141, or equivalent, or consent of instructor. The kinetics and mechanism of gas-solid reactions. Absorption and phase-boundary reactions. Nucleation of reaction products, defect structure of oxides, crystal structure and morphology of oxide films, factors influencing adherence of surface films. Mr. Douglas (F)

242A. Plasticity Theory Applied to Metal Working. (Formerly numbered Engineering 242A) Prerequisite: Engineering 141 or equivalent, or consent of instructor. The kinetics and mechanism of gas-solid reactions. Absorption and phase-boundary reactions. Nucleation of reaction products, defect structure of oxides, crystal structure and morphology of oxide films, factors influencing adherence of surface films. Mr. Douglas (F)

242B. Solid State Reactions. (Formerly numbered Engineering 242B) Prerequisite: Engineering 141 or equivalent, or consent of instructor. The kinetics and mechanism of gas-solid reactions. Absorption and phase-boundary reactions. Nucleation of reaction products, defect structure of oxides, crystal structure and morphology of oxide films, factors influencing adherence of surface films. Mr. Douglas (F)

243A. Fracture of Structure Materials. (Formerly numbered Engineering 243A) Prerequisite: Engineering 143. Fracture mechanics, engineering and scientific aspects of crack nucleation, slow crack growth and unstable fracture. Fracture mechanics, dislocation models, fatigue, fracture in reactive environments, alloy development, fracture-toughness relations. Mr. Ono (W)

243B. Design for Fatigue Reliability. Prerequisites: at least one of Engineering 143A, 156A, 158A, or equivalent courses. Prediction of fatigue life of machine, structures, and vehicles with statistical confidence. Design concepts and fabrication techniques to prevent 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: Engineering 143A or 158A. Elastic and plastic behavior of crystals, the geometry, mechanics and interaction of dislocations, mechanisms of yielding, work hardening and other stresses. Crystals. (F, even years)

244. Electron Microscopy. (Formerly numbered Engineering 244) Prerequisite: Engineering 145A 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 crystal structure. Mechanical, elastic (F, odd years)

245C. Diffraction Methods in Science of Materials. (Formerly numbered Engineering 245C) Prerequisite: Engineering 145A or equivalent. Theory of the diffraction of waves (x-rays, electrons, and neutrons) in crystals, and materials in general; short and short-range order in crystals, structural effects of plastic deformation, solid-state transformations, arrangements of atoms in liquids and amorphous solids. Mr. Wagner (F, even years)

246A. Mechanical Properties of Nonmetallic Crystalline Solids. (Formerly numbered Engineering 246A) Prerequisite: Engineering 146A. Material and environmental factors affecting the mechanical properties of nonmetallic crystalline solids, including atomic bonding and structure, microstructural features, residual stresses, temperature, stress state, strain rate, size, and surface conditions. Methods for evaluating mechanical properties. Mr. Mackenzie (F, odd years)

246B. Structure and Properties of Glass. (Formerly numbered Engineering 246B) Prerequisite: Engineering 146A. Structure of amorphous solids and glasses. Conditions of glass formation and theories of glass formation and structure. Mechanical, elastic (Sp, even years)

246D. Electronic and Optical Properties of Ceramics. (Formerly numbered Engineering 246D) Prerequisite: Engineering 146A. Electronic properties of ceramic single crystals and glasses and effects of processing and microstructure of these properties. Electronic conduction, ferromagnetism, superconductivity. Electronic, magnetic, infrared, visible, and ultraviolet transmission. Unique application of ceramics. Mr. Mackenzie (Sp, odd years)


247C. Advanced Solidification. (Formerly numbered Engineering 247C) Prerequisite: Materials Science and Engineering 247A or equivalent. Liquid state concept of constitutional supercooling; nucleation from the liquid phase; solute redistribution during liquid-solid transformation; fluid motion; interface morphology; eutectic growth; determination of phase diagrams; student reports on current topics in solidification. Mr. Yoo (W)

248. Applications of Interdisciplinary Methods to Materials Synthesis. (Formerly numbered Engineering 248A) Prerequisite: a bachelor's degree in chemistry, physics, or engineering. Techniques used in materials synthesis: experimental design, control systems, vacuum techniques, methods of heating and quenching, consolidation and refining of metals, crystal growth, thin film deposition and thick film deposition. Laboratory experiments and demonstrations carried out. Mr. Sunahsh (W)

253C. Sound and Vibration. (Formerly numbered Engineering 253C.) Prerequisite: Engineering 153A or 155A, or consent of instructor. Theoretical analysis of the interaction of sound waves with layered and moving media. Multiple reflections. Wave number and frequency space; radiation and reflection of elastic waves; surface waves; vibrations of rods and plates. Mr. Mal (W, even years)

257B. Elastic Wave Propagation II. (Formerly numbered Engineering 257B.) Prerequisite: consent of instructor. Wave propagation in layered media; Green's functions for various geometries; diffraction and scattering of elastic waves; applications to inversion problems. Mr. Mal (Sp, even years)

259A. Seminar on Advanced Topics in Fluid Mechanics. (Formerly numbered Engineering 259A.) Prerequisite: consent of instructor. To study advanced fluid mechanics with intensive student participation, involving assignments in research problems leading to a term paper or an oral presentation and possible help from guest lecturers. Mr. Charwat (W)

259B. Seminar on Advanced Topics in Solid Mechanics. (Formerly numbered Engineering 259B.) Prerequisite: consent of instructor. Advanced study in various fields of solid mechanics on topics which may vary each year. Term for dynamical, mechanical, and radiative properties, static questions, and stability of solids. Mr. Muki (W)

262A. Advanced Mechanics and Mechanical Systems. (Formerly numbered Engineering 262A.) Prerequisite: Engineering 162A. The kinematic analysis and synthesis of mechanisms. Mechanical systems with special emphasis on use of modern analytical methods are considered. The use of computer techniques is discussed. A broad group of examples are studied.

256A. Mechanics of Deformable Solids. (Formerly numbered Engineering 256A.) Prerequisite: Engineering 158A or consent of instructor. Stress and strain tensors, indicial notation, compatibility conditions, equations of motion. Work and energy, uniqueness of solution and extremum principles. Constitutive laws for elastic solids, thermoelasticity, linear viscoelasticity and incremental plasticity.

256B. Elasticity. (Formerly numbered Engineering 256B.) Prerequisite: Mechanics and Structures 256A, or consent of instructor. Theory of elasticity 256A. Concepts of stability; state space interpretation; stability determination by simulation, linearization, and Liapunov's Direct Method; the Hamiltonian as a Liapunov function; theory of stability; concepts of nonautonomous systems; averaging and perturbation methods of nonlinear analysis; parametric excitation and nonlinear resonance. Application to mechanical systems.

256C. Plasticity, Creep and Thermal Stresses. (Formerly numbered Engineering 256C.) Prerequisite: Engineering 150A or consent of instructor. Stress and strain tensors, indicial notation, compatibility conditions, equations of motion. Work and energy, uniqueness of solution and extremum principles. Constitutive laws for elastic solids, thermoelasticity, linear viscoelasticity and incremental plasticity.

257A. Elastic Wave Propagation I. (Formerly numbered Engineering 257A.) (Same as Earth and Space Sciences M224A.) Prerequisite: Engineering 158A or 158A, or consent of instructor. Elastic wave equation and elementary solutions; application to elastic half-spaces; reflection and refraction of elastic waves; surface waves; vibrations of rods and plates.

259A. Seminar on Advanced Topics in Fluid Mechanics. (Formerly numbered Engineering 259A.) Prerequisite: consent of instructor. To study advanced fluid mechanics with intensive student participation, involving assignments in research problems leading to a term paper or an oral presentation and possible help from guest lecturers. Mr. Charwat (W)

259B. Seminar on Advanced Topics in Solid Mechanics. (Formerly numbered Engineering 259B.) Prerequisite: consent of instructor. Advanced study in various fields of solid mechanics on topics which may vary each year. Term for dynamical, mechanical, and radiative properties, static questions, and stability of solids. Mr. Muki (W)

262A. Advanced Mechanics and Mechanical Systems. (Formerly numbered Engineering 262A.) Prerequisite: Engineering 162A. The kinematic analysis and synthesis of mechanisms. Mechanical systems with special emphasis on use of modern analytical methods are considered. The use of computer techniques is discussed. A broad group of examples are studied.

262B. Vehicle Dynamics and Control. (Formerly numbered Engineering 262B.) Prerequisite: Engineering 163 or consent of instructor. The analysis of complex machines and electromechanical systems. Emphasis of the performance and dynamic response of systems containing gears, elastic compliances, active feedback elements, and other complex components and subystems. Both classical methods and modern computer-based techniques are applied.

263A. Dynamics and Control of Machines and Electromechanical Systems. (Formerly numbered Engineering 263A.) Prerequisite: Engineering 163 or consent of instructor. The analysis of complex machines and electromechanical systems. Emphasis of the performance and dynamic response of systems containing gears, elastic compliances, active feedback elements, and other complex components and subsystems. Both classical methods and modern computer-based techniques are applied.

263C. Current Topics in Design, Dynamics and Control of Industrial Robots. Lecture, four hours. Prerequisite: Engineering 163 or equivalent. Theory and implementation of industrial robotic manipulator systems. The modeling of kinematic structure, trajectory planning and systems dynamics. Control concepts and control computer algorithms. Mechanical and electromechanical design considerations. Lectures and seminars on current literature. Individual student projects.

264A. Theory of Plates and Shells. (Formerly numbered Engineering 264A.) Prerequisite: Engineering 158A, 158A, or consent of instructor. Small and large deformation theories of thin plates; energy methods; free vibration; buckling; nonlinear theories and asymptotic deformation of cylinders and spherical shells including bending.

264B. Advanced Structural Analysis. (Formerly numbered Engineering 264B.) Prerequisite: Engineering 158A or consent of instructor. Advanced study in various fields of solid mechanics on topics which may vary each year. Term for dynamical, mechanical, and radiative properties, static questions, and stability of solids. Mr. Muki (W)

265A. Finite Element Analysis of Structures. (Formerly numbered Engineering 265A.) Prerequisites: Engineering 165B; Mechanics and Structures 265A or consent of instructor. Direct energy formulations for deformable systems; solution methods for linear equations; analysis of structural systems with one dimensional elements; introduction to variational calculus; discrete element displacement force, and moment methods; membrane, plate, shell, and beam instabilities effects.

265A. Stability of Structures I. (Formerly numbered Engineering 265A.) Prerequisite: Engineering 165B, 166 or equivalent. Advanced buckling of bars. Different approaches to stability problems. Inelastic buckling of columns and beam columns. Columns and beam columns with linear, nonlinear creep. Combined torsional and flexural buckling of columns and beam columns. Mr. Dong (Sp)

267A. Optimum Structural Design. (Formerly numbered Engineering 267A.) Prerequisite: Mechanics and Structures 265A. Synthesis of structural systems; analysis and design as optimization problems; techniques for synthesis and optimization; application to aerospace and civil structures. Mr. Schmit (W)


267E. Structural Loads and Safety for Civil Structures. (Formerly numbered Engineering 267E.) Prerequisites: Engineering 167A or 167B or 167C, and 165A which may be taken concurrently. Concept of structural system; First Fundamental Theorem of structural mechanics: the law of superposition of loads in building codes. Probability of failure and quantification of loads in probabilistic approaches to structural safety. Relationships between factor of safety and probability of failure. Mr. Hart (F, odd years)


268A. Experimental Structural Analysis. (Formerly numbered Engineering 268A.) Prerequisite: consent of instructor. Study of modern techniques in experimental mechanics, including dimensional analysis, similarity theory and experimental mechanics. Emphasis will be placed on techniques of modern optics, e.g., holography. Moiré analysis, photoelasticity and speckle interferometry.

266B. Failure of Structural Systems. (Formerly numbered Engineering 266B.) Prerequisites: Engineering 165B. Philosophy of structural safety. Principles of design for prevention of failure (other than buckling). Fatigue, brittle failure, delayed cracking, creep, design of efficient joints, environmental effects. Emphasis on current problems in actual structures.

268A. Experimental Structural Analysis. (Formerly numbered Engineering 268A.) Prerequisite: consent of instructor. Study of modern techniques in experimental mechanics, including dimensional analysis, similarity theory and experimental mechanics. Emphasis will be placed on techniques of modern optics, e.g., holography. Moiré analysis, photoelasticity and speckle interferometry.

Mr. Friedmann (F)


Mr. Friedmann (W)


Mr. Lade (Sp)


Mr. Friedmann (Sp, odd years)


Mr. Lade (Sp)


Mr. Lade (Sp)

285EC. Seminar on Advanced Topics in Soil Mechanics. (Formerly numbered Engineering 285EC.) Prerequisites: Graduate Standing in Engineering and consent of instructor. Topics may vary from term to term and cover subjects as earth dam design, seepage through the earth dam, slope stability, lateral earth pressures, stress analysis and excavation bracing; the effects of flexibility of bulkhead walls, creep in soils and construction techniques are also discussed in detail.

Mr. Lade (F, odd years)

285EL. Advanced Soil Mechanics Laboratory. (Formerly numbered Engineering 265EL.) Lecture, one hour; laboratory, six hours. Prerequisites: Engineering 185A, 185B; Mechanics and Structures 255A, 255B. Lectures and laboratory studies of advanced aspects of soil mechanics. Fundamentals of soil mechanics, testing, strength testing, pore water pressure measurements, advanced instrumentation and measurement techniques. Preparation of engineering reports.

Mr. Lade (Sp)

285EA. Earthquake Engineering. (Formerly numbered Engineering 285EA.) Prerequisites: Mechanics and Structures 255A or 255A or Engineering 159A. Engineering seismology: strong earthquake motion, microtremors, wave velocity and damping, induced tremors and earthquakes, and nuclear tests. Study of ground motion and its effects on buildings and other structures. Site evaluation, structure-earth system interaction. Response to earthquake relative design of buildings, bridges and dams. Theory and field experiments.

Mr. Seh (W)

285F. Structural Response to Ground Movements. (Formerly numbered Engineering 265F.) Prerequisites: Mechanics and Structures 255A or consent of instructor. Spectral analysis of ground motions; response of structures. Derived equations and methods; site and site calculations. Prediction of structural response. Response analysis including evaluation of contemporary design standards. Limitations; additional methods. Mr. R. Dash (Sp)


Mr. Westmann (W, Sp)

285C. Asymptotic and Perturbation Methods I. (Formerly numbered Engineering 265C.) (Same as Mathematics M274A.) Prerequisites: Engineering 192A or equivalent; 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)

285D. Asymptotic and Perturbation Methods II. (Formerly numbered Engineering 265D.) (Same as Mathematics M274B.) Prerequisites: Engineering 192A or equivalent; Mathematics 132 or equivalent. The fundamental mathematics of asymptotic analysis, limit process expansions, regular and singular perturbation problems, matching of asymptotic expansions, applications to partial differential equations, near and far fields.

Mr. Muki (W)

System Science

200A. Linear Dynamic Systems. (Formerly numbered System Science 228A.) Prerequisites: Engineering 128A or equivalent. State space description of dynamic systems. Deduction of state space equations from input-output data. State controllability and observability. Stability and state feedback stabilizability; state observer.

Mr. Balakrishnan, Mr. Levan (F, W)

200C. Stochastic Processes. Prerequisites: Engineering 112A or equivalent. Formulation and applications of second order theory stochastic processes. Correlation and spectral density. Gaussian process, prediction by dynamic systems, Bayes rule and conditional expectation; mean square estimation and Kalman filters.

Mr. Balakrishnan, Mr. Mortensen, Mr. Yao (F, Sp)

200D. Discrete Stochastic Processes. Prerequisites: Engineering 120A or equivalent or consent of instructor. Discrete stochastic process models in systems involving Poisson counting processes, discrete-time Markov chains, jump point processes, discrete-time Markov chain models, Markov jump processes; applications to communication systems and networks, queuing systems, information processing, and operations research.

Mr. Miller, Mr. Rubin, Mr. Subelman (F, Sp)

201A-2012Z. Seminars in System Science. Prerequisites: consent of instructor, and additional prerequisites for each offering as announced in advance by the Department of System Science. 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 doctoral dissertations in the field. All sections are graded S/U only, and may be repeated for credit.

The Staff, System Science Department (F, W, Sp)

220A. Stochastic Theory of Queuing Systems I. (Formerly numbered Engineering 220A.) Prerequisites: Probability M291A and permission of instructor. Stochastic Point Processes. Topics in the theory of queues; the imbedded Markov Chain Method; equilibrium results for multiple server queues; method of stages; applications to communication, control, and system integration. Mr. Balakrishnan, Mr. Miller, Mr. Rubin (W)

220B. Stochastic Theory of Queuing Systems II. (Formerly numbered Engineering 220B.) Prerequisites: System Science 220A. Advanced topics in queuing theory; structure and performance of stationary waiting time and busy period, integral equation method, series of queues and priority queues, inventories, communication, control, and systems problems.

Mr. Balakrishnan, Mr. Rubin, Mr. Subelman (Sp)


Mr. Rubin, Mr. Subelman (F)

221. Linear Optimal Control. (Formerly numbered Engineering 221.) Prerequisites: Engineering 128A; Engineering 122A or equivalent (may be taken concurrently) or consent of instructor. An introduction to optimal control, with emphasis on detailed study of LQG, or linear regulators with quadratic cost criteria. Relationships to classical control system design.

Mr. Levan, Mr. Mortensen (W, Sp)

222A. Nonlinear Control. (Formerly numbered Engineering 222A.) Prerequisites: System Science 221. Techniques for studying nonlinear control systems, with emphasis on their stability; Liepunov's direct method; input-output stability; Popov's method; linearization. Mr. Wang, Mr. Wiberg (F)

222B. Stochastic Control. (Formerly numbered Engineering 222B.) Prerequisites: Engineering 120B and System Science 221. Estimation and control of linear discrete-time and continuous-time stochastic systems; separation theorem and its application to linear discrete-time Markov chains, Kalman filtering.

Mr. Balakrishnan (F, Sp)


Mr. Mortensen, Mr. P.K.C. Wang (W)
222E-222EZ. Topics in Control. (Formerly numbered Engineering 222E.) Prerequisite: consent of instructor, and additional prerequisites for each offering as announced in advance by the Department of System Science. Through 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; uncertainty, and robustness. Control problems in flight control, nuclear reactors, process control, biomedical problems. May be repeated for credit when no duplication exists.

Mr. Balakrishnan, Mr. P.K.C. Wang (F, W)

M222F. Biological and Medical Systems. (Formerly numbered M222F.) (Same as Anesthesiology 222F.) Prerequisite: 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. Mr. Wiberg (Sp)

M222G. Control and Coordination in Economics. (Formerly numbered Engineering M222G.) Prerequisite: Graduate Standing in Economics or Engineering, consent of instructor. Appropriate mathematics course recommended. Stabilization policies, short- and long run dynamics and disequilibrium analysis; decompositional, computer-oriented, control of teams; certain equivalence and separation theorems; stochastic and learning models. Bayesian approach to price and output rate adjustment.

Mr. Aoki

227A. Signal Detection and Digital Communication. (Formerly numbered Engineering 227A.) Prerequisite: Engineering 120B or consent of instructor. Applications of statistical decision theory to signal 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. Mr. Omura, Mr. Yao (F, Sp)

227B. Information Theory and Coding. (Formerly numbered Engineering 227B.) Prerequisite: System Science 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, and applications to performance bounds of block and convolutional codes. Mr. Omura, Mr. Rubin, Mr. Yao (W)

227C. Estimation and Filtering. (Formerly numbered Engineering 227C.) Prerequisite: Engineering 120A or System Science 227A. Prerequisites: System science 227A or equivalent. Computational methods for determination of optimal statistical estimators, applied to problems in stochastic processes, communication systems, analog modulation and demodulation.

Mr. Balakrishnan, Mr. Mortensen, Mr. Yao (Sp)

227EA-227EZ. Topics in Communication. (Formerly numbered Engineering 227E.) Prerequisite: graduate standing or consent of instructor. Additional prerequisites for each offering as announced in advance by the Department of System Science. Topics in one or more special aspects of communication systems, such as phase-coherent communication systems, optical channels, time-varying channels, feedback channels, fading channels, and adaptive equalization. Computer-oriented, control oriented techniques. May be repeated for credit when no duplication exists. Mr. Omura, Mr. Rubin, Mr. Yao (W, Sp)

227F. Algebraic Coding Theory. (Formerly numbered Engineering 227F.) Prerequisite: System Science 227F or consent of instructor. Fundamentals of linear or parity-check codes and decoding algorithms based on the algebraic theory of finite groups and fields: cyclic codes; Hamming; Reed-Muller, Bose-Chaudhuri-Hocquenghem, and Reed-Solomon codes, and corresponding decoding algorithms. Mr. Omura, Mr. Yao (F)

227G. Rate Distortion Theory and Data Compression. (Formerly numbered Engineering 227G.) Prerequisite: System Science 227B or consent of instructor. Sources and distortion measures, rate distortion functions, optimal source coding and rate distortion functions, source coding, block and tree source encoding techniques, and application to data compression. Student presentations of current research papers in the field.

Mr. Balakrishnan, Mr. Kaplan

228A. Numerical Techniques in Systems Optimization. (Formerly numbered Engineering 229A.) Prerequisite: Engineering 291A; Engineering 129A or System Science 272A or similar background recommended. Computational methods for constrained extremal problems. Mr. Balakrishnan, Mr. Kaplus


Mr. Balakrishnan, Mr. Levan

229C. Stochastic Differential Systems. (Formerly numbered Engineering 229C.) Prerequisite: Engineering 120B, System Science 273B, Engineering 291A or equivalent, and consent of instructor. Integration with respect to continuous-parameter martingales; Radon-Nikodym derivatives in metric spaces; applications to filtering and stochastic control theories.

Mr. Balakrishnan, Mr. Mortensen

229EA-229EZ. Topics in Optimization. (Formerly numbered Engineering 229E.) Prerequisite: consent of instructor, and additional prerequisites for each offering as announced in advance by the Department of System Science. Comprehensive treatment of one or more selected topics in such areas as system optimization theory and numerical techniques, system identification, stochastic systems, finite graphs, network analysis, queuing theory, etc. May be repeated for credit when no duplication exists.

Mr. Balakrishnan, Mr. Jacobsen (F, W)

229J. Linear Programming. (Not the same as System Science 229J.) Prerequisite: consent of instructor. Applications of linear programming to problems of optimal resource allocation and control; transportation, budget, and inventory problems. The finite state infinite horizon model of a single server queueing system. Emphasis on the theory of linear programming. Mr. Jacobsen, Mr. Subelman (F, Sp)


Mr. Jacobsen (Sp)

273A. Dynamic Programming. (Formerly numbered Engineering 273A.) Prerequisites: Engineering 120A and 129C, or equivalent. Introduction to the mathematical foundations of sequential decision processes. The finite 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. Miller, Mr. Subelman (F, Sp)

273B. Probability Theory for Applications. (Formerly numbered System Science 273B.) Prerequisites: Engineering 120B, or 120C, and consent of instructor. This course is designed to prepare students for graduate courses in Communication, Control, and Operations Research. Measure and integration; conditioning; convergence; stochastic processes and measures on function spaces. The Wiener process, Poisson processes, Markov processes, Markov times, and Martingales.

Applications. Mr. Balakrishnan (W)

275A. Statistical Design of Experiments. (Formerly numbered Engineering Systems M275A.) Prerequisite: Engineering 120A or equivalent. The matrix treatment of linear hypotheses in engineering experimentation. Statistical estimation, tests of hypotheses, analysis of variance, regression models. Randomized blocks, factorial, Latin square, multiple factorial, analysis of covariance. Topics in linear models and sequential decision processes.

Mr. Wiberg, Mr. Miller, Mr. Subelman (Sp)


Mr. Miller, Mr. Subelman


Mr. Omura, Mr. Subelman (F)


ENGINEERING AND APPLIED SCIENCE / 145
Interdisciplinary Courses

291C. Integral Equations In Engineering. Prerequis- itses: Mathematical Introduction to general- ized function theory and Green’s functions. Conver- sion of partial equations to integral equations and classification of integral equations. Solution to in- tegral equations with degenerate kernels and approximations of successive approximations and Fredholm and Hilbert-Schmidt theory. Mr. Westmann (Sp)

289. Seminar In Engineering. (1 to 1 course) Prerequis- itses: Graduate Standing in engineering; cons- ent of instructor. Seminars may be organized in ad- vanced areas of engineering. Course may be re- peated for credit upon satisfactory completion. Provided no duplication exists. If appropriate, field trips may be arranged.

470A-470D. The Engineer In the Technical En- vironment. (4 course each) Prerequisite: accep- tance in the Engineering Executive Program. Theory and application of quantitative methods in the analy- sis and synthesis of engineering systems for the pur- pose of making management decisions. Optimization of outputs with respect to dollar costs, time, material, energy, information and manpower. Includes case studies and individual projects. Mr. O’Neill

471A-471B-471C. The Engineer In the General Environment. (1/2, 1/2, 1/2 courses) Prerequisite: ac- ceptance in the Engineering Executive Program. In- fluences of human relations, laws, social sciences, humanities, and fine arts on the development and utilization of natural and human resources. The inter- action of technology and society past, present and future. Change agents and resistance to change. 471B-471C is offered on an In-Progress basis, which requires students to complete the full 2-quarter se- quence, at the end of which time a grade is given for all quarters of work. Mr. Barthol

472A-472B-472C-472D. The Engineer In the Business Environment. (1, 1, 1, 1 courses) Prerequisite: acceptance in the Engineering Executive Program. The language of business for the engi- neering executive: marketing, financial 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, through provided independent research for M.S. candidates, in- cluding thesis prospectus. To be graded on a S/U basis.

496. Teaching Assistant Training Seminar. Prerequis- itses: Graduate Standing in engineering; cons- ent of instructor. Usually taken after student has been advanced to candidacy. To be graded on a S/U basis.

English

(Office, 2225 Rolfe Hall)


Charles V. Hartung, Ph.D., Emeritus Professor of English. Leon Howard, Ph.D., L.H.D., Emeritus Professor of English. Claude Jones, Ph.D., Emeritus Professor of English. Paul Alfred Jorgensen, Ph.D., Emeritus Professor of English. Alfred Edwin Longueil, Ph.D., Emeritus Professor of English. Ada Blanche Nisbet, Ph.D., Emeritus Professor of English. Franklin Prescott Rolfe, Ph.D., Emeritus Professor of English. Walter Eldon Anderson, Ph.D., Associate Professor of English. Charles Linwood Batten Jr., Ph.D., Associate Professor of English. A.R. Braunnmuller, Ph.D., Associate Professor of English. Frederick Lorrain Burwick, Ph.D., Associate Professor of English. Edward Ignatius Condon, Ph.D., Associate Professor of English and of Medieval Studies. Ronald E. Freeman, Ph.D., Associate Professor of English. James Edward Goodwin, Ph.D., Associate Professor of English. Christophor Maraldo Grose, Ph.D., Associate Professor of English. Albert David Hutter, Ph.D., Associate Professor of English. Gordon L. Kipling, Ph.D., Associate Professor of English. G. Jackson Kolb, II, Ph.D., Associate Professor of English. Kenneth Robert Lincoln, Ph.D., Associate Professor of English. Robert M. Maniquis, Ph.D., Associate Professor of English. Raymond Arthur Paredes, Ph.D., Associate Professor of English. Kearsia Elizabeth Rowe, Ph.D., Associate Professor of English. Thomas Richard Wortham, Ph.D., Associate Professor of English. Ruth E. Armentrout, Ph.D., Assistant Professor of English. Susan D. Brienza, Ph.D., Assistant Professor of English. Romy T. Keys, Ph.D., Assistant Professor of English. Joseph F. Nagy, Ph.D., Assistant Professor of English. Barbara Lee Packer, Ph.D., Assistant Professor of English. Jonathan Post, Ph.D., Assistant Professor of English. Jeffrey Rubin-Dorsky, Ph.D., Assistant Professor of English. J. Roger Solomon, Ph.D., Assistant Professor of English. Seth Joshua Weiner, Ph.D., Assistant Professor of English. Richard Alan Yorky, Ph.D., Assistant Professor of English.

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Jerome Cushman, A.B., B.S.L.S., Senior Lecturer; Literature for Children and Adolescents. Everett L. Jones, M.A., Senior Lecturer in English. David Stuart Rodes, Ph.D., Senior Lecturer in English.

English as a Second Language

(Office, 3303 Rolfe Hall)

J. Donald Bowen, Ph.D., Professor of English. Russell Norman Campbell, Ph.D., Professor of English. John Frederick Povey, Ph.D., Professor of English.
The Master of Arts Degree

Admission Requirements. Admission to the master's program is based on a thorough review of the applicant's academic record. Ordinarily, students holding the B.A. are expected to meet these minimum requirements: an undergraduate major or program that prepares one for advanced study of literature; a grade point average in the junior and senior years of at least 3.2; and a score on the Graduate Record Examination of at least 600 on both the Verbal and Quantitative sections of the Aptitude Test and the Advanced Literature in English Test. All applicants must 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 to the Departmental Graduate Committee. Such a request must be justified convincingly on the basis of a special research interest.

A reading knowledge of a language may be demonstrated in one of two ways: (1) by scoring 500 or higher on an Educational Testing Service (ETS) examination; (2) by passing a special reading examination offered by certain UCLA foreign language departments. The first language requirement must be satisfied before the student is admitted to the First Qualifying Examination, and the second before he or she is admitted to the Second Qualifying Examination.

A student who chooses the single language option must also demonstrate a reading knowledge of that language before taking the First Qualifying Examination. He or she may then proceed to demonstrate superior proficiency, before taking the Second Qualifying Examination, in either of two ways: (1) by successful completion (grade B or higher) of three upper division or graduate courses in the literature (not in translation) of the foreign language (such courses must be approved by the Vice Chair for Graduate Studies, must be in areas related to the student’s specialization, and must not have been completed more than two years prior to the student’s entrance into the Ph.D. program) or (2) by passing an examination administered by the Department of English. A student electing the latter option will be expected to demonstrate a knowledge of the foreign language (and literature) comparable to that which might be obtained by taking the three upper division or graduate courses.

Teaching Experience. Although teaching experience is not required, most students in the doctoral program have the opportunity to serve as teaching assistants after passing the English 275 requirement and being enrolled for at least one year in the doctoral program. Teaching assistantships are not automatically offered to doctoral students, but are awarded on the basis of merit.

Written and Oral Qualifying Examinations, Required Courses, and the Final Oral Examination. The doctoral program is divided into three stages, the first two of which culminate in the First and Second Qualifying Examinations.

A. The First Stage.

In the first stage, which leads to the master’s degree, the student must take a minimum of nine (letter-graded) English courses from the 200 series. One course, 201, is required. (Students entering with an M.A. in English are presumed to have fulfilled the 9-course requirement, but must take 201 or its equivalents.)

First Qualifying Examination. Upon successful completion of these required courses (and satisfaction of at least one of the foreign language requirements), the student takes the First Qualifying Examination. This consists of four written examinations of four hours each. One of these may be taken in a genre (novel, drama, literary criticism, folklore/mythology, Afro-American literature, history of the language, rhetoric) or an alternate field (proposed by the student and approved by the Department’s Graduate Committee). At least three of the examinations must be taken in any of the following chronological periods: the Middle Ages; the Renaissance; the Earlier 17th Century; the Restoration-18th Century; the Romantic Period; the Victorian Period; American Literature to 1828; American Literature 1828-1900; and either 20th Century American Literature or 20th Century British Literature. No student may write on more than two American fields, and those who elect a genre or alternate field may choose only one American field.

The four parts of the First Qualifying Examination are graded as High Pass, Pass, Low Pass, and Fail, and in order to pass the examination as a whole, a student must have maintained a passing grade on each of the parts. A decision on whether or not a student who fails is allowed to repeat must be made by the Graduate Faculty, which will consider, not only the results of the examining committees’ evaluations but also the student’s overall graduate record. (A grade of High Pass is considered final and need not be repeated. A grade of Low Pass on four examinations is considered a failure of the examination as a whole.) A student allowed to repeat must do so the next time the examination is offered. (A student who is allowed to repeat has the option of substituting a different field for one of his or her failures.) These examinations are offered twice a year, once in the fall and again in the spring.

Advising. After passing the First Qualifying Examination, each student chooses a faculty adviser in the area of his or her specialization, and remains with this adviser until the dissertation is completed.

Breadth Requirement. With the exception of course 201, no specific courses are required in this first stage of the program, but students must cover eight of the ten chronological fields before taking the Second Qualifying Examination. Students may elect to meet this requirement through any combination of exams chosen for the First Qualifying Examinations and courses. In at least two of the periods not chosen for the examinations students must select courses from the 220 series.

Philology Requirement. All students must take two courses in language from the sequence numbered 210-213 before the Second Qualifying Examination. Students with an interest in the fields of Anglo-Saxon or Medieval literature should take the introductory courses in this area (211 and 212) as early as possible.

Bibliography Requirement. English 200, Approaches to Literary Research, is required before taking the Second Qualifying Examination.

B. The Second Stage.

In this stage of the program, the student must take five courses from the 200 series in English, including a minimum of three seminars. The student is 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 deemed sufficiently well-prepared, through coursework and independent study, and after satisfying the second language requirement, the student takes the Second Qualifying Examination.

Second Qualifying Examination. The Second Qualifying Examination consists of an oral examination of no fewer than two hours (and probably more) in length, administered by a committee of five, including a chair and two other members from the English Department, and two members from outside the English Department. The examination consists of two parts. The first is an oral examination of at least one hour covering a 100-year period or longer in English or American literature. The second part of the oral examination deals with the student’s prospectus. The committee must certify both that the candidate is competent in the historical field and that the prospectus has been approved. If one or both parts of the examination is failed the candidate may, at the discretion of the committee, repeat only once. The student submits a substantially re-researched dissertation prospectus, which has been approved by the committee chair, to each of the members of the committee at least one week before the scheduled examination. The student also offers, with the chair’s approval, a list of at least ten significant scholarly or critical works that bear on the field of specialization and are directly relevant to the method or subject matter of the dissertation.

C. The Third Stage.

A student who has passed the Second Qualifying Examination may advance to candidacy, and upon his or her application, the Candidate in Philosophy (C.Phil.) degree is conferred. The student now proceeds with the writing of the dissertation. A final oral defense of the dissertation is optional with the doctoral committee, but is usually not required. Final approval of the dissertation is normally delegated to three certifying members of the doctoral committee (two from the English Department, and one from another department).

Time to Degree. A student will normally be able to complete his or her doctoral studies within 18 academic quarters, according each of the three stages of the program roughly equal amounts of time:

First Stage — from admission to the First Qualifying Examination, the time normally allowed is six quarters. (Students entering with the M.A. normally write the examination after three quarters in residence.)

Second Stage — from the First Qualifying Examination to the Second Qualifying Examination, the time normally allowed is six quarters.
Dissertation Stage — from the Second Qualifying Examination to the completion of the dissertation (and the degree), the time normally allowed is six quarters.

Graduate Courses

200. Approaches to Literary Research. The bibliographical tools of English and American literary scholarship; an introduction to descriptive bibliography, and basic methods of research. Mr. Battey, Mr. Gullans, Mr. Kipling

201. The History of Literary Criticism. Lecture, four hours. The study of the major documents in Western literary theory from Plato to the present. Mr. Dearing

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. Computer and Literary Research. Practice in writing and using computer programs for the analysis of literary style, content, and authorship. No previous knowledge in this area is necessary. Mr. Dearing

205. Perspectives in American Folklore Research. (Same as Folklore and Mythology 205.) Prerequisites: Folklore 101 and one other upper-division folklore course. An examination of American folklore studies compared and contrasted with investigations in other countries, with emphasis upon the principal conceptual schemes and research orientations employed in the study of folklore in American society, with emphases upon the principal conceptual schemes and research orientations employed in the study of folklore in American society.

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. Armentrout, Mr. Condra

211. Old English. Study of Old English grammar, vocabulary, phonology and prosody. An emphasis on enabling the student to read the literature silently and aloud. Reading of as much of the more interesting Old English prose and poetry as can be read in a quarter. Mr. Calder, Mr. Condra

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. Condra, Ms. Ridley

213. Modern English. Detailed study of the language's history and characteristics since 1500. Phono-logical, grammatical, and lexicographical developments will be studied in relation to accompanying intellectual, political, and social changes. Ms. Armentrout

215. The Structure of Present-Day English. Prerequisite: course 212 or 212K. Investigation in depth of the basic constructs and sub-systems of English structure as described by grammarians of various theoretical persuasions. Ms. Celce-Murcia

216A-218B. Old Irish. Prerequisite: consent of instructor. Studies in grammar. Readings in the glosses and other texts. Comparative considerations. Mr. Ford

217A-217B. Medieval Welsh. Prerequisite: consent of instructor. Studies in grammar. Readings in the Mabogin 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

Graduate Readings

These courses stress wide reading in major works and their cultural background. Students with adequate undergraduate preparation in a period may proceed directly to a seminar.

220. Readings in Medieval Literature. Mr. Kelly, Ms. Ridley

221. Readings in the Renaissance Literature. Mr. Jorgensen, Mr. Kintman, Mr. Lantham

222. Readings in the Earlier Seventeenth Century Literature. Mr. Guiffey, Mr. Gullans, Mr. Sellin

223. Readings in Restoration and Eighteenth Century Literature. Mr. Dearing, Mr. Novak, Mr. Rousseau

224. Readings in Romantic Literature. Mr. Burwick, Mr. Maniques, Mr. Sheats

225. Readings In Victorian Literature. Mr. Freeman, Mr. Tennyson, Mr. Welsh

226A. Readings in Earlier American Literature. Mr. Webster

226B. Readings in Nineteenth-Century American Literature. Mr. Nevius, Ms. Packer

227. Readings in Twentieth-Century American Literature. Mr. Lehan, Mr. Riddel

228. Readings In Twentieth-Century British Literature. Mr. Bedient, Mr. Cross, Mr. Kessler

Graduate Seminars

Seminars 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 for all seminars will be available in the department office by June 1 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). This course may be repeated, but may not satisfy more than one of the nine courses required for the First Qualifying Examinations, nor count toward any of the required courses required for the Second Qualifying Examination.

240. Studies in the History of the English Language. Individual seminars will deal with: any single historical period from the Old English period to the present; or the development of a particular linguistic characteristic, phonology, syntax, semantics, dialectology, through various periods. Ms. Armentrout, Mr. Calder

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.

242. Language and Literature. The application of linguistics to literary analysis. Individual seminars will deal with: a historical period, Medieval and Renaissance, Neo-classical, or eighteenth century and modern; specific authors; or the contributions of specific groups of linguists to literary analysis. Ms. Brienzi, Mr. Grosse, Mr. Lantham

243A. The Ballad. (Same as Folklore 243A.) 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

243B. Problems in Ballad Scholarship. (Same as Folklore 243B.) Prerequisite: course 243A or consent of instructor. Intensive investigation of a problem or problems in the study of the popular ballad. Mr. Wilgus

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. Condren, 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. Dent, Mr. Kinsman

247. Shakespeare. Mr. Dent, Mr. Jorgensen, Mr. Allen

248. Earlier Seventeenth-Century Literature. Studies in the poetry and prose of seventeenth-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. Grosse, Mr. Sellin, Mr. Post

250. Restoration and Eighteenth-Century Literature. Mr. Nevius, Ms. Packer

251. Victorian Literature. Studies in English poetry and prose of the Victorian period; limits of investigation to be set by the individual instructor. Mr. Freeman, Mr. Tennyson, Mr. Welsh

252. Contemporary British Literature. Mr. Bedient, Mr. Kessler, Mr. Yenser

254. American Literature to 1900. Studies in colonial and nineteenth-century American Language; limits of investigation to be set by the individual instructor. Mr. Nevius, Mr. Wathom

255. Contemporary American Literature. Studies in contemporary American poetry and prose; limits to be set by the individual instructor.

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.

257. Studies in Poetry. Studies in various forms of poetry from Old English to the present; limits of investigation to be set by the individual instructor.

258. Studies in the Novel. Studies in the evolution of the genre from its beginnings to the present; limits of investigation to be set by the individual instructor. Mr. Lehan, Mr. Novak, Mr. Welsh

259. Studies in Criticism. Ms. Hutter, Mr. Krieger, Mr. Riddell

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

Special Courses

270A-270B. English for the Two-Year College. Prerequisite: course 120B or 275. The courses will involve both discussion and practice of two-year college instruction in reading and composition. They are offered for an "In-Progress" basis which requires students to complete the full two-quarter sequence, at the end of which time a grade is given for both quarters of work. Ms. Fuji

271. Studies in African Literature in English. Prerequisite: English 114 or consent of instructor. Continuation of English 114. Special problems and trends of African literature in English. Mr. Povey

272. Current Issues in the Teaching of English. Prerequisite: course 120B or Linguistics 100. The course will focus each term on one of a variety of topics of special current interest. Mr. Lantham

273. Studies in Afro-American Literature. (Same as Afro-American Studies 2800.) Prerequisite: consent of instructor. Intensive research and study of African-American literature. Mr.Sellin

274. Teaching English to Minority Groups. Pre- or co-requisite: course 120 or Linguistics 100. The special cultural, social, psychological, and methodological considerations involved in the English instruction of minority groups in American schools and colleges.

275. African Languages. Mr. Yarborough, Mr. Keys

276. Issues In the Teaching of English. Mr. Sellin
Professional Courses In Method

302. 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.

465. Supervised Teacher Preparation. Prerequisite: teaching assistant, involved in freshman composition program. Seminar for teaching assistants who are associated with the freshman composition program. Required for the teaching assistant. May be repeated for credit. To be graded S/U. Ms. Brienza.

499. Directed Individual Study in Pedagogy. (4 courses) Prerequisite: must be teaching assistant working under member of the faculty. Supervised individual instruction in teaching, including monitoring of teaching assistant’s pedagogical activities and regular consultation with assistant concerning all of his teaching responsibilities. To be graded S/U.

501. Cooperative Program. (5 to 2 courses) Prerequisites: approval of UCLA Graduate Adviser and Graduate Dean; and approval of 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. To be graded S/U.

Individual Study and Research
490. Directed Individual Study for Master’s Candidates. An independent study course for Master’s Candidates, which involves the completion of a substantial piece of work, creative or scholarly. Four units will be accepted toward the nine courses required for the degree. Offered only on a graded basis.

494. Directed Individual Study. For first-stage doctoral students preparing for the first Qualifying Examination. May be taken only once (four units). May not be used to satisfy any course requirement for the degree. To be graded S/U.

507. Preparation for the Doctoral Examination. Ph.D. Candidates restricted to one course (four units) before the Second Qualifying Examination. To be graded S/U.

595. Dissertation Research. (1 or 2 courses) Enrollment restricted to Ph.D. Candidates unable to enroll in seminars in their fields, or candidates concurrently enrolled in such seminars. (Exception to this rule must be requested by petition.) To be graded S/U.

English as a Second Language
Certificate Program and the Master of Arts Degree in Teaching English as a Second Language
Admission Requirements. To be admitted to the Certificate or the M.A. program, U.S. citizens and students from other countries must have the equivalent of an American bachelor’s degree or an educational background sufficient to qualify them as teachers in their country. The Certificate program includes nine courses, which can be normally completed within the 9-month period of an academic year. Since several of the courses are given only once a year and must be taken in fixed order, students are only admitted at the beginning of the Fall Quarter.

In order to complete the Certificate or M.A. program, candidates so admitted must maintain a grade point average of at least B. Prior teaching experience is not required for admission. The Admissions Committee in the TESL section screens all applications using the following criteria: grade point average, letters of recommendation, applicant’s statement of purpose and relevant professional experience. Since admission is limited to the number of students admitted each year, it is important that the student submit a complete application containing all of this material.

Applications for admission are obtained from and returned to the Graduate Admissions Office. The TESL program does not have a separate departmental application. The TESL program requires three letters of recommendation in support of the application for admission. Three letters of recommendation forms are included in the admission packet. The applicant is requested to submit the letters of recommendation and the statement of purpose directly to the Graduate Adviser, English as a Second Language, Department of English. The statement of purpose should contain the following information: (1) reasons candidate wishes to study TESL at UCLA; (2) special qualifications and experience as a teacher and (3) knowledge of languages other than English.

The Graduate Record Examination (GRE) is not required as part of the admission requirements. Personal interviews are not required, but welcomed.

Advising. Edie Olson, Graduate Adviser; Teaching English as a Second Language Program; 3906 Rolfe Hall, 405 Hilgard Ave., Los Angeles, California 90024.

New students entering the program meet with the Graduate Adviser and the staff at a special orientation meeting held at the beginning of the Fall Quarter. There is a clearly stated set of course requirements students must fulfill in order to earn the TESL Certificate. Each individual student’s program is specified in a meeting with the Graduate Adviser. During the year, students are made aware of their progress in individual courses as the result of midterm and final examinations. At the beginning of each quarter, the Graduate Adviser reviews each student’s record and advises him or her of progress in the program and the remaining requirements that must be met.

Foreign Language Requirement. Students whose native language is English generally use their Fall and Winter Quarter electives to fulfill a special requirement included to help them 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 (Linguistic Areas) or 225 (Linguistic Structures) series; (3) one foreign language course plus English 274 (Teaching English to Minority Groups) (4) English 111K (Background Language for Teachers of English as a Second Language) plus an unrestricted elective.

Those particularly interested in working with Mexican-American, Oriental-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 the linguistic structure of that language should be selected whenever possible.

The electives to be taken during the Fall and Winter Quarters vary, depending on whether or not the student speaks English as his or her native language. Non-native speakers of English, depending on the results of the University’s Entrance Examination in English as a Second Language, may be required to take a course designed to improve their practical command of English.

Students are urged to fulfill the language requirement by courses taken after admission to the Certificate program. Exemption from the courses may be granted, however, to those who can demonstrate a strong need to take other electives and who have an unusually extensive background of previous foreign language study. Information regarding the circumstances under which a petition for exemption may be approved can be obtained from the TESL Graduate Adviser.

Course Requirements. The typical course of study for both the Certificate program and the first year of the M.A. program is as follows:

Fall Quarter: Linguistics 100, English 370K, Foreign Language Requirement or Elective. (Course depends on language requirement plan.)

Winter Quarter: English 122K, English 250K, Foreign Language Requirement or Elective. (Course depends on language requirement plan.)

Spring Quarter: Linguistics 103 or English 103K; English 380K; English 106K, or English 107K, or English 109K.

Exceptions to the above requirements will be made only after consultation with the Graduate Adviser.

Of the nine courses required for the Certificate, at least seven of the courses must be in TESL, English, Linguistics, or structure of language courses in language departments.

Work completed in regular undergraduate status cannot be counted as fulfillment of the Certificate or M.A. program requirements.
Teaching Experience. All students are required to teach ESL at one of four levels under the supervision of a master teacher: in one of the UCLA ESL service courses; in an adult school; in a secondary school; or in an elementary school. In addition to supervision and observation by the master teacher of the host schools, a UCLA TESL faculty member observes each TESL student several times during each course.

The Certificate in Teaching English as a Second Language leads to a credential to teach on the Adult School level only.

Time to Completion of Certificate. Normally, students finish the Certificate requirements within the 9-month academic year, however, some students due to financial and/or outside commitments are allowed to complete the program on a part-time basis.

Disqualification. Students are required to maintain a 3.0 (B average) throughout their academic career. Should the student fall below the minimum grade point average, he/she is notified by the Associate Dean of the Graduate Division and the Graduate Adviser. After consultation with the student, Graduate Adviser, and the Vice Chair, a memo is normally sent to the Graduate Dean requesting that the student be allowed to continue on probation allowing the student to remove any deficiencies during the next quarter in residence.

Disqualification of a student will be requested of the Dean of the Graduate Division by the Vice Chair on the recommendation of a departmental committee set up to review the particular circumstances of a given case. The committee will include at least one student. Either the Graduate Adviser or a member of the faculty may initiate the process by informing the Vice Chair of the need to consider a given student for disqualification.

In general, TESL policy follows that of the overall University policy in that a student can be disqualified for: (a) failing to complete degree requirements during the period permitted by departmental regulations; (b) failing to maintain the required GPA; (c) lapses in expected academic morality, e.g., plagiarism, cheating.

Appeals. If a student thus disqualified has grounds for appealing the decision, the student will present them in writing to the Vice Chair, who will then reconvene the ad hoc committee to reconsider the matter.

Should a student complete the Certificate program minus the required 3.0 grade point average, a meeting must be arranged with the Vice Chair and the Graduate Adviser to determine what extra courses the student should take to remove the deficiency.

Other Relevant Information and Rationale of Program. There are two technical courses in Linguistics. Linguistics 100 is an introduction to the methods and concepts of linguistics analysis; the nature of language, the interlocking systems that make up a language, how a language is analyzed. Examples are drawn from a large number of the world's languages.

English 122K applies these same methods and concepts to the study of the phonological and grammatical structures of modern English.

There are three professional courses which deal primarily with pedagogical matters. English 370K develops a methodology based on what is known of the nature of language and the nature of the learner, and deals with general guidelines applicable to learners of any background or at any level of instruction. English 250K, which is conducted as a series of seminar projects, provides an opportunity to contrast first languages and cultures with English and to apply this knowledge to the construction of materials suited to the particular needs of ESL students. These courses include the observation of filmed classes at various levels and visits to language classrooms and laboratories, in preparation for English 380K, in which the student-trainees engage in classroom teaching under the supervision of a master teacher at the university, elementary, secondary, or adult level.

Each student is required to take two practical courses. One is chosen from three courses that consider the written language in ESL instruction (either composition (English 106K), reading (English 107K), or literature (English 109K)) and the other with spoken language (phonetics, either English 103K or Linguistics 103). English 106K, English 107K, and English 109K provide opportunities to upgrade composition skills and study an important related area, the teaching of composition, reading or literature in the ESL context. English 103K is designed to help non-native speakers improve their own pronunciation and to give native speakers the experience of helping to improve the pronunciation of others. Linguistics 103 emphasizes practical training in analyzing and describing speech.

The elective courses can serve a variety of purposes. They permit students especially concerned with the language problems of underprivileged children in the American schools to include in their program a 2 or 3-course sequence in teaching English to a particular minority group. They make it possible for native speakers of English to become acquainted with a new language, judge the validity of pedagogical theory in the light of a fresh language-learning experience, and gain better insights into the linguistic and cultural backgrounds of those whom they are eventually to instruct. In some cases a non-native speaker of English can take a course in the structure of his/her native language—something about which he/she may have very little analytical knowledge. Some students use their electives to broaden their acquaintance with American or English literature. Others use them to fulfill the prerequisites for admission to a related M.A. program in another department.

As explained above, the course of study includes a substantial practical element: the observation of classes, the preparation of lesson plans, and actual classroom teaching. Prospective students should be forewarned, however, that there is an equal or greater emphasis on theory in the program, especially at the beginning of the Certificate year. 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 their competence in a language. They are also expected to be able to relate theoretical guidelines to practical procedures. This program is therefore probably not appropriate for the student who is interested exclusively in receiving vocational training.

The Master of Arts Degree in Teaching English as a Second Language

Major Fields or Subdisciplines. The M.A. in TESL is designed to provide students with an opportunity to investigate, in depth, some particular aspect of teaching and learning English as a second language or dialect. Whereas the major emphasis of the Certificate program is on improving the teacher's performance in the classroom, the M.A. program is particularly relevant to the out-of-class responsibilities that a specialist in TESL is often asked to assume, such as research, planning, curriculum development, the formulation of policy, and the preparation of instructional materials.

Foreign Language Requirement. There are no foreign language requirements for the M.A. in TESL other than those included among the Certificate requirements.

Course Requirements. For any master's degree, the University requires satisfactory completion of at least nine graduate (in the 200 or 500 series) and upper division (in the 100 series) courses, including at least four graduate courses taken during the Certificate year that are credited toward the fulfillment of this requirement: usually Linguistics 100, Linguistics 103 or English 103K, English 122K, and English 250K. This leaves five courses, four of which must be at the graduate level, to be completed during the M.A. year. The combination of the Certificate plus the M.A. thus requires 14 courses.

The electives to be taken should be selected as a sequence of three courses related among themselves and relevant to the thesis topic chosen. These courses should be selected in consultation with the M.A. Adviser at the beginning of the student's work toward the M.A., and any subsequent changes of program must have the M.A. Adviser's approval.

English 400K is a seminar in which TESL M.A. candidates present and defend the results of their thesis research. Enrollment is required of all candidates in the Spring Quarter but does not count for credit toward the degree.

Teaching Experience. One quarter of supervised teaching is required during the Certificate year.

Thesis Plan. At the conclusion 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.

**Time to Degree.** From Graduate Admission to completion of TESL Certificate: three quarters. From Graduate Admission to award of M.A. degree: six quarters, and in some cases, a summer session. Students must complete the degree including the filing of the thesis within three years after beginning the M.A. program. If the degree is not completed within that time period, students must file a petition indicating reasons for extension of time with the Department.

**500 Series Course Limitations.** Students in the M.A. program are permitted to take up to 8 units of 500 series courses. Students must be enrolled in English 598K (Research and Thesis Preparation for Candidates for M.A. in Teaching English as a Second Language) each quarter they are registered; however, a total of only 4 units of credit is given on a Satisfactory/Unsatisfactory basis. In addition, students are permitted to take up to 4 units of English 596K (Individual Study and Research) or 500 series courses, on a letter grade basis, in other departments if relevant to the student’s thesis preparation.

**Lower Division Courses**

A grade of C or better is required to pass into the next class in the series, or proficiency demonstrated on the English as a Second Language Placement Examination.

**33A. Low Intermediate English as a Second Language.** Prerequisites: grade of C or better in English 232 or proficiency demonstrated on the English as a Second Language Placement Examination. Meets five days weekly. Emphasizes writing and reading comprehension skills. Additional work on grammar rules, vocabulary development, listening and speaking.

**33C. High Intermediate English as a Second Language.** Prerequisites: grade of C or better in English 232, or proficiency demonstrated on the English as a Second Language Placement Examination. Meets five days weekly. Emphasizes composition research skills and reading unsimplified academic materials.

**34. Oral Communication Skills for Foreign Students.** Prerequisite: grade of C or better in English 33C, or proficiency demonstrated on the English as a Second Language Placement Examination. English 34 will develop oral language skills that will prepare non-native speakers of English to participate in class discussions, make oral presentations (lectures, debates, thesis defense, etc.) before an audience and respond to questions, and continue to improve their ability to speak.

**35. Intermediate Composition for Foreign Students.** Prerequisite: grade of C or better in English 33C, or proficiency demonstrated on the English as a Second Language Placement Examination. A course designed to improve English language writing skills for non-native speakers of English. Special attention is given to grammatical structures, principles and methods of exposition and writing for academic purposes.

**Upper Division Courses**

**103J. Phonetics for Foreign Students.** Prerequisite: grade of C or better in English 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 in which they are put together in connected speech, applied to the improvement of the student's own accent. Language laboratory.

**109K. Introduction to Literature (for Foreign Students).** Prerequisite: grade of C or better in English 33C, or proficiency demonstrated on the English as a Second Language Placement Examination. Introductions 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 mastery of the English language.

**109L. Literature 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. Survey of theoretical and methodological issues related to the teaching of writing/ composition to ESL students and examines appropriate classroom materials.

**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 reading to ESL students and examines appropriate classroom materials.

**106J. Advanced Composition for Foreign Students.** Prerequisite: grade of C or better in English 33C, or proficiency demonstrated on the English as a Second Language Placement Examination. Exercises in writing based on readings dealing with American life and thought, with the aim of developing control of idiomatic expression.

**Linguistics 103. Introduction to General Phonetics.** Prerequisite: course 100 or equivalent (100 may be taken concurrently with 103). The phonetics of a variety of languages and the phonetic phenomena that occur in languages of the world. Extensive practice in and analysis of each phonetic phenomenon. A special section emphasizes those languages likely to be of interest to teachers of English as a Second Language.

**Graduate Courses**

**210K. Role of English as a Second Language in Bilingual Education.** Prerequisites: Linguistics 100, course 370K and consent of instructor. Research and study of major problems and issues in designing and evaluating bilingual, bi-cultural programs in the United States and abroad.

**250K. Contrastive Analysis and Error Analysis in the ESL Context.** Prerequisites: Linguistics 100, course 370K. Analysis of English and other languages at the phonological, grammatical, lexical, and cultural levels. Preparation of lesson plans for helping specific groups of students overcome common errors identified through the analyses. Observation of ESL classes.

**251K. Bilingual Comparative Studies.** Seminar. Prerequisites: courses 215 and 250K. The relationship of two languages in an incipient bilingual speaker. Further study of the kinds and nature of comparative analysis as a means of predicting interference between linguistic systems with application to original research projects.

**260K. Psycholinguistics and Language Teaching.** Seminar. Prerequisites: courses 370K and 103K 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 and methodologies of teaching language as evidenced by classroom observation, analysis of research literature, and experimental designs to test existing assumptions about learning and teaching foreign languages.


**262K. Second-Language Acquisition.** Prerequisite: consent of instructor. The literature on child and adult second-language acquisition forms the basis for this research class. Language variables (phonological, morphological, semantic, and discourse level) and social and psychological variables which may affect differences in learning are considered. Research on classroom language learning and/or learning in "natural" environments is required.

**263K. Issues in Language Testing.** Lecture, four hours. Prerequisite: course 261K or consent of instructor. This course is designed to explore current issues in language testing research from both theoretical and practical perspectives and to provide actual experience in testing current issues. The latest approaches to language testing methodology will be examined. Specific topics may vary according to trends in the field.

**264K. English for Specific Purposes.** 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.

**270K. Language Policy in Developing Countries.** Seminar. Prerequisites: the consent of the instructor. Uses of and need for English in countries such as Nigeria and the Philippines; factors affecting language policy in their schools systems; applicability of research techniques of socio-linguistics to problems of language policy.

**Additional Required Courses for Certificate Program**

**Linguistics 100. Introduction to Linguistics.** An introduction to the theory and methods of linguistics: universal properties of human language; phonological, morphological, syntactic, and semantic structures and analysis; the nature and form of grammar.
Environmental Science and Engineering (Interdepartmental)

Office: 3677 Geology Building

Orson L. Anderson, Ph.D., Professor of Geophysics.
James G. Edinger, Ph.D., Professor of Meteorology.
Ernest A. Englebert, M.P.A., Ph.D., Professor of Political Science.
Christopher S. Foote, Ph.D., Professor of Chemistry.
Malcolm S. Gordon, Ph.D., Professor of Biology.

Environmental Science and Engineering

Advising. Graduate Adviser — Environmental Science and Engineering, 3677 Geology Building.

Graduate students are advised in general terms by the program Graduate Adviser, but their specific program is planned in consultation with a program committee of three faculty members. This program committee is formed during the student’s first quarter in the program. The student meets with this committee at least once a year, and frequently more often, to plan his/her program. This committee consists of at least two members of the Interdepartmental Committee, and at least one member from the student’s major discipline. The program committee later serves as the nucleus for the student’s doctoral committee.

Ongoing evaluations of academic progress are made by a careful review at the end of each quarter of progress in courses completed toward degree requirements, grades in all coursework, performance in the cumulative exams, and performance in Problems Coursework. The primary assessment is by course faculty and the Graduate Adviser, with review and assistance as needed by the student’s guidance committee.

Major Fields or Subdisciplines. Students may pursue one of several specialties within the Environmental Science and Engineering program; these include, but one is 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, it is possible for the student to slant his/her work either in the direction of greater emphasis on the science and engineering side, or on the science policy side of an area of emphasis.

Course Program.

Course Requirements. A minimum of nine courses after admission to the program will be required to broaden the student’s education in environmental problem areas, to deepen his/her knowledge in his/her specialty, to bridge gaps between other courses selected, and to provide a sufficient background in related social science subjects. More than nine courses are usually required, unless students are outstandingly well-prepared. Students will be guided in the selection of this course program by their program committees. Courses taken outside the student’s own disciplinary area will often be upper division undergraduate courses. Lower division courses may also be required but cannot be counted toward the minimum 9-course requirement. Individual reading or study courses may be taken under the guidance of a qualified faculty member.

Breadth Requirements. Students must pass a program of required breadth courses, in four of the five areas described below, excluding their special area. Courses taken during undergraduate or master’s work may count toward this requirement with approval of the Interdepartmental Committee. This approval may be delegated to the Graduate Adviser. Upper division or graduate courses taken in this program will count toward the nine required courses. All breadth courses must be taken for a letter grade.

Courses may be substituted with the approval of both the student’s committee and the Interdepartmental Committee. This approval may be delegated to the Graduate Adviser. In gen-
eral, courses to be substituted must fall within the same general area.

Departmental curricula and course numbers are so frequently altered that a specific designation of required breadth courses can be misleading, but the following general description of requirements may be useful.

Chemistry: Five courses, including organic and environmental chemistry.

Earth Sciences: Four courses, including both geology and meteorology.

Engineering and Mathematics: Seven courses, including calculus (one full year) energy and environmental engineering, and statistics.


Environmental Science and Engineering Seminar: ESE 411 is required of all students each quarter, taken S/U.

During the breadth program, full-time students will normally enroll in 18 units, including the Seminar ESE 411.

In the Problems Course. When the breadth requirements are near completion, students will enroll for three successive quarters in the Environmental Courses (ESE 400 ABC), at 8 units per quarter.

Environmental Workshops. Students may also take several Environmental Workshops concurrent with the environmental problems course as their committee and the faculty member in charge of the problems course may require.

Written and Oral Qualifying Examinations. Cumulative Examinations. Students must pass four out of eight 2-hour cumulative examinations, which are offered four times a year. These examinations are designed to test awareness of the current literature of Environmental Science and Engineering. Students must begin them in their first quarter in the program. They must attempt each examination offered after they begin, or it is counted as a fail. Thus, they have a maximum of two years to complete the requirement.

Qualifying Oral Examination. When the student has completed all other course requirements and is in the final quarter of the Problems Course, a doctoral committee will be established. The Interdepartmental Committee will nominate a minimum of three faculty members from a list of "inside" members supplied to the Graduate Division (normally those who already constitute the student's guidance committee) and a minimum of two "outside" members whose names do not appear on the list. The doctoral committee will be appointed by the Dean of the Graduate Division acting for the Graduate Council.

The doctoral committee conducts an Oral Qualifying Examination of the student. The committee uses the student's contribution to the report of the Problems Course as a starting point from which to assess the student's competence to engage in applied research. The doctoral committee takes note of the particular areas of interest to the student as evidenced by his/her professed discipline and coursework, and conducts the examination in such a way as to explore both the depth, breadth, and extent of the student's preparation with appropriate emphasis on practical problems and situations. Upon successful completion of the oral examination and completion of their Problems Course requirements, students are advanced to candidacy.

If the student should fail this examination, he/she will be permitted to take it on one subsequent occasion after completion of such additional coursework or individual study as the doctoral committee may recommend.

Doctoral Committee. There are no additional conditions to those stated by the Graduate Council.

Final Report and Oral Examination. A dissertation is not required. However, upon his/her return to UCLA following the internship, the student participates for a final quarter in the Problems Course and prepares a complete written report on his/her internship program. This report must be a detailed and complete statement of the problem on which he/she worked, must indicate clearly what his/her contribution was, and must contain an evaluation of the present status of the problem. Written reports done at the institution may be accepted as part of all of this requirement if they have been prepared by the student and are of the quality required by the doctoral committee and if the student's contribution is clearly identified.

The written report must demonstrate to committee members that the candidates have effectively applied to the study, program, or project of their internship the knowledge, concepts, and principles acquired during their academic preparation. If the report is satisfactory as judged by his/her committee, the student gives one or more seminars in an Environmental Colloquium. If the seminar and all other elements of the student's performance are judged satisfactory by his/her committee, the student is awarded the degree of Doctor of Environmental Science and Engineering (D.Env.).

The final written report submitted by the student in partial satisfaction of these requirements will be filed in the University Library as a permanent record. A copy is also to be filed with the Environmental Science and Engineering Program Office and with the chair of the doctoral committee.

Currently, the Final Oral Examination is routinely required in this program. The examination may be held before the candidate has prepared the final report, but passing the examination does not imply approval of the final report. If a final oral examination is required, all members of the committee must attend and vote. Students may pass with one negative vote. Notification is sent to the Graduate Division on the "Result of the Final Oral Examination" form. In case of failure, the doctoral committee will determine whether or not the candidates may be reexamined.

Time to Degrees. Full-time students are expected to take 14 or 18 units per quarter. The average time for completion of all coursework following admission is six to eight quarters. The minimum period for the internship is 18 months, followed by a final quarter by UCLA. The normal period from admission to award of the degree is therefore, 13 to 15 quarters.

Disqualification and Appeal of Disqualification. The process by which a student may be recommended for termination will depend on the status of a graduate student. For a student who has not yet taken the oral examination for advancement to the internship, the basic decision that termination of graduate status is appropriate will be made by a majority of five faculty: the 3-member committee responsible for the student's program up to internship, and the Program Graduate Adviser and Chair. After the oral examination has been administered and passed, responsibility shifts to the 5-member doctoral committee. Should an appeal be made, it is to the Program's Interdepartmental Committee. Grounds for termination, aside from unacceptably low course grades, may include, unsatisfactorily slow progress toward completion of degree requirements, inability to communicate as required for success in the program area (written or oral), or that an individual simply is not suited for the kind of professional activity which is the goal of this educational program.

Other Relevant Information. An 18 to 24-month internship is required of all students, with faculty approval and overview responsibility. When a student has been advanced to candidacy, an internship in the student's field of interest will be arranged at an outside institution. Arrangements for the internship are the responsibility of the student, and must be approved by both the doctoral committee, the Interdepartmental Committee, and the Dean of the Graduate Division. The arrangements are to be formalized by a written memorandum of understanding between the Chair of the Interdepartmental Committee and an appropriate representative of the internship institution. Supervision during the one and 1/2 to 2-year period of the field training experience will be by the student's doctoral committee.

Graduate Courses

400A. Environmental Science and Engineering Problems Course. (2 courses) Prerequisites: 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.
Environmental Science and Engineering doctoral program chair. Continuation of 400A. Multidisciplinary technical and socio-economic analysis and prognosis of significant current environmental problems. Letter grade assigned upon completion of 400C.

Environmental Science and Engineering Problems Course. (2 courses) Prerequisites: satisfactory completion of 400A, consent of instructor and program chair. Continuation of 400A. Multidisciplinary technical and socio-economic analysis and prognosis of significant current environmental problems. Letter grade assigned upon completion of 400C.

Environmental Science and Engineering Problems Course. (2 courses) Prerequisites: satisfactory completion of 400C and of an internship approved by the Environmental Science and Engineering Interdepartmental Committee. Multidisciplinary technical and socio-economic analysis and prognosis of significant current environmental problems.

Environmental Science and Engineering Workshop. (1/4 course) Prerequisites: consent of instructor and limited to graduate students in Environmental Science and Engineering departments. Current topics in environmental science and engineering. To be given on a S/U basis. May be repeated more than once for credit.

Cooperative Program. (1/2 to 2 courses) Prerequisites: approval by UCLA Graduate Adviser, Program Chair, and Graduate Dean. Approval of 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. To be graded S/U.

Directed Individual or Tutorial Studies. (1/2 to 2 courses) Prerequisites: consent of instructor and the Chair. Environmental Science and Engineering Interdepartmental Committee. Supervised investigation of advanced environmental problems. To be graded S/U basis.

Folklore and Mythology (Interdepartmental)

(Office, 1041 Graduate School of Management)

Shirley L. Arora, Ph.D., Professor of Spanish. Margherita Cottino-Jones, Ph.D., Professor of Italian. Patrick K. Ford, Ph.D., Associate Professor of English and Celtic Studies (Director, Center for the Study of Comparative Folklore and Mythology). Robert A. Georges, Ph.D., Professor of English and Folklore.

Margaret Simbutes, Ph.D., Professor of European Archaeology. Nazir A. Jalalzaybov, Ph.D., Professor of Music. Michael Owen Jones, Ph.D., Professor of History and Folklore. Vladimir Markov, Ph.D., Professor of Slavic Languages.

James Porter, M.A., Professor of Music and Folklore. Jean Pulvill, Ph.D., Professor of Classics and Indo-European Studies. Stanley L. Rabe, Ph.D., Professor of Spanish.

Robert M. Stevenson, Ph.D., Professor of Music. Donald J. Ward, Ph.D., Professor of German and Folklore. D. K. Wilgus, Ph.D., Professor of English and Anglo-American Folklore (Chair, Folklore and Mythology Committee). Johannes Willert, Ph.D., Professor of Anthropology. Wayland D. Hand, Ph.D., Emeritus Professor of German and Folklore. Charles Speroni, Ph.D., Emeritus Professor of Italian. David E. Draper, Ph.D., Assistant Professor of Music.

Joseph Nagy, Ph.D., Assistant Professor of English and Folklore.

Mariana D. Birnbaum, Ph.D., Adjunct Associate Professor in Hungarian.


Alexander Badawy, Ph.D., Professor of Art. Henrik Birnbaum, Ph.D., Professor of Slavic Languages.

Kees W. Bolle, Ph.D., Professor of History.

Kenneth G. Chapman, Ph.D., Professor of Scandinavian Languages.

Jerome Cushman, B.S.L.S., Senior Lecturer in Literature for Children and Adolescents.

Elise Durin, M.A., Associate Professor of Dance. Charlotte Heit, Ph.D., Assistant Professor of Music. Melvyn Haitlen, Ph.D., Professor of Theater Arts.

Boris A. Krakenleif, Ph.D., Emeritus Professor of Music.

Steven Lattimore, Ph.D., Associate Professor of Classics and Classical Archaeology.

Jacques Maquet, Ph.D., Professor of Anthropology.

James R. Massengale, Ph.D., Associate Professor of Scandinavian Languages.

Michael Maizner, Ph.D., Professor of Anthropology. Philip Newman, Ph.D., Associate Professor of Anthropology.

Wendell H. O'Neil, Ph.D., Professor of Anthropology. Pier-Maria Passiotti, Ph.D., Professor of Italian and Comparative Literature.

Douglas Price-Williams, Ph.D., Professor of Anthropology and Psychiatry in Residence.

Florence H. Ridley, Ph.D., Professor of English.

Arna Ruben, Ph.D., Associate Professor of Art.

Georges Sabag, Ph.D., Professor of Sociology. Allegra Snyder, M.A., Professor of Dance.

Ellie Sol, Ph.D., Professor of German.

Erik Weihgen, Ph.D., Emeritus Professor of Scandinavian and Germanic Languages.

Dean S. Worth, Ph.D., Professor of Slavic Languages.

The programs leading to the M.A. and Ph.D. degrees in Folklore and Mythology are administered by the Interdepartmental Committee on Folklore and Mythology.

The Master of Arts Degree

Admission Requirements. The student is required to have completed Folklore 101, Introduction to Folklore (or its equivalent), and another upper division course in folklore. (These course requirements may be completed during the first quarter in residence at UCLA, following admission to the program.) In addition, two letters of recommendation from former instructors or other comparable references are required.

Applicants who have completed Folklore 101 are admitted in any term; others are admitted only in the Fall and Spring terms.

Advising. Address: Folklore and Mythology Program, 1041 Graduate School of Management.

Students will plan their programs with the guidance and approval of the Chair.

Foreign Language Requirement. A reading knowledge of French, German, or Spanish is required. Students will have the option of demonstrating proficiency either by:

- presenting evidence of passing the fifth quarter or fourth semester level course in the chosen foreign language at a college or university with a grade of B or its equivalent no more than five years before graduate enrollment, or

- successfully completing the Educational Testing Service GSFTL examination with a score of 500 or better, or

- passing a reading examination administered and evaluated by members of the Folklore and Mythology Program faculty (or by "outside" faculty in the case of languages not familiar to the Folklore and Mythology faculty). The "in-house" foreign language examination will consist of two parts: (1) translation into English of a portion of traditional prose or poetic text, with the student choosing which of two to translate, and (2) translation into English of a passage from an historical or theoretical work in folklore and mythology studies. Each part of the examination will be 50 minutes in length, with the student allowed the use of a dictionary during the final 15 minutes. The examination will be devised, administered, and evaluated by a 2-member committee appointed by the Chair of the Folklore and Mythology Interdepartmental Committee.

No student may enroll in Folklore 597A, Preparation for M.A. Comprehensive Examination, until the foreign language requirement is satisfied.

Course Requirements. All degree candidates, whether electing the Thesis or the Comprehensive Examination Plan (see below), must complete the following courses: Folklore 200, Folklore Bibliography, Theory and Research Methods; Folklore 21A-21B, Folklore Collecting and Field Research; Folklore 218, The Folktales, and at least one course each from the following groups:

Group 1. One course in folksong 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.

Thesis Plan. The candidate must complete a minimum of 10 courses (six in the 200 series—which may include only one 597 course) and submit an acceptable thesis, prepared under the direction of a member of the Folklore and Mythology Program. Submission of the thesis will be followed by an oral examination covering the fields of folklore and mythology studies.
The thesis committee, composed of three or more faculty members chosen with the approval of the Chair of the Interdepartmental Committee on Folklore and Mythology, is appointed no later than the quarter before the student expects to complete the requirements. No "outside" members are required.

Comprehensive Examination Plan. The candidate must complete a minimum of 10 courses (six in the 200 series — which may include only one 596 course). After completion of the coursework, the candidate will be expected to demonstrate competence in a written examination requiring a grasp of:

— theoretical bases, major documents, and research methods and techniques of folklore and mythology studies.
— two forms of folklore and mythology.
— the folklore and mythology of a specific country, continent, or geographical area.

A final Oral Comprehensive Examination will cover the fields of folklore and mythology studies.

The Comprehensive Examinations are given no later than the seventh week of each quarter. The written examinations are set by (1) a 3-person faculty committee appointed by the Chair of the Interdepartmental Committee on Folklore and Mythology, and (2) by the members of each candidate's M.A. committee, three or more faculty members chosen with the approval of the Chair of the Interdepartmental Committee on Folklore and Mythology. No "outside" members are required.

Time to Degree. For a full-time student with no deficiencies upon admission to the program, the normal progress toward the degree is as follows:

a. From graduate admission to completion of required courses: five to six quarters.
b. From graduate admission to award of degree: seven quarters.

500 Series Course Limitation.

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<tr>
<th>Course No.</th>
<th>Unit Value</th>
<th>Type of Grading</th>
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<tr>
<td>596</td>
<td>2-6</td>
<td>Letter</td>
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<td>597A</td>
<td>2-4</td>
<td>S/U</td>
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<td>597B</td>
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<td>599</td>
<td>4-8</td>
<td>S/U</td>
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Only four units of 596 and no other 500 series courses may be applied to the minimum course requirements.

Disqualification. The specific conditions which may lead to termination are: (1) failure to pass the foreign language examination in 10 before the fifth quarter in residence (2) scholarship (recommendation from the Interdepartmental Committee on Folklore and Mythology); (3) failure to make normal progress toward the degree (recommendation from the Interdepartmental Committee on Folklore and Mythology); (4) failure to pass the Comprehensive Examination (recommendation from the student's master's committee).

Appeals. The student is notified of termination by the Chair of the Interdepartmental Committee on Folklore and Mythology in writing. Should the student wish to appeal such a decision, he/she may submit a letter to the Chair stating his/her reasons, and the Chair will transmit it to the Committee for consideration. (A student who fails the Comprehensive Examination may apply to retake the examination within one year.)

The Ph.D. Degree

Admission Requirements. Requirements for admission to the doctoral program include the completion of the requirements for the M.A. degree in Folklore and Mythology (or their equivalents) including the Comprehensive Examination. A student will be admitted to the doctoral program upon the recommendation of the Folklore and Mythology Interdepartmental Committee. (A student may secure provisional admission in order to complete the admission requirements.)

Major Fields. A student is required to 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 student's guidance committee.

Foreign Language Requirement. A reading knowledge of a foreign language approved by the candidate's guidance committee is required. Students will have the option of demonstrating proficiency either by:

(a) presenting evidence of passing the fifth quarter or fourth semester level courses in the chosen foreign language at a college or university with a grade of B or its equivalent no more than five years before graduate enrollment, or
(b) successfully completing the Educational Testing Service GSFLT examination with a score of 500 or better, or
(c) passing a reading examination administered and evaluated by members of the Folklore and Mythology Program faculty (or "outside" faculty in the case of languages not familiar to the Folklore and Mythology faculty). The "in-house" foreign language examination will consist of two parts: (1) translation into English of a portion of a traditional prose or poetic text, with the student choosing which of two to translate, and (2) translation into English of a passage from an historical or theoretical work in folklore and mythology studies. Each part of the examination will be 50 minutes in length, with the student allowed the use of a dictionary during the final 15 minutes. The examination will be devised, administered, and evaluated by a 2-member committee appointed by the Chair of the Folklore and Mythology Interdepartmental Committee.

The foreign language examinations must be completed before the student attempts the Qualifying Examination.

Course Requirements. Before attempting the Qualifying Examination, a student will complete a minimum of nine courses or seminars in the 200-series (or substitutes recommended by his/her guidance committee) in (1) a major field of folklore and mythology and (2) an area of concentration within a related discipline.

Qualifying Examination. After the required preparation, the student will complete a written examination covering (1) his/her specialization in folklore and mythology and (2) his/her related area of concentration. The examinations will be administered by a committee appointed with the approval of the Folklore and Mythology Interdepartmental Committee and will include one or more members from the student's related discipline.

Doctoral Committee. The student's doctoral committee will consist of a minimum of three faculty members actively participating in the Folklore and Mythology Program and a minimum of two "outside" members, at least one of whom is from the student's related discipline. The doctoral committee will consider and approve the student's dissertation topic.

Final Oral Examination Following Completion of the Dissertation. A successful oral defense of the dissertation will constitute the final examination for the degree.

Time to Degree. For a full-time student with no deficiencies upon admission to the program (pre-M.A.) the normal progress to degree is 18 quarters. The normal progress from the M.A. to the Ph.D. is 11 quarters.

Disqualification and Appeal of Disqualification. The specific conditions which may lead to termination are: (1) failure to complete the foreign language requirements; (2) scholarship (recommendation from the Interdepartmental Committee on Folklore and Mythology); (3) failure to make normal progress to the degree (recommendation from the Interdepartmental Committee on Folklore and Mythology); (4) failure to meet the requirements of the doctoral committee. After notification of termination in writing, a student may appeal to the Interdepartmental Committee on Folklore and Mythology.

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. Ward

201A, 201B. 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. Wilgus

201P. Folklore and Poetry. Prerequisite: course 200. One quarter of lecture-demonstration in the principles and techniques of the classification and preservation of folklore collectanea, followed by one quarter of directed experience in archiving.

Mr. Georges

202A-202B. Folklore Archiving. (½ course each) Prerequisite: course 200. One quarter of lecture-demonstration in the classification and preservation of folklore collectanea, followed by one quarter of directed experience in archiving.

Mr. Georges

202A. Folklore Archiving. (½ course each)
M205. Perspectives in American Folklore Research. (Same as English M205.) Prerequisites: Folklore 101 and one other upper-division folklore course. An examination of American folklore studies compared and contrasted with investigation in other countries, with emphasis upon the principal conceptual schemes and research orientations employed in the study of folklore. American society. Mr. Jones.

213. Folk Belief and Custom. Prerequisites: course 101 and any one of the following courses: 118, M121, M122, M123A-M123B, 124, M125, M126, M128, M149, M150; Anthropology 102, 140; German 134, 240. 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 legend and their relation to myth, custom, ritual, popular beliefs, and balladry. Mr. Ward.

216. The Folktales. Prerequisite: course 200 or consent of instructor. Mr. Georges, Mr. Ward.

217. Folk Speech. Prerequisites: course 101, M106, or M111; also recommended: Anthropology M146, English 121, or Linguistics 100. A study of the phonology, morphology, and syntax of the folk language, with particular reference to oral interchanges and the study of legal and popular words. Mr. Georges.

M219. Seminar in the Puppet Theater. (Same as Theater Arts M217.) Prerequisite: consent of instructor. Studies in the puppet theaters of the world: technique and content. Mr. Robe.

M241. Folklore and Mythology of the Near East. (Same as Near Eastern Languages-Jewish Studies M241.) Prerequisite: Graduate Standing or upper division with consent of instructor. An examination of both the historic and generic methods used in the study of Jewish Folk-Literature. Mr. Wilgus.

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.) Prerequisite: course M243A or consent of instructor: intensive investigation of a problem or problems in the study of the popular ballad. Mr. Wilgus.

248. Theory and Method in Latin American Folklore Studies. A historical survey of folklore scholarship in Latin America, with emphasis on the theoretical bases of the methods and techniques employed in the study of and analysis of traditional tales, songs, music, linguistic expression. Mr. Wilgus.

M249. Hispanic Folk Literature. (Same as Spanish and Portuguese M249.) Prerequisite: Graduate Standing. An intensive study of folklore literature as represented in a) ballad and poetry, b) narrative and drama, c) speech. Ms. Arora, Mr. Robe.

251. Seminar in Finno-Ugric Folklore and Mythology. Advanced studies in the folk traditions and mythologies of the Finno-Ugric speaking nations. Mr. Wilbert.

M257. South American Folklore and Mythology Studies. (Same as Anthropology M257.) Prerequisite: Anthropology 105A 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 peoples. Mr. Wilbert.

M258. Seminar in Folk Music. (Same as Music M258.) Prerequisite: consent of instructor. Mr. Porter, Mr. Wilgus.

259. Seminar in Folklore. Prerequisite: course 200 and consent of instructor.

ered to approve their program. Students who have established doctoral guidance committees or thesis committees (M.A. Plan C) are expected to have their program approved by the Chair of their committee.

All graduate students, regardless of degree objective, are required to have their program approved by a faculty member at the beginning of each quarter.

Disqualification and Appeal of Disqualification. Termination of graduate status may be recommended in cases of continued unsatisfactory scholarship, insufficient progress toward the degree or failure of examinations. Such decisions are made by the Chair of the Department in consultation with the Committee on Graduate Progress. Appeals should be directed to the Chair.

The Master of Arts Degree

Admission Requirements. The Graduate Record Examination Advanced Test in French and three letters of recommendation are required. A B.A. in French is desirable but not mandatory. Information is available from the French Department Graduate Secretary, 160 Haines Hall.

Foreign Language Requirement. For all candidates for the M.A. in French, the foreign language requirement will be fulfilled by passing a course of at least level 3 in either German, Latin, Spanish, or Italian, or by passing the University reading examination in one of these languages. Passing the ETS language examination with a score of 500 or more is considered as fulfilling this requirement. In special cases, substitution of another foreign language will be accepted if approved by the Chair of the Department. Students are required to complete the foreign language requirement before taking the M.A. examination (Plan A or B) or submitting their thesis (Plan C). All candidates for the M.A. must satisfy the Department as to their proficiency in spoken French.

Plans of Study

The Department offers three Master's programs:

- Plan A, designed for teachers of French at the secondary and junior college levels.
- Plan B (Comprehensive Examination Plan) and Plan C (Thesis Plan), leading to the Ph.D. in French.

Plan A: Course requirements: At least 12 courses in French including normally 201D, and 310A/310B or 370/495 (or any combination of one theory and one observation course). Among these 12 courses, the student will take at least seven courses in literature including at least three courses in each of two periods (one of which must be the modern period). To meet general University requirements, at least six courses must be at the graduate level.

Comprehensive Examination: Written examinations of three hours in length in each of the two periods prepared, a 2-hour examination in translation and literary composition, a 2-hour explication de texte, and an oral examination in French. These examinations are given twice a year (during the seventh week of the Fall and Spring Quarters) by a committee of four professors appointed by the Chair. At the discretion of the Department, a candidate may be permitted to take the examination a second (but not a third) time.

Plans B and C: Course requirements: At least 12 courses in French, including normally 201D, at least three courses in each of two periods, and at least one course from 202-207. At least eight of these courses must be at the graduate level. Students in Plan C may include 4 units of 598 credit for work on the thesis.

Plan B: Comprehensive Examination: Written examination of four hours in length in each of the two periods prepared, a 2-hour explication de texte, and an oral examination in French. These examinations are given twice a year (during the seventh week of the Fall and Spring Quarters) by a committee of four professors appointed by the Chair. At the discretion of the Department, a candidate may be permitted to take the examination a second (but not a third) time.

Plan C: Admission Requirements and Oral Qualifying Examination. Students may apply to the Chair of the Department for admission into Plan C after completion of at least six courses of graduate level (200-series), at least four of which must be literature courses in the French Department. The minimal admission requirements are: (1) 3.5 graduate G.P.A. in French (2) letters from two graduate professors in the Department specifically recommending admission into this plan.

Final admission into Plan C (i.e., permission to write the thesis) is contingent upon passing the Oral Qualifying Examination. This is a 1-hour oral examination in the two periods prepared, to be administered by a committee established by the candidate, consisting of three graduate professors in the French Department, including normally at least one specialist in each period. If the candidate fails this examination, the Committee will determine whether he/she be permitted another attempt, or whether he/she be advised to take the written comprehensive examination (Plan A).

Thesis. The thesis should demonstrate proficiency in the methods and concepts of literary research; a suitable length will normally be about 50 pages.

After passing the Oral Qualifying Examination the candidate should establish a 3-member Thesis Committee (normally but not necessarily the same body that administered the Oral), to be appointed by the Dean of the Graduate Division. A tentative outline of the proposed thesis must be approved by all three members in writing before work on the thesis is begun. Final approval of the thesis by all three members is also required.

Time to Degree. A reasonable time period for the M.A. is 1 1/2 to 2 years.

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The Ph.D. Degree

Admission Requirements. Completion of master's degree Plan B or C with recommendation for continuance by M.A. committee; outside applicants require an M.A. degree or the equivalent, and three letters of recommendation.

Admitted students holding the M.A. or Licence des Lettres 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 should be taken during the first year of residence. In case of failure it may be repeated a second time.

Information is available from the Departmental Graduate Secretary, 160 Haines Hall.

Foreign Language Requirement.

A) Two languages up to courses 5 and 6 respectively. These are to be chosen upon approval of the Guidance Committee among the following: Latin, German, Russian and Spanish. Language requirements may also be satisfied by taking the Educational Testing Service (ETS) examination with level III corresponding to a score of 500, level V 550 and level VI 600. Substitution of another language when warranted by the nature of the student's specialization must be recommended by the student's Guidance Committee, and approved by the Chair of the Department.

B) When the nature of the student's specialization requires the knowledge of a third language (in addition to the two normally required) the Guidance Committee is expected to take into account the extra work implied in making its other recommendations.

C) Language requirements are to be completed before permission is granted to take the doctoral Qualifying Part II Examination.
Course Requirements. 1) at least three courses from the 202-207 series, including one from the 203 series; 2) at least four seminars, two of which should be in the candidate's proposed area of specialization; 3) at least two graduate courses in other departments related to the area of specialization. In addition, the candidate is expected to follow the Guidance Committee's suggestions in taking courses in preparation for the Doctoral Qualifying Examination.

Written Qualifying Examination. (1) Four written examinations of four hours each as follows:

(a) Focused specifically in the area of the prospective dissertation topic (e.g., an author, a specifically defined theme or genre over a limited period).

(b) Dealing with a more general subject related to the dissertation topic (i.e., the period of the author, the development of the theme or genre over one or more centuries).

(c) In a cognate field related to the methodology or approach the candidate proposes to employ in the dissertation.

(d) In the period not covered at the M.A. level. It is understood that the topics to be dealt with in parts a, b, and c shall be determined by prior consultation of the candidate with the Doctoral Guidance Committee.

A student failing the Written Qualifying Examination may, at the discretion of the Guidance Committee, be permitted to take it a second (but not a third) time.

Oral Qualifying Examination

Upon passing the written examinations the candidate will be admitted to the Oral Qualifying Examination where the departmental members of his/her doctoral committee will be joined by two members from other departments. This examination, normally of two hours duration, will bear chiefly on parts (a) and (b) of the written examination, and on the proposed dissertation subject. The candidate is expected to submit a written outline of research plans before the oral examination.

Doctoral Guidance Committee: Upon admission to the doctoral program, the student will establish a Doctoral Guidance Committee consisting of at least three graduate professors, including (1) the Chair, normally in the student's proposed period of specialization and (2) a specialist in the period not covered at the M.A. level. This committee will administer the doctoral Written Qualifying Examination.

Final Oral Examination Following Completion of the Dissertation. (Defense of dissertation.) This examination is no longer required. This does not prevent individual doctoral committees from imposing this examination on a candidate.

Time to Degree. Estimated time: 15 to 18 quarters.

Candidate in Philosophy Degree. Students are eligible to receive the C. Phil. degree upon advancement to candidacy for the Ph.D.

Graduate Courses

201A. Theme. Course meets three times weekly. Advanced translation into French.

201B. Version. Course meets three times weekly. Advanced translation into English.


201D. Problems of French Literary Composition. Course meets three times weekly. Practical work of an advanced nature in the expression and presentation of literary research.

202. Explication de Textes. Mr. Bensimon

203A-203B-203C. French Literary Criticism.

204A. Topics in Literary Criticism from Aristotle to Sainte-Beuve.

204B. Modern Theories of Criticism.

205A. The Intellectual Background of French Literature.

205B. Scholasticism (with ancient sources); Humanism.

205C. Rationalism, Empiricism, Positivism.

205D. Criticism, Idealism, Dialectical Materialism.

205E. Phenomenology, Existentialism, Structuralism.

206. French Linguistics. Prerequisite: Linguistics 100 or French 105, 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.


215F. The Chanson de geste.

215G. The Romance.

215H. Medieval Theater.

215I. Provençal Poetry.

216A-216H. The Renaissance.

216A. Topics in early sixteenth century French literature.

216B. Topics in the Pleiade.

216C. Topics in late sixteenth century French literature.

216D. Ronsard.

216E. Rabelais and Prose Writers.

216F. Baroque Poetry.

216G. Montaigne.

216H. Theater.

217A-217I. The Seventeenth Century.

217A. Topics in Classical Theater.

217B. Topics in Non-Dramatic Literary Genres.

217C. Topics in Classical prose and thought.

217D. Molière.

217E. Corneille.

217F. Racine.

217G. The Novel.

217H. Moralists.

217I. Religious Thought.

218A-218D. The Eighteenth 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.


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.


220A-220P. The Twentieth Century.

220A. From Symbolism to Surrealism. Selected topics.

220B. From Surrealism to Existentialism. Selected topics.

220C. From Existentialism to the Present. Selected topics.

220D. Paul Valéry.

220E. Marcel Proust.

220F. André Gide.

220G. André Malraux.

220H. The Theater.

220I. The Anti-Theater.

220J. The Novel.

220K. The Anti-Novel.

220L. Surrealism.

220M. Existentialism.

220N. Poetry.

220P. Cinema and Literature.

221A-221D. French-African Literature.


221C. French-African Literature of Berbero-Sudanese and Arabo-Islamic Africa.

221D. Franco-Caribbean Literature.

Seminars

The following courses, 250A through 260B, may be repeated for credit.

150-250A. Studies in Medieval Literature (Introduction to the Provençal Medieval Poetry). Prerequisite: Senior or graduate status, or permission of the instructor. Mr. Gans

250A-250B. Studies in Medieval Literature.

251A-251B. Studies in the Renaissance.


256A-256B. Studies in Contemporary Literature.


258A-258B. Studies in Literary Criticism.

259A-259B. Studies in Philosophy and Literature.


270. Introduction to Methods of Literary Research. Prerequisite: Graduate Standing. The course will be made up of lectures on aspects of literary research. It will range from bibliography to new critical approaches, and will call on specialists in each field.
Professional Courses

310A-310B. The Teaching of French in the Elementary School and at the Junior High Level.
310A. Prerequisite: consent of instructor. Theory of French teaching in the elementary school and at the junior high level. Classes meet three hours weekly. Required for the Standard Elementary Credential.
310B. Observation of language teaching in the elementary school and at the junior high level. Classes will meet as announced. Required for the Standard Elementary Credential.

370A. 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.

372. The Language Laboratory. (1/2 course) Prerequisite: consent of instructor. New electronic techniques for language instruction. Pedagogical and practical problems of making tapes, installing and organizing a laboratory; control procedures.

495. The Teaching of French in the Secondary Schools and at the College Level. Prerequisite: course 370. Theory of language teaching. Letter grade.

Individual Study and Research

506. Directed Individual Studies or Research. (1/2 to 1 course)
508. Research for and Preparation for the Comprehensive Examination for the Major’s Degree or the Qualifying Examination for the Ph.D. (1/2 to 2 courses)
509. Research for and Preparation of the Master’s Thesis. (1/2 to 1 course) Prerequisite: consent of instructor. A maximum of 4 units may be applied toward the M.A. degree requirements. Grade S/U.
510. Research for and Preparation of the Doctoral Dissertation. (1/2 to 2 courses)

Geography

(Office, 1255 Bunche Hall)

Charles F. Bennett, Ph.D., Professor of Biogeography.
C. Rainer Berger, Ph.D., Professor of Geography and Geophysics.
Henry J. Brumman, Ph.D., Professor of Geography.
William A. Clark, Ph.D., Professor of Geography.
Gary S. Dunbar, Ph.D., Professor of Geography.
Huey L. Kostantick, Ph.D., Professor of Geography.
Richard F. Logan, Ph.D., Professor of Geography.
Tom L. McKnight, Ph.D., Professor of Geography (Chair of the Department).
Howard J. Nelson, Ph.D., Professor of Geography.
Anthony R. Orme, Ph.D., Professor of Geography.
Jonathan D. Sauer, Ph.D., Professor of Geography.
Allen J. Scott, Ph.D., Professor of Geography.
Warren H. Teten, Ph.D., Professor of Geography.
Norman J. W. Thower, Ph.D., Professor of Geography.
Harmit Bal, Ph.D., Professor of Geography.
Walter E. Westman, Ph.D., Professor of Geography.
Robert M. Gielen, Ph.D., Emeritus Professor of Geography.
Clifford H. MacFadden, Ph.D., Emeritus Professor of Geography.
Joseph E. Spencer, Ph.D., Emeritus Professor of Geography.
Benjamin E. Thomas, Ph.D., Emeritus Professor of Geography.
N. Nicholas Enttiken, Ph.D., Associate Professor of Geography.
Gerry A. Hale, Ph.D., Associate Professor of Geography.
Christopher L. Sailer, Ph.D., Associate Professor of Geography.
Stanley W. Trimble, Ph.D., Associate Professor of Geography.
James H. Johnson, Ph.D., Assistant Professor of Geography.

Frank H. Weirich, M.Sc., A.B.D., Acting Assistant Professor of Geography.
John D. Stephens, Ph.D., Visiting Assistant Professor.

General Information

Advising. For 1982-1983, Dr. Charles F. Bennett will be the Graduate Adviser. His office is Room 1251 Bunche Hall, Department of Geography, UCLA, Los Angeles, CA 90024.

Early in the first quarter of residence, each candidate is required to seek an informal guidance committee headed by an interim adviser from among the faculty, in consultation with the Graduate Adviser. The interim adviser may be changed as the candidate’s plan and objectives change, subject to the normal courtesies of informing the Graduate Adviser and others involved.

The Department holds a review of all graduate students every Spring Quarter. To this end, all graduate students should have designated a committee chair or interim adviser and have completed a simple form detailing program and accomplishments prior to Spring Quarter. All faculty members are at the review meeting. The results of this review (Favorable, Favorable with Reservations, or Unfavorable) are reported in writing to each student individually, determine whether or not the student is permitted to proceed toward their degree objective.

Apart from this review, all students are encouraged to meet with their advisers to review progress and plan future programs at least once a month, and preferably more frequently.

Major Fields or Subdisciplines. By its very nature, geography embraces many fields of endeavor within the physical, biological, and social sciences. In essence, geography is both a vital discipline that explores the interface between environment and society, and a method of study, a correlative science that seeks to establish relationships both within and between the many complex expressions of our surroundings. While acknowledging this, graduate students commonly focus their attention on one or more of the following subdisciplines: geomorphology, climatology, biogeography, cultural, historical, urban, economic, political, cartography, environmental studies.

Graduate brochures are available by writing the Graduate Adviser, Department of Geography, UCLA, Los Angeles 90024.

The Master of Arts Degree

Admission Requirements. The Department of Geography admits students to the graduate program for the Fall, Winter or Spring Quarter.

The Department requires an undergraduate major or its equivalent; a bachelor’s degree or its equivalent from an accredited college or university; a high grade point average (3.3) in courses taken in the junior and senior years and in the major field. Prospective students are required to take the Graduate Record Examination Aptitude Test (General Section only) and receive a minimum score of 1100 (Verbal and Quantitative scores combined); and in addition, 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 their Graduate Record Examination 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.

Requirements for students entering the graduate program from beyond departments of geography: Non-geography majors entering the geographic program from another field will be required to show proficiency in six upper division geography courses (additional to those required for the M.A.) including three courses from Group I (The Environment) and three courses from Group II (Human Geography), embracing at least one course each from Groups Ia, Ib, Ila, and Iib.

Research Tool Requirement. At least one research tool is required for graduate study. This is a minimum requirement and is subject to approval by the graduate student’s committee at both the M.A. and Ph.D. levels, prior to advancement to candidacy. 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 a series of courses (with a B average), taking of the Educational Testing Service (ETS) examination with a score of 500 or taking of a special departmental written examination.

Course Requirements. The work in residence must include at least nine courses plus Geography 200, including a minimum of seven courses at the graduate level, of which Geography 201, and at least one seminar in geography are required. The student’s program must have the approval of the graduate student’s committee. Geography 200 must be taken at the earliest opportunity.

Thesis or Comprehensive Examination Plan. Committee. At a time agreed upon by the student and his/her adviser, an official 3-person Graduate Division committee, including a Chair, will be appointed. This committee is responsible for the candidate’s course of study henceforth, and supervises the preparation of the master’s thesis or the Comprehensive Examination.

Thesis Plan. Under the Thesis Plan, each student 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 candidate should submit a written statement to all members of the thesis committee, describing in some detail the thesis proposal. This 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.** All formal coursework, including the completion of the research tool requirement, must be completed before the examination is attempted. The Comprehensive Examination normally is given in the final 2-week period of the quarter in which the candidate completes his/her 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 the more specialized abilities of the candidate. A student who fails any part of the Comprehensive Examination may be reexamined once. Such reexaminations must take place within one calendar year of the failure. A student who completes the M.A. degree by the Comprehensive Examination Plan may not continue for a Ph.D. degree in this department.

**Advancement to Candidacy.** For both plans: A student must file an application for advancement to candidacy no later than the second week of the quarter in which the degree will be awarded.

**Time to Degree.** Normal progress for the M.A. degree is from graduate admission to completion of required courses three (3) quarters. From graduate admission to award of the M.A. degree six (6) quarters.

An M.A. degree must be completed within five calendar years of admission to graduate status at UCLA.

**500 Series Course Limitations.**

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<th>Course No.</th>
<th>Unit Value</th>
<th>Type of Grading</th>
<th>Number of Times May Be Repeated</th>
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<tr>
<td>596</td>
<td>2-8</td>
<td>S/U</td>
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<td>597</td>
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<tr>
<td>598</td>
<td>2-8</td>
<td>S/U</td>
<td>No limit</td>
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Only one 500 series course may be applied to the minimum course requirements for the master’s degree and to the minimum graduate course requirement.

A student may not take Geography 596 in a given term unless he/she is also taking a least one formal course during that term.

In any given term a student may take no more than 8 units of Geography 596.

**Disqualification.** A graduate student could be terminated for failure to maintain a grade point average of at least 3.0, failure of the Comprehensive Examination (after second attempt). The decision to terminate would be made by a vote of the entire faculty in residence at the time and not by one or a few individuals.

**Appeals.** Student appeals would be directed to the faculty.

**The Ph.D. Degree**

**Admission Requirements.** 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 higher, plus a strong showing on the Graduate Record Examination Aptitude Test (minimum score of 1100 — Verbal and Quantitative scores combined), plus strong letters (3) of recommendation.

An M.A. or M.S. degree, with a geography specialty and a high grade point average (3.5) in graduate studies is recommended for all students undertaking work toward the Ph.D. degree. No screening examination is required. However, any student entering the doctoral program who has not previously written a master's thesis must, during his/her first quarter of residence, produce clear evidence of substantive research and writing ability, to the satisfaction of the faculty. Any student 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, a student may proceed directly toward the Ph.D. degree without taking a master's degree if the following conditions are met:

1. The student must be enrolled in the UCLA M.A. program in geography and have a superior (4.0) grade point average.
2. The student must be recommended for a direct Ph.D. by the M.A. guidance committee who will bring the matter before the entire faculty.
3. The student must have three letters of recommendation in addition to one from his/her interim adviser or chair.
4. The student must receive the approval of at least two-thirds of the current Geography 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. This is a minimum requirement and is subject to approval by the graduate student's committee at both the M.A. and Ph.D. levels, prior to advancement to candidacy. The research tool may be fulfilled by a series of courses in the approved tool, or if a foreign language, by the taking of the Educational Testing Service (ETS) examination with a score of 500 or taking of a special departmental written examination. If a series of courses are taken, a B average must be received.

**Course Requirements.** All Ph.D. students must satisfactorily complete Geography 200 and 201 if these have not already been taken at the M.A. level. Students are also required to take at least three graduate geography courses additional to their M.A. coursework (excluding 200, 201, and the 500 series) and three upper division or graduate courses in one or two allied fields to their main field, subject to approval of their committee. The allied field requirement may be met at any time during graduate status. Geography 200 must be taken at the earliest opportunity.

**Written and Oral Qualifying Examinations.**

**Written Qualifying Examinations.** The Written Qualifying Examinations are administered by a student's informal guidance committee and consist of five written papers arranged as follows: three substantive fields of geography, one general paper covering the entire range of geography, and one small field research problem. The field problem will require one full day in the field, followed by one full day in which field results are prepared for presentation. All other papers will be of four hours duration. The examination may be spread over a period of not more than two weeks. This examination should be taken no later than the end of the sixth quarter of the Ph.D. program. If the examination, or any portion thereof, is failed, the student may make one further attempt. This attempt may not be sooner than three months nor longer than one year from the first examination.

**Oral Qualifying Examination.** The Oral Qualifying Examination is conducted by the candidate's official Ph.D. dissertation committee. This examination focuses on the dissertation research proposal prepared by the candidate and distributed to all committee members at least one month prior to the oral. This proposal should specify the objectives, methodology, and scientific background of the research envisaged. Successful completion of the Oral Qualifying Examination implies acceptance by the committee of the student's qualifications for doctoral research and approval in principle of the dissertation proposal, subject to such minor modifications in design and methodology as the committee may recommend. A student who has successfully completed the Oral Qualifying Examination is eligible for advancement to candidacy. In instances of failure, the oral examination may be taken once more only. At the end of the candidate's successful Oral Qualifying Examination, the chair and members of the committee, in consultation with the student, shall determine which of its members will guide, read, approve and certify the dissertation. At least two members from the student's department and at least one outside member must be certifying members of the doctoral committee. At least three members of the committee must hold an appointment as associate professor or professor.

**The Dissertation.** The dissertation is the ultimate focus of each student's 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.

**Doctoral Committee.** The Geography Department has no special requirements other than those of the Graduate Council.

**Final Oral Examination Following Completion of the Dissertation.** Optional with doctoral committee. A final oral defense of the dissertation may be required by the dissertation
committee. This examination may be held at any time mutually agreed upon by the candidate and his/her committee, provided that the dissertation is essentially complete. In instances of failure, only one reexamination is permitted.

Time to Degree. From admission to the Ph.D. program to the Qualifying Examination — six quarters. From Oral Qualifying Examination to Time to Degree — fifteen quarters. From Oral Qualifying Examination to Time to Degree — fifteen quarters. From oral examination to the Qualifying Examination — six quarters. From oral examination to the Qualifying Examination — six quarters.

Candidate In Philosophy Degree. All students who have been advanced to candidacy for the Ph.D. degree are eligible to receive this degree.

Disqualification. A graduate student could be terminated for failure to maintain a grade point average of at least 3.0, failure on written or oral qualifying examinations, or for failure to proceed to the qualifying examinations after being given extensions of time. The decision to terminate would be made by a vote of the entire faculty in residence at the time and not by one or a few individuals.

Appeals. Student appeals would be directed to the faculty.

Other Relevant Information. A Ph.D. degree must be completed within seven calendar years from the initiation of work on the degree for candidates from beyond UCLA, or within seven calendar years from admission to graduate status at UCLA for candidates who obtain M.A. degrees from UCLA.

Graduate Courses

Courses Required of all Entering Graduate Students

200. Trends in Contemporary Geography. (6 course) Lecture, three hours. Prerequisite: Graduate Standing. An analysis and interpretation of contemporary geography with emphasis on research trends in major subfields of the discipline, each subfield being examined by a faculty expert. Graded S/U.

201. History of Geography. Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisite: consent of instructor. A survey of geography from classical times onward, with emphasis on the professionalization of geography in Europe and North America from 1870 to present. Mr. Dunbar

Group I: The Environment

202. Advanced Geomorphology. (Formerly numbered 212.) Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisite: course M 102 or equivalent, or consent of instructor. An extended study of selected geomorphic processes and landforms. Mr. Orme

203. Seminar: Geomorphology. (Formerly numbered 215.) Discussion, three hours; reading period, one hour. Prerequisite: course 202 or equivalent and consent of instructor. Selective geographical topics with emphasis on current research frontiers and techniques. May be repeated for credit. Mr. Orme

204A-204B-204C. Advanced Climatology. Lecture, three hours; laboratory, one hour. Prerequisites: course 104, first year of calculus, acquaintance with FORTRAN IV, or consent of instructor. Course must be taken sequentially. An introduction to the tools and concepts of environmental physics of relevance to natural and man-made landscapes. Such basic intellectual, mathematical, and computer programming tools will be applied to physical geographers, ecologists, and architects. Mr. Terjung

205. Seminar: Climatology. (Formerly numbered 215.) Discussion, three hours; reading period, one hour. Prerequisites: course 204 or equivalent and consent of instructor. Selected topics. May be repeated for credit. Mr. Terjung

208. Advanced Biogeography: Plants. (Formerly numbered 262.) Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisites: courses 106, 110 or 116, or equivalent, or consent of instructor. An intensive review and analysis of physical and cultural factors influencing plant distributions. Mr. Sauer

212. Advanced Biogeography: Animals. (Formerly numbered 260.) Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisites: courses 112, 117, or equivalent, or consent of instructor. An intensive review and analysis of biophysical and cultural factors influencing animal distributions. Mr. Banker

213. Seminar: Biogeography. (Formerly numbered 265.) Discussion, three hours; reading period, two hours. Prerequisites: courses 208, 212 or equivalent and consent of instructor. Research projects related to or growing out of course 208 or 212. May be repeated for credit.

215. Seminar: Quaternary Studies. (Formerly numbered 216.) Discussion, three hours; reading period, two hours. Prerequisites: courses 202 or 204 or 208 or 212; or 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.

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. Mr. Orme

222. Seminar: Humid Tropics. (Formerly numbered 252.) Discussion, three hours; reading period, two hours. Prerequisite: consent of instructor. An analysis of humid tropical topics. Biophysical and cultural complexes of the humid tropics with emphasis on problems related to human settlement and livelihood. May be repeated for credit.

227. Water Quality Management. Discussion, three hours; reading period, one hour. Prerequisites: Graduate Standing and consent of instructor. Discussion of the basic technical, regional planning and public policy issues in water quality management. Mr. Westman

228. Seminar: Man and Environment. (Formerly numbered 266.) Discussion, three hours; reading period, two hours. Prerequisite: course 128 or equivalent. An analysis of man's perception of the environment throughout history and in different parts of the world and its impact on past, present and future ecosystems. Mr. Walter

Group II: Human Geography

232. Advanced Cultural Geography. (Formerly numbered 220.) Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisite: course 132, 133 or equivalent, or consent of instructor. Lectures and discussions about specific aspects of the development of cultural landscape in different geographic environments. Mr. Hulse, Mr. Saiter

233. Seminar: Cultural Geography. (Formerly numbered 225.) Discussion, three hours; reading period, two hours. Prerequisites: course 232, 236, or equivalent and consent of instructor. Discussions centered around particular topics in cultural geography; topics may vary from year to year. May be repeated for credit.

236. Advanced Historical Geography of the United States. (Formerly numbered 222.) Lecture, two hours; discussion, one hour; reading period, two hours. Prerequisites: course 136 and consent of instructor. Some major themes in American historical geography. Mr. Dunbar

237. Seminar: Historical Geography. (Formerly numbered 223.) Discussion, three hours; reading period, two hours. Prerequisites: course 236 and consent of instructor. Theory and practice of historical geography in North America and Europe. May be repeated for credit.

240. Advanced Political Geography. Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisite: course 140 or equivalent or consent of instructor. Intensive study of the theories and principles of political geography and German geopolitics. Selected regions will be used as specific examples of differing techniques of study in geopolitics. Mr. Kostanick

241. Seminar: Political Geography. (Formerly numbered 245.) Discussion, three hours; reading period, two hours. Prerequisites: course 240 or equivalent and consent of instructor. Related research projects growing out of course 240. May be repeated for credit. Mr. Kostanick

242. Advanced Population Geography. Lecture, three hours; reading period, one hour. Prerequisite: courses 240 or equivalent and consent of instructor. A study of population dynamics and migration, spatial variation in population composition, and population resource problems, diffusion and epidemiology.

248. Location and Space Economy. Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisites: course 145 and 146 or consent of instructor. Methods of locational analysis as applied to problems of regional growth and development.

249. Seminar: Economic Geography. ( Formerly numbered 238.) Discussion, three hours; reading period, two hours. Prerequisite: course 248 or equivalent, or consent of instructor. Related research projects growing out of course 248. May be repeated for credit.

250. Urban Systems. Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisite: course 145 or 146 or consent of instructor. Methods of locational analysis as applied to problems of urban growth and development.

251. Seminar: Urban Geography. (Formerly numbered 255.) Discussion, three hours; reading period, two hours. Prerequisites: course 250 or equivalent, and 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. Entikin

254. Migration and Residential Mobility. Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisite: course 250 or equivalent and consent of instructor. Related research projects growing out of course 250. May be repeated for credit.

255. Seminar: Urban Geography. (Formerly numbered 255.) Discussion, three hours; reading period, two hours. Prerequisites: course 250 or equivalent, and consent of instructor. Related research projects growing out of course 250. May be repeated for credit.
Group IV: Seminars in Regional Geography

280-281. Selected topics for each seminar. Each may be repeated for credit. Lecture, two hours; discussion, two hours.

280. North America. (Formerly numbered 290A.) Prerequisite: course 180 or consent of instructor. Mr. McKnight, Mr. Nelson

281. Middle America. (Formerly numbered 290B.) Prerequisite: course 181 and consent of instructor. Mr. Bennett, Mr. Brumman

282. South America. (Formerly numbered 290C.) Prerequisite: course 182 and consent of instructor. Mr. Bennett, Mr. Brumman

283. Europe. (Formerly numbered 290D.) Prerequisites: course 183 and consent of instructor. Mr. Kostantick, Mr. Thrower

284. Soviet Union. (Formerly numbered 290E.) Prerequisites: course 184 and consent of instructor. Mr. Kostantick

285. South and South East Asia. (Formerly numbered 290F.) Prerequisites: course 185 and consent of instructor.

286. Eastern Asia. (Formerly numbered 290G.) Prerequisite: course 186 and consent of instructor. Mr. Salltor

287. Middle East. (Formerly numbered 290H.) Prerequisites: course 187 and consent of instructor. Mr. Salltor

288. Northern Africa. (Formerly numbered 290I.) Prerequisites: course 188 and consent of instructor. Mr. Salltor, Mr. Thomas

289. Middle and Southern Africa. (Formerly numbered 290J.) Prerequisites: course 189 and consent of instructor. Mr. Salltor

290. Australia. (Formerly numbered 290K.) Prerequisites: course 190 and consent of instructor. Mr. McKnight

291. The Arid Lands. Prerequisites: courses 102, 104, 106, 108, 116, 120, 148, or equivalent and consent of instructor. An investigation of the physical and cultural complexes of the world's arid regions. Salient factors emphasized include climate, landforms, water, soils, natural vegetation and the various aspects of human occupancy, including future possibilities for human utilization.

292. Advanced Regional Geography: Selected Regions. Prerequisites: course 171 or consent of instructor. Advanced topics in the utilization of mathematical and statistical cartographic procedures as tools for geographical research. Emphasis on linear models, factor analysis and grouping procedures as applied to geographerian data bases. Mr. Clark

293. Seminar: Geographical Thought. Discussion, three hours; reading period, two hours. Prerequisites: Graduate Standing, consent of instructor. Discussion and study of topics significant to the growth of modern philosophy of geography. Mr. Enriklin

294. Teaching of College Geography. (½ course) 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. Mr. McKnight

Individual Study and Research

596. Directed Individual Study or Research. (½ to 2 courses) Prerequisite: consent of instructor.

597. Preparation for M.A. Comprehensive Examination or Ph.D. Qualifying Examination. (½ to 2 courses) Special individual study. Prerequisite: consent of instructor.

598. Research for and Preparation of the Master's Thesis. (½ to 2 courses) Independent study. Prerequisites: consent of instructor.

599. Research for and Preparation of the Doctoral Dissertation. (½ to 2 courses) Independent study. Prerequisites: consent of instructor.

Institute of Geophysics and Planetary Physics

(Office, 3871 Slichter Hall)

Orson L. Anderson, Ph.D., Professor of Geophysics.
C. Rainer Berger, Ph.D., Professor of Geophysics. Geography and Anthropology.
Arthur L. Boettcher, Ph.D., Professor of Geology and Geophysics.
Friedrich H. Busse, Ph.D., Professor of Planetary Physics.
Paul J. Coleman, Jr., Ph.D., Professor of Planetary Physics.
Richard E. Dickerson, Ph.D., Professor of Chemistry. W. Gary Ernst, Ph.D., Professor of Geophysics and Geochemistry.
Isaac R. Kaplan, Ph.D., Professor of Geology and Geophysics.
William M. Kaula, D.Sc., Professor of Geophysics. Charles F. Kennel, Ph.D., Professor of Geophysics and Geophysics.
Leon Knopoff, Ph.D., Professor of Geophysics and Associate Director of the Institute of Geophysics and Planetary Physics. R.L. McPherron, Ph.D., Professor of Planetary Physics and Geophysics.
John P. McGlade, Ph.D., Professor of Chemistry. J. William Schoof, Ph.D., Professor of Geophysics and Geophysics.
Ronald L. Shreve, Ph.D., Professor of Geology and Geophysics.
John T. Wasson, Ph.D., Professor of Geochemistry and Chemistry.
Robert E. Holzer, Ph.D., Emeritus Professor of Geophysics.

The Institute of Geophysics and Planetary Physics was established to encourage fundamental research and graduate instruction in Geophysics, Geochemistry and Space Physics. Faculty members of associated departments are prepared to supervise graduate work in a variety of fields: atmospheric physics, physics of the radiation belts, interplanetary physics and solar physics, geophysical fluid dynamics, high pressure physics, tectonophysics, geochemistry, nuclear geophysics, age determination, gravitation, physical oceanography and marine geophysics, seismology, physics of the deep interior, and exploration geophysics. For further information, contact the Institute of Geophysics and Planetary Physics.

Undergraduate students with an interest in graduate study in Geophysics are advised to complete a major in physics, mathematics or chemistry. Attention is also drawn to opportunities to complete an undergraduate course of study in Geophysics and Space Physics and in Applied Geophysics. For information concerning these programs, consult the catalog listings for the Department of Earth and Space Sciences.
The Master of Arts Degree
Admission Requirements.

(a) A bachelor's degree in German with a minimum grade point average of 3.0 from an accredited U.S. institution or the equivalent. Candidates deficient in their undergraduate preparation, will be required to take remedial courses, as recommended by the departmental Graduate Adviser. A placement examination in the German language or literature may be required of entering graduate students.

(b) Three letters of recommendation are required.

Advising. There are two departmental Graduate Advisers. At present these are: Professor Wolfgang Nehring, (advisees A-L) Office: 326 Royce Hall; Professor Franz Bäuml (advisees M-Z). Office: 328 Royce Hall, Department Telephone Number: (213) 825-3955.

The Graduate Advisers evaluate student preparation for the M.A. program and/or Ph.D. program, and assess progress toward the degree. They advise students on planning their studies, course selection and preparation for the M.A. examinations. They meet with each student at least once every quarter and maintain records of these interviews. Those students who choose the M.A. Thesis Plan (see Thesis and Comprehensive Plan, below) will, in addition, be guided by a thesis adviser and a guidance committee.

Major Fields and Subdisciplines. There are two M.A. programs that differ with respect to the course requirements (see Course Requirements, below) and the comprehensive examinations (see Thesis and Comprehensive Plan, below). Plan A: for students who plan to terminate their studies with the M.A. and a teaching credential. Plan B: for students whose main interests are literary and linguistic rather than pedagogical, and for students who plan to proceed toward the Ph.D.

Foreign Language Requirement. Before advancement to candidacy for the M.A., the student must pass the GSFLT (Graduate School Foreign Language Test) reading examination in French. The test is administered through University Extension at the beginning of each quarter, including the summer. The required score for passing the examination is 500.

Course Requirements. Plan A: A minimum of nine upper division and graduate courses, of which at least five courses must be graduate level, i.e., 200 or 500 series (see 500 Series Course Limitations, below). In addition to the above, courses 128, 129 (or the equivalent), and 370 are required. Undergraduate credit for these courses (or their equivalent) is applicable in satisfaction of these requirements.

Plan B: A minimum of nine upper division and graduate courses, of which at least six courses must be graduate level, i.e., 200 or 500 series (see 500 Series Course Limitations, below). One seminar must be included.

Thesis and Comprehensive Plan. Candidates for the M.A. degree in German have the choice of the Thesis Plan or the Comprehensive Plan.

Thesis Plan. A thesis committee will be established no later than the end of the fourth quarter of graduate study. At that time the thesis committee evaluates the proposal for the thesis. The M.A. thesis committee consists of four members, one of whom is designated director of the thesis. The director of the M.A. thesis is to be chosen by the candidate; the other members are appointed by the Department Chair. No committee member from outside the Department is required. After acceptance of the thesis, the candidate must pass a 2-hour oral examination which will be an examination in the field of the thesis as well as in the fields listed below under the Comprehensive Plan.

Comprehensive Plan. Examinations are offered each quarter, beginning with the written part during the third week of each quarter (i.e., Fall, Winter, and Spring). Under exceptional circumstances the Chair of the Department will receive student petitions for M.A. examinations during the Summer recess. For details of petition procedure, consult the Departmental Policies. The comprehensive examination committee is appointed by the Chair of the Department. The committee consists of at least four faculty members, including one linguist.

Membership of M.A. committee is announced at the beginning of the Spring Quarter for the following academic year.

One 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, to be followed by a 1-hour oral examination.

Part I of the written examinations covers various fields. In the case of Plan A, the origin and development of the standard German language and contemporary standards of the German language are included. In the case of Plan B, bibliography, Middle High German and the history of the German language are included. Part II of the written examinations covers major works and authors of German literature from earliest times to the present and concepts of literary criticism. After the candidates have taken the written examination, the M.A. committee decides whether they may proceed to the oral examination. If a candidate fails the oral examination, the M.A. committee decides whether the candidate must repeat the entire examination or only the oral portion. Each M.A. candidate is entitled to one repeat of the examinations without petition.

Students who apply for an M.A. under Plan B (to proceed toward the Ph.D.) and are awarded a terminal M.A. may repeat the examinations if they choose not to have the M.A. degree officially awarded before the reexamination.

Time to Degree. Estimated time to the M.A. degree for a full-time student with no deficiencies upon admission to graduate status and
taking a full course load, is three to five quarters; estimated time to the degree for teaching assistants is six quarters.

500 Series Course Limitations. Individual study courses 596, 597, and 598 are graded Satisfactory (S) or Unsatisfactory (U). Course 596 may be taken twice during a graduate student's studies, including progress toward the Ph.D. degree; course 597 may be taken once before the M.A. degree; course 598 may be taken three times. However, only one course in the 500 series may count toward the M.A. course requirements.

Disqualification. A student who fails to maintain an overall grade point average of 3.00, is immediately placed on academic probation. If in the first quarter of probationary status, the student maintains a grade point average of 3.00, the Department will normally recommend extension of probationary status for another quarter. If at the end of the first quarter of probationary status, a student has not maintained a grade point average of 3.00 for that quarter, the Department will normally recommend dismissal. Every recommendation to terminate a student for reasons other than failure to maintain a grade point average of at least 3.00 will be discussed and decided upon by the Department faculty.

Appeals. The student may appeal to the Department, in writing, any recommendation for termination.

The Ph.D. Degree in Germanic Languages

Admission Requirements. (a) An M.A. degree in German from an accredited U.S. Institution or equivalent (e.g., Staatsexamen in German). The Graduate Advisers will review the records of students entering from another institution. If significant deficiencies in previous training are noted, they will notify the students in writing and make appropriate study or course recommendations. All deficiencies must be removed prior to the student's application for admission to candidacy for the qualifying examinations leading to the Ph.D. degree. A student who has gained admission to the doctoral program without an M.A. in German (e.g., with an M.A. in Comparative Literature or Linguistics), will be required to pass the written part of the M.A. Comprehensive Examination before beginning doctoral work in the Department.

(b) Three letters of recommendation are required.

Advise. As soon as is possible after admission to the doctoral program, the student, after consultation with the Graduate Adviser, will secure the consent of those faculty members he/she wishes to serve on his/her Doctoral Guidance Committee. This Committee is appointed by the Department Chair. The Committee is comprised of at least two professors representing the student's major field and at least one professor representing the student's minor field. It guides the student's preparation for the Ph.D. Qualifying Examinations. Changes in the composition of this Committee may be made at the written request of the student and with the consent of the Committee members concerned and of the Department Chair. The student is to arrange periodic meetings with the Committee members. The Guidance Committee, in consultation with the student, decides when the student may be permitted to take the Ph.D. Qualifying Examinations. (See Written and Oral Qualifying Examinations, below).

Major and Minor Fields of Study. At the beginning of their work toward the doctorate or as soon as possible thereafter, the students shall declare their major and minor fields. The field in which the student intends to present a dissertation will be designated as the major field and will be selected from the four fields in which the degree is offered: (a) German Literature, (b) Germanic Philology and Linguistics, (c) Scandinavian Literature and Philology, or (d) Germanic Folklore. Candidates who choose German Literature as their major field will be required to choose one of the following: (a) German Literature Before 1700 or (b) German Literature From 1700 to the Present.

The minor field may be chosen 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) Scandinavian Literature and Philology; (6) Germanic Folklore; (7) Yiddish; (8) Dutch-Flemish-Afrikaans. Students with a major field in German Literature may not choose options (1)-(3). Students, except those majoring in Scandinavian, may substitute the following course minor for the formal minor: They take four graduate courses (excluding German 217 and all literature courses taken prior to the award of the M.A. degree) in one of the other fields in which the degree is offered or four appropriate courses in Yiddish or Dutch-Flemish-Afrikaans. Students may also choose a minor field from outside the Department provided that it relates to the prospective dissertation topic. In such cases, the student will meet with the chair of the Guidance Committee to discuss the needs, value, and feasibility of an extradepartmental minor. The student will enlist the support of an extradepartmental faculty member who will sponsor the student's minor field. The student will then draft a proposal for the extradepartmental minor that will include a delineation of the areas for which the student will be responsible on the minor field Written Qualifying Examination. The extradepartmental sponsor must write a letter of support to the Chair of Germanic Languages. The student proposal and the faculty supporting letter will then be presented at a departmental meeting for faculty approval. The proposal must be approved by majority vote of the Department members present at that meeting. Scandinavian majors must obtain the approval of the Scandinavian Section.

Foreign Language Requirement. In addition to French, a second language examination is required either in a modern Scandinavian language or in Dutch-Flemish-Afrikaans or in Latin or in Yiddish (substitution of another language may be approved by petition to the Department).

Course Requirements. There are no course requirements per se for the doctorate in Germanic Languages. However, the following rules apply: (a) Students must have successfully completed at least three seminars in residence before becoming eligible to take the Qualifying Examinations for the Ph.D. (b) Specific course requirements may be assigned to new students in the doctoral program by the Graduate Adviser (see Admission Requirements, above). (c) Students may choose to fulfill their minor field requirements by taking specific courses rather than being tested in the minor field on the Ph.D. Qualifying Examinations. These provisions are outlined in detail in the sections on Major and Minor Fields of Study and Written and Oral Qualifying Examinations.

Written and Oral Qualifying Examinations. The Guidance Committee consults with the student not later than three months (i.e., one quarter) before the student intends to take the major field qualifying examinations so that the Committee can determine the student's progress and provide additional counseling. Prior to the major field examinations, the members of the Committee decide if the student is prepared and should be admitted to the examinations. In case of a negative decision, the student must be informed about noted deficiencies. For the minor field examinations, the Guidance Committee may delegate these decisions to a subcommittee. When the Guidance Committee has determined that the student is prepared to take the Qualifying Examinations, the chair of the Committee will schedule the examinations. The written examinations consist of three parts unless the student opts for the course minor, in which case it will consist of two parts:

1. First half of major field: (3 hours)
2. Second half of major field: (3 hours)
3. Minor field: (3 hours)

The student may elect to 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.

A student who has opted for the formal minor and fails the written examination is not permitted to switch to the course minor.

Advancement to Candidacy. Advancement to candidacy will take place when the student has (a) passed the graduate reading examination in French; (b) passed a departmental reading examination either in a modern Scan-
chie of the Faculty of the Department will normally recommend dismissal. If, at the end of the first quarter of probationary status, the student maintains a grade point average of 3.00, the Department will normally recommend extension of probationary status for another quarter. If, at the end of the first quarter of probationary status, a student has not maintained a grade point average of 3.00 for that quarter, the Department will normally recommend dismissal.

2. A student who fails any part of the Written or Oral Qualifying Examinations three times will be disqualified.

3. A student who does not complete the dissertation (including its oral defense, if required) within seven years after passing the Qualifying Examinations for the Ph.D., is subject to dismissal. If a completed first draft of the dissertation is not submitted to the chair of the doctoral committee within five years after the qualifying examinations, the student is subject to dismissal. Every recommendation to terminate a student for reasons other than failure to maintain a grade point average of at least 3.00 will be discussed and decided upon by the Department faculty.

Appeals. The student may appeal to the Department, in writing, any recommendation for termination.

Lower Division Courses

1G. Elementary German for Graduates. (No credit) Lecture, four hours per week. To provide preparation for Graduate Division foreign language requirement

Upper Division Courses

Courses open to Graduate Students in German.


Graduate Courses

202A. 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 study and research in literary and philological problems. Practical exercises in the analysis and compilation of bibliographical data.

Mr. Sobel

201C. Theories of Literary Criticism. Analysis and discussion of the foundations of literary criticism and current theories such as hermeneutics, positivism, psychology, sociology, intellectual history (Geistesgeschichte), New Criticism, Marxist Criticism, Russian and Czech Formalism, structuralism and semiotics.

Mr. Bah, Mr. Bauml

202A. Middle High German. Introduction to the grammar, syntax, and vocabulary of the Middle High German Language. Exercises in reading Middle High German literary works are combined with a study of the socio-cultural contexts in which the works of the medieval period were produced and performed.

Mr. Bauml

202B. Readings in Middle High German Literature. This course is essentially a continuation of Ger- man 202A and will provide the student with the opportunity to do extensive reading of the literary monu- ments for medieval Germany. The course will also introduce the student to the cultural and literary history of the Middle Ages. Mr. Bauml, Mr. Ward

203A. The Courtly Epic. An analysis of the major epics of the medieval period in Germany such as Hartmann von Aue's Tristan, Ernce and Wolfram's Parzival, and Gottfried's Tristan. A study of the socio-cultural context in which the songs were produced and performed and an introduction to methods of interpretation and analysis.

Mr. Bauml

203B. The Courtly Lyric. The medieval songs of courtly performers, beginning with Daf von Kuhnhirt and ending with Wolfram's Meistersangbuch, will be analyzed. Study of the socio-cultural context in which the songs were produced and performed and an introduction to methods of interpretation and analysis.

Mr. Bauml, Mr. Ward

203C. The Heroic Epic. A survey of German heroic literature beginning with the Hildebrandslied and including such works as the Nibelungenlied, Kudrun, and the Dietrich epic. Methods of analysis and interpre- tation as well as an analysis of thematic and formal characteristics of the different epics.

Mr. Bauml, Mr. Ward

204A. 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 languages and selected readings from the works of such authors as Sebastian Brant, Martin Luther, Hans Sachs and Johann Fischart.

Mr. Sobel

205D. Baroque Literature. Definition of the term baroque; development of modern baroque scholarship; influence of foreign models; analysis of sample theo- retical writings (prosodies) and of representative poe- ms, dramas, novels, and prose satires of the 17th century.

Mr. Sobel, Mr. Wagener

206A. Enlightenment and Sentimentalism. Study of the 18th century part of the 18th century from Gottsched through Lessing, including such authors as Leibniz, Thomasius, Wolf, Bodmer and Breitinger, Johann Elias Schlegel, Hailer, Brockes, Anacreontic poets, Geber, Klopstock, Mendelssohn and Wieland.

Mr. Bah, Mr. Ward

206B. Sturm und Drang. Study of representative authors of the Sturm und Drang period, such as Herd- er, Forster, Gertserberg, Leiswitz, Klinger, Wagner, R.M. Lenz, Moritz, Heine, Schubert and the young Goethe.

Mr. Schiller

207A. Classicism. Goethe. Selected topics from the works of Goethe in the period 1798-1832, such as Iphigenia auf Tauris, Torquato Tasso, Wilhelm Meister, Lehnjahre, Die natürliche Tochter, Pandora, and in- terpretive criticism.

Mr. Beuml

207B. Classicism. Schiller. Selected topics from the critical and dramatic works of Schiller in the period of 1793-1805, such as Über Annunt und Würde, Uber das Erhabene, Wattenstein, Maria Stuart, Jungfrau von Orleans and Wilhelm Tell.

Mr. Bahr

208A. Romanticism. Analysis of selected works of the Romantic period. Authors such as Weckroeder, Tieck, the brothers Schlegel, Novalis, Hölderlin, Brentano, Arnim, the brothers Grimm, "Bona- ventura," E.T.A. Hoffmann, Eichendorff and others. Courses may be genre or topic oriented.

Ms. Komar, Mr. Nehring

208A. 19th Century Lyric. The development of German lyric poetry from the Classic-Romantic peri- od to Symbolism. Discussion of forms, attitudes, ten- dencies. Analysis of selected works of the Romantic period. Authors as well as Heine, Piaton, the political poets of Vormärz, Droste-Hülshoff, Keller, Storm, C.F. Meyer, Nietzsche, George and others.

Ms. Komar, Mr. Nehring

208B. 19th Century Drama. Reading and analysis of selected plays by Kleist, Büchner, Hebbel, Grillparzer, and others. "Discussion and analyses may include topics such as Schicksalstragödie, bourgeois trivial drama, socio-political drama, historical drama, Viennese Volkstheater."

Ms. Komar, Mr. Nehring
209C. 18th 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, Büchner, Dreiser-Hölffeld, Stifter, Goethe, Keilier, C. F. Meyer. Taught by Mr. Nehring.

210A. Naturalism and Symbolism. Sociological background and theoretical writings concerning Naturalism and Symbolism. Analysis of representative poems, dramas, and shorter works by authors such as Holz, G. Hauptmann, George, Hofmannsthal, Rilke. Taught by Mr. Wegener.

210B. Expressionism and Neo-realism. Historical and sociological background of the period 1910-1925. Theoretical writings of Expressionism and Dadaism, Expressionist dramas and shorter narratives. Definition and representative works of Neo-realism. Taught by Mr. Wegener.

210C. 20th Century Novel to 1945. Analysis of selected twentieth-century novels written prior to 1945. Authors of different literary and historical eras such as Broch, Döblin, Hesse, Kafka, Heinrich Mann, Thomas Mann and Rilke. Taught by Ms. Komar, Mr. Wegener.

210D. Contemporary Lyric and Drama. A study of selected plays and poems of 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 will be analyzed and placed in the context of literary, cultural and political trends. Taught by Mr. Stephan.

211B. Contemporary Lyric and Drama. A study of selected plays and poems of 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 Bracht will be analyzed and placed in the context of literary, cultural and political trends. Taught by Mr. Stephan.

217. History of the German Language. A historical survey of the development of the Standard Literary German language from the time of Indo-European unity through proto-Germanic, West Germanic, the medieval period, the Reformation, the baroque period, and the Enlightenment until its final codification at the end of the 19th century. Taught by Mr. Wilbur.

230. Survey 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 various dialects; problems in the phonological evolution of the various dialects. Taught by Mr. Wilbur.

231. Gothic. A systematic study of the phonology and grammar of the Gothic language with readings in Westphalian translations of the Bible and an introduction to the history of the Gothic and their place in the development of Modern Europe. Taught by 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. Taught by 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 Häger, the Grims, Bolte, Meier, Naumann, Bausinger and others. Taught by Mr. Ward.

240B. Folk Song and Ballad. Analysis of the poetic and musical aspects of Germanic folk songs and ballads. The folk songs and ballads are studied in context and text and music, combined with an introduction to the theories and methods of analysis of folk music, and the function of folk song in its social context. Taught by Mr. Ward.

240C. Oral Prose Genres. Study of the thematic and formal characteristics of legends, fables, jests, proverbs and riddles. The role of popular narrative in its socio-cultural context in German history and a survey of methods of analysis of narratives, texts, and context. Taught by Mr. Wegener.

245B. Germanic Antiquities. Survey of the prehistoric and early history of Germanic civilization from the Bronze Age to the end of the migrations on the basis of archeological, historical and philological evidence. Methods of comparative ethnography, religion, and myth will be used to interpret the evidence. Taught by Mr. Ward.

251. Seminar in Syntax and Phonology of German. Topics chosen from the field of contemporary German phonology and syntax. The seminar topic will depend upon the needs and preparation of the students enrolled; e.g. Dialektgeographie, generative phonology, generative syntax, Valenztheorie, Texttheorie. Taught by Mr. Wilbur.

252. Seminar in Historical and Comparative German Linguistics. Topics are chosen from the field of historical German phonology and syntax according to the needs and preparation of the students enrolled; topics such as the West Germanic problem and the classification of the West Germanic languages, the development of Germanic verbal and nominal morphology, Proto-Germanic syntax. Taught by Mr. Wilbur.

253. Seminar in Medieval Literature. Selected topics in medieval literature with stress on problems in literary analysis and the applicability of various types of analysis to medieval texts. Taught by Mr. Bäuml, Mr. Ward.

254. Seminar in Renaissance and Reformation. Seminar on selected problems, literary or philological, 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. Taught by Mr. Sobel.

255. Seminar in Baroque Literature. Seminar on selected topics of German Baroque literature, such as a particular genre, author 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. Taught by Mr. Sobel, Mr. Wegener.

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, women's literature, Jacobin literature, seduction and betrayal as motifs. Taught by Mr. Yahr.

257. Seminar in the Age of Goethe. Selected topics in German literature between 1775 and 1832, such as Schiller's theatrical writings, Goethe's Faust II, Goethe's Wanderjahre and Westöstlicher Divan, Goethe's Faust II and Hegel's Phänomenologie des Geistes, the French Revolution and German Classicism. Textual analysis and review of current research. Taught by Mr. Yahr.

258. Seminar in Romanticism. Discussion of a specific author or topic from the Romantic period, possibly in close connection with course 208. Critical review of secondary works included. Taught by Ms. 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. Taught by Mr. Bahr, Mr. Nehring, Mr. Wegener.

261. Seminar in Contemporary Literature. Study of selected works, a specific period, period or topic from 1945 to the present. Texts will be analyzed and placed in the context of literary, cultural and political trends. Taught by Mr. Stephan.

262. Seminar in Germanic Folklore. Detailed research on individual aspects of Germanic folklore. The topic selected will generally be drawn from the course in the German 240-series that preceded the seminar. Emphasis on problems of theory and method.

263. Seminar in Theories of Literature. Specialization on literary theories such as Rezeptionsästhetik Neo-Manuel criticism, New Criticism, psychology or sociology of literature, structuralism, semantics and hermeneutics. Taught by Mr. Bahr, Mr. Bäuml

Professional Courses in Teaching Methods

270. The Teaching of German in Secondary Schools. Lecture, three hours per week and discussion periods. Prerequisite: Graduate Standing or consent of instructor. Required of all candidates for the general Secondary Teaching Credential. Taught by Mr. Ward.

495A-495B. Preparation for College Teaching of German. (1 course each) Two-quarter sequence. Study of problems and methods in teaching German on the college level. Theory and classroom practice, observation and critical evaluation. Credit only on completion of 495B. May not be used to fulfill any of the course requirements for the Master's Degree. Taught by Mr. Bahr.

Individual Study and Research

596. Directed Individual Study or Research. To be arranged with the member of the faculty who will direct the study or research. The member of the faculty directing the study will be identified by a two-letter code using the initials of the sponsoring instructor (see department for code). To be graded on S/U basis. May be taken twice. Only one course in the 590 series may count toward the M.A. graduate course requirement.

597. Preparation for Comprehensive Examination for the Masters Degree or the Qualifying Examination for the Ph.D. To be arranged with the member of the faculty who will direct the study. The member of the faculty directing the study will be identified by a two-letter code using the initials of the sponsoring instructor (see department for code). To be graded on S/U basis. May be taken only once before and only once after the M.A. degree. Only one course in the 590 series may count toward the M.A. graduate course requirement.

598. Research for Preparation of Master's Thesis. To be arranged with the member of the faculty who will direct the study. The member of the faculty directing the study will be identified by a two-letter code using the initials of the sponsoring instructor (see department for code). To be graded on S/U basis. May be taken only once after and only once after the M.A. degree. Only one course in the 590 series may count toward the M.A. graduate course requirement.

599. Research for Preparation of the Doctoral Dissertation. 1 to 2 courses) To be graded on S/U basis. May be taken unlimited number of times. To be arranged with the member of the faculty who will direct the study. Each faculty member has his own doctoral research course identified by a two-letter code using his initials.

Dutch-Flemish and Afrikaans

120. Introduction to Dutch Studies. Taught by Mr. Kirsner.

131. Introduction to Modern Dutch Literature. Taught by Mr. Kirsner.

135. Introduction to Afrikaans Literature. Taught by Mr. Kirsner.

199. Special Studies in Dutch-Flemish and Afrikaans Literature. Taught by Mr. Kirsner.

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. This course is equivalent to Linguistics 225. Taught by Mr. Kirsner.

GERMANIC LANGUAGES / 167
The Master of Arts Degree in Scandinavian

Admission Requirements. In addition to the University minimum requirements, prospective students in the M.A. program in Scandinavian Languages must have an undergraduate major in Scandinavian, or the equivalent. If the candidate is deficient in the undergraduate major, he or she 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 of entering graduate students.

Three letters of recommendation are required by the Graduate Division.

Write to the Scandinavian Section, Department of Germanic Languages, UCLA, Los Angeles, California 90024 for a brochure describing the program and requirements. No special application form is required, other than that issued by the Graduate Division.

Advising. Graduate Adviser: A member of the Scandinavian Section, Royce Hall 332, Telephone: (213) 825-2432.

Students in the M.A. program in Scandinavian Languages should meet with the Graduate Adviser each quarter. Through these meetings, the Graduate Adviser keeps both the students and the other members of the Section informed of their progress. The adviser keeps records of these interviews, whenever deemed necessary, in the student's file. There are no Section guidance committees for M.A. candidates.

Admission to Master's Program. This is synonymous with graduate admission. Specific courses are required only in cases where entering graduate students have deficiencies in their undergraduate preparation.

Major Fields or Subdisciplines. There are no clear major fields or subdisciplines in the M.A. program in Scandinavian, but students emphasize one modern language and literature area in Danish, Norwegian or Swedish.

Foreign Language Requirement. A reading knowledge of French or German is required in addition, of course, to a knowledge of the Scandinavian languages. Students must pass the 500-level (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 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 in Scandinavian. At least one of these three courses in a related field must be on the graduate level. Comparative Literature 200 or an equivalent course in methodology is required as one of the 12 required courses.

Thesis Plan. There is no thesis plan in the M.A. program in Scandinavian.

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 in Scandinavian. The examination is given whenever the candidate has completed the course requirements and feels prepared to be examined on both the coursework and the reading list.

The Scandinavian Section as a whole serves as the comprehensive examination committee. All members of the Section in residence participate in the conducting of the examination, which is both written and oral. Students who fail the Comprehensive Examination may be reexamined once without petitioning.

Time to Degree. For a full-time student with no deficiencies upon admission to graduate status, completion of coursework and examinations for the M.A. in Scandinavian usually requires six quarters of standard coursework.

500 Series Course Limitations.

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<tr>
<th>Course No.</th>
<th>Unit Value</th>
<th>Type of Grading</th>
<th>Number of Times May Be Taken</th>
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<tbody>
<tr>
<td>596</td>
<td>4</td>
<td>S/U</td>
<td>Three*</td>
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</table>

Disqualification. Specific conditions which may lead to termination of graduate status are: failure to maintain a B average; C work in Scandinavian courses; or failing the M.A. written or oral examination. A final decision about dismissal is made by the Scandinavian faculty in residence.

Appeals. Students may appeal such a decision by submitting to the Vice Chair a petition outlining any extraordinary circumstances.

For the Ph.D. degree in Germanic Languages with Scandinavian Literature as a Major or Minor Field, see the Doctoral Degree Program in Germanic Languages.

**Graduate Courses

C251. Henrik Ibsen. Prerequisite: an advanced knowledge of Norwegian and consent of instructor. Intensive study of the works of Ibsen. May be concurrently scheduled with C144.

Ms. Norseng
C252. August Strindberg. Prerequisites: an advanced knowledge of Swedish and consent of instructor. Intensive study of the work of August Strindberg. May be concurrently scheduled with C145.

Mr. Massengale, Mr. Shideholder.

C253. Soren Kierkegaard. Prerequisites: an advanced knowledge of Danish and consent of instructor. Intensive study of the works of Kierkegaard. May be concurrently scheduled with C145.

Mr. Massengale.

C254. Knut Hamsun. Prerequisites: an advanced knowledge of Norwegian and consent of instructor. Intensive study of the works of Hamsun. May be concurrently scheduled with C147. Mr. Norseng.

Mr. Shideholder.

C264. The Theory of the Scandinavian Novel. This course examines the predominant structures of the novel, the Scandinavian novel in particular, starting with its beginnings in the Icelandic sagas, concentrating on the rise of the novel in the 19th century, and focusing on the novel's evolution in the 20th century. The works of such writers as Soren Kierkegaard, H.C. Andersen, J.L. Almqvist, J.P. Jacobsen, Knut Hamsun, Martin A. Hansen are central to the course. Discussion focuses on the "Bisuggerman" and the reaction that set in against it. The emphasis of the course is a theoretical one, exploring approaches that can be taken to these works of fiction. May be concurrently scheduled with Scandinavian C182.

Individual Study and Research

597. Preparation for the Qualifying Examination for the Ph.D. (1 to 2 courses) To be arranged with the member of the faculty who will direct the study or research. To be graded on S/U basis. May be taken three times. May be concurrently scheduled with C186.

598. Research for Preparation of the Doctoral Dissertation. To be arranged with the member of the faculty who will direct the study. To be graded on S/U basis. May be taken unlimited number of times.

History

(Office, 6265 Bunche Hall)

Joyce Appleby, Ph.D., Professor of History.
Robert L. Benson, Ph.D., Professor of History.
Kees W. Bolle, Ph.D., Professor of History.
E. Bradford Burns, Ph.D., Professor of History.
Robert J. Burns, S.J., Ph.D., Professor of History.
Robert N. Burr, Ph.D., Professor of History.
Mortimer H. Chambers, Jr., Ph.D., Professor of History.
Claw-Peter Clausen, Ph.D., Professor of History.
Stanley Coben, Ph.D., Professor of History.
Robert Dallek, Ph.D., Professor of History.
Christopher Ehret, Ph.D., Professor of History.
Amos Funkenstein, Ph.D., Professor of History.
John S. Galtreth, Ph.D., Professor of History.
Frank O. Gateil, Ph.D., Professor of History.
Juan Gomez-Quijones, Ph.D., Professor of History.
Richard Hovannisian, Ph.D., Professor of History.
Daniel W. Howe, Ph.D., Professor of History (Vice-Chair of the Department).
Norman C. Hulett, Ph.D., Professor of History.
Michael O. Jones, Ph.D., Professor of History.
Nikol Keddie, Ph.D., Professor of History.
Barbara Krelik, Ph.d., Professor of History.
John H.M. Lassetter, D. Phil., Professor of History.
James Lockhart, Ph.D., Professor of History.
Peter Loewenberg, Ph.D., Professor of History.
Andrew Loskky, Ph.D., Professor of History.
Alfred Marquis, D. Phil., Professor of History.
Lauro R. Martins, Ph.D., Professor of History.
Gary B. Nash, Ph.D., Professor of History.
Boniface I. Obichere, D. Phil., Professor of History.
Merrick Posnansky, Ph.D., Professor of History.
Hans J. Roger, Ph.D., Professor of History (Chair of the Department).
Richard H. Rouse, Ph.D., Professor of History.
Dmodar R. SarDesai, Ph.D., Professor of History.
Alexander P. Saxton, Ph.D., Professor of History.
Stanford J. Shaw, Ph.D., Professor of History.
James W. Wilkie, Ph.D., Professor of History.
Robert Wohlf, Ph.D., Professor of History.
Stanley A. Wolkert, Ph.D., Professor of History.
Milton Anastos, Ph.D., Emeritus Professor of History.
Eugene N. Anderson, Ph.D., Emeritus Professor of History.
Truseal F. Brown, Ph.D., Emeritus Professor of History.
John J. Burke, Ph.D., Emeritus Professor of History.
John W. Caughey, Ph.D., Emeritus Professor of History.
Raymond H. Fisher, Ph.D., Emeritus Professor of History.
Yu-Shan Han, Ph.D., Emeritus Professor of History.
Jere C. King, Ph.D., Emeritus Professor of History.
Gerhart B. Ladner, Ph.D., Emeritus Professor of History.
Lynn White, Jr., Ph.D., Emeritus Professor of History (University Professor).
Robert A. Wilson, Ph.D., Emeritus Professor of History.
Edward A. Alpers, Ph.D., Associate Professor of History.
Robert P. Brenner, Ph.D., Associate Professor of History.
David M. Fernquhar, Ph.D., Associate Professor of History.
Thomas S. Hines, Ph.D., Associate Professor of History.
Philip C. Huang, Ph.D., Associate Professor of History.
Temma Kaplan, Ph.D., Associate Professor of History.
Ronald J. Mellow, Ph.D., Associate Professor of History.
Eric H. Monkkonen, Ph.D., Associate Professor of History.
Michael G. Morony, Ph.D., Associate Professor of History.
Fred G. Noteheller, Ph.D., Associate Professor of History.
Peter H. Reill, Ph.D., Associate Professor of History.
Geoffrey W. Symcox, Ph.D., Associate Professor of History.
Richard Weiss, Ph.D., Associate Professor of History.
M. Norton Wise, Ph.D., Associate Professor of History.
Mark A. Yeager, Ph.D., Associate Professor of History.
Edward Berenson, Ph.D., Assistant Professor of History.
Margararet W. Crole, Ph.D., Assistant Professor of History.
Robert A. Hill, M.Sc., Assistant Professor of History.
Kenneth M. Morrison, Ph.D., Assistant Professor of History.
Deborah Silverman, M.A., Acting Assistant Professor of History.

Kendall Bailes, Ph.D., Professor of History (U.C. Irvine).
Amin Banini, Ph.D., Professor of Persian and History.
Giorgio Buccellati, Ph.D., Professor of History and Near Eastern Languages.
Robert G. Frank, Ph.D., Associate Professor of History and Medical History/Anatomy.
Albert Hoxie, M.A., Senior Lecturer in History.

Ludwig Laumer, Lecturer and Librarian.

The Master of Arts Degree

Admission Requirements. For admission to graduate status in the Department of History, a student 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 plus average for upper division work. The applicant must have three letters of recommendation and the scores of the Aptitude Test of the Graduate Record Examination submitted to the Department (Note: the United States field requires GRE scores on both the Aptitude and Advanced Tests). Students not meeting the grade average requirements may be admitted in exceptional cases if their letters of recommendation, their Graduate Record Examination scores, or other factors indicate unusual promise. 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 program. Applicants with a year or more of graduate study at other institutions should have attained a grade point average of 3.50 or better (on a 4.0 scale) if they wish to work toward the Ph.D. degree. Admission to the Department depends upon the number of openings in the field in which the applicant expects to specialize. 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. The Department has no separate application form, but uses the general University form distributed by the Graduate Admissions Office. Departmental information may be obtained by writing to Mrs. Barbara Kelley, Graduate Adviser.

There is no screening examination. Non-history majors may be required to take specified courses, depending upon their background and fields of specialization. A student is expected to work in the field for which he/she was admitted. A change of fields after admission requires the approval of the relevant Admissions Committee.

Advising. Address: Mrs. Barbara Kelley, Graduate Office—Department of History, 6273 Bunche Hall.

A Guide to Graduate Study in History which explains the requirements and procedures of the History graduate program is mailed to all new graduate students who have filed an "Intent to Register" (prior to registration). The Guide lists all faculty, their major publications and descriptions of courses offered during the year.

During registration week, an orientation program is held for entering graduate students. The requirements for degrees and criteria, standards and procedures regarding progress toward the degrees are discussed.
The Graduate Adviser is available for consultation regarding University and Departmental requirements and procedures for advanced degrees. Students are advised to consult faculty within their respective fields for more specific academic counseling. Each quarter the Graduate Adviser approves the study list for each student, but responsibility for planning a program to satisfy degree requirements rests with the student.

Students are encouraged to read the course evaluations submitted by faculty each quarter. These evaluations appraise the student's coursework and are indicators of the student's progress and status. Each Spring Quarter, the Graduate Guidance Committee conducts a review of the progress of all graduate students and writes letters to the students with academic problems or deficiencies.

**Major Fields or Subdisciplines.** The Comprehensive Examination covers one of the following fields:

1. Ancient (also includes Ancient Near East).
2. Medieval (also includes Byzantine and Medieval Jewish History).
3. Europe, 1550-present (also includes British History and the British Empire).
4. Africa.
5. Near East (includes candidates with emphasis on Armenia).
6. India and Southeast Asia.
7. East Asia.
8. Latin America.
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 approval of the faculty in these fields may petition the Graduate Guidance Committee for an M.A. examination in their field of specialization.

**Foreign Language Requirement.** A reading knowledge of any foreign language approved by the Department is required. It is recommended that this requirement be met by the second quarter of graduate work. A score of 600 on the GSFLT for French, German, Russian or Spanish is required. For other languages, certification is required by the department teaching the language according to that department's standards. Students of United States and African History may use departmentally administered translation examinations in French, Spanish, or German in place of the Educational Testing Service Graduate School Foreign Language Tests. Students of European History must satisfy foreign language requirements by passing departmentally administered examinations.

**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 counted toward this requirement and only one in the 500 series. For students in United States History, a minimum of seven of the nine courses must be at the 200 level, including at least one 2-quarter seminar and History 245. Students in European History must include History 225, and Africanists must take History 275.

**Thesis or Comprehensive Examination Plan.** The Department follows the Comprehensive Examination Plan (see "Thesis or Comprehensive Examination" in DEGREES AND REQUIREMENTS section of the Catalog). Individual fields specify fulfillment of the examination requirement by one of the following: (1) a 3-hour written examination designed to assess the candidate's 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 the candidate's 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 2-quarter research seminar in United States History.

In the Spring Quarter of each academic year each field meets to determine which of the Comprehensive Examination options it wishes to adopt for the following academic year. In consultation with the faculty in each field, the Chair of the Department then appoints a field M.A. committee, which consists of at least three faculty members, to administer the Comprehensive Examination for that year. Field examiners administer the M.A. Comprehensive Examinations in November, March and May of each academic year, considering the candidate's examination in relation to course evaluations filed by professors for all graduate courses taken by the candidate. To complete the examination file, an evaluation of the candidate's potential must be forwarded to the Field Examining Committee by the professor whom the candidate would like to become chair of the doctoral committee. 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 with "Pass Subject to Reevaluation", the field M.A. committee will conduct a special reevaluation of the candidate's progress after not more than an additional three quarters of study.

Only in exceptional cases are oral examinations required for the M.A. degree.

**Time to Degree.** Completion of the master's degree at UCLA is designed to meet requirements for admission to the Department's doctoral program. Students are advised to pass their master's degree over a 2-year period, completing requirements within six quarters of full-time study. The Department will recommend to the Dean of the Graduate Division that students who do not complete the master's degree in six quarters be dropped from departmental rolls automatically unless upon petition the Graduate Guidance Committee grants an extension of time.

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### 500 Series Course Limitations

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<th>Course No.</th>
<th>Unit Value</th>
<th>Type of Grading</th>
<th>Number of Time May Be Repeated</th>
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<tbody>
<tr>
<td>596</td>
<td>2-8</td>
<td>S/U</td>
<td>No limit</td>
</tr>
<tr>
<td>597</td>
<td>2-8</td>
<td>S/U</td>
<td>No limit</td>
</tr>
</tbody>
</table>

Only one 500 series course may be included toward both the 9-course total course requirement and the minimum 5-graduate (200 series) course requirement. This could be either 4 units of 596 or 4 units of 597.

**Disqualification.** A student may be dismissed at the end of the first year of graduate work if the Graduate Guidance Committee determines (after consultation with faculty in the student's field of study) that the student does not have the academic qualifications for successfully completing an advanced degree. If a student fails below a 3.0 average because of incomplete grades which lapse to F, the student is given an opportunity to remove the F(s) within a specified period before any action for dismissal is taken.

**Appeals.** A student may appeal any action taken by the Graduate Guidance Committee by presenting his/her case to the Department's Advisory Committee. If evidence is presented which results in a favorable decision for the student's continuation to the Ph.D., the student may then complete the requirements for the M.A. degree and continuation to the Ph.D., contingent upon the results of the M.A. Comprehensive Examination. Graduate students are rarely dismissed prior to taking the M.A. Comprehensive Examination, but a small percentage of students do receive a "terminal M.A.". This decision, which is made by the M.A. field committee, may be appealed to the Graduate Guidance Committee. If the student who receives a "terminal M.A." wants to continue to the Ph.D. and can find a faculty member willing to sponsor him/her in a doctoral program, the student may be given a year of probationary status to demonstrate his/her ability to proceed to the Ph.D. degree.

Students who fail to proceed according to "normal progress" stipulations are subject to dismissal, but every opportunity is given a student to petition for extensions of time limitations if extenuating circumstances prevent his/her meeting specified deadlines.

**Other Relevant Information.** No field work or internship is required for the M.A. A departmental brochure describing the graduate History program in some detail is available in the Graduate Adviser's Office (6273 Bunche Hall) to any interested student.

A concurrent master's program with the Graduate School of Library and Information Science has been approved. Students who wish to receive the M.A. in History and the M.L.S. in three years may apply for this program. Applications for admission will be reviewed by com-
mittees in the Department of History and the Graduate School of Library and Information Science, and a course of study for the program will be published in the near future. Further information may be obtained by writing to the Department of History or the Graduate School of Library and Information Science.

The Ph.D. Degree

Admission Requirements. 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 History 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, the following evaluation procedures determine a student's continuance to the Ph.D. degree.

For the student who enters the graduate program with only a B.A. degree, an evaluation comparable to the M.A. Comprehensive Examination must occur within the period of six quarters.

For the student who enters with a master's degree from another department, evaluation must be completed by the end of three quarters of study in the History Department in order to determine whether or not he/she will be permitted to continue toward the Ph.D. This evaluation will be conducted in the same manner as described under the M.A. program, except that for some candidates the written examination may be waived at the discretion of the field examination committee.

All candidates must present to the Graduate Guidance Committee a field approval form signed by the faculty member who has agreed to sponsor his/her work for the Ph.D. according to the following schedule; by the end of the seventh quarter or earlier for students entering with only a B.A.; and by the end of the third quarter or earlier for students entering with an M.A. from another department. For a description of fields for the Ph.D. degree, see "Written and Oral Qualifying Examinations" below. Students who do not meet time limits for proceeding to the Ph.D. will be dropped from the departmental rolls automatically, unless the Graduate Guidance Committee extends their time limits by petition.

Advising. Address: Mrs. Barbara Kelley, Graduate Adviser, Department of History, 6273 Bunche Hall.

A Guide to Graduate Study in History which explains the requirements and procedures of the History graduate program is mailed to all new graduate students who have filed an "Intent to Register" (prior to registration). The Guide lists all faculty with their major publications and descriptions of courses offered during the year.

During registration week, an orientation program is held for entering graduate students. The requirements for degrees, criteria, and standards and procedures regarding progress toward the degrees are discussed.

For academic counseling, a student chooses a faculty sponsor who chairs the doctoral committee and guides the student in his/her Ph.D. program.

There is a Graduate Guidance Committee consisting of five faculty members and one graduate student appointed by the Chair of the Department, which reviews and makes recommendations regarding all doctoral programs and any petitions requesting variations from the program as described in the catalog. The Graduate Adviser is an ex officio member of this committee and channels all petitions and programs for review to the Graduate Guidance Committee. The student's chair is normally consulted about petitions and variances.

At the end of each quarter, course evaluations are written by professors for each graduate student. Students are asked to read these evaluations in the Graduate Office where they may discuss the evaluations if there are questions.

An annual review of all graduate students is made each Spring Quarter by the Graduate Guidance Committee. Letters are written to those students with program or grade point deficiencies.

Students are encouraged to consult the Graduate Adviser, a full-time staff member, about requirements and procedures for progress towards the Ph.D. degree. The Graduate Adviser approves study lists at the beginning of each quarter.

Major Fields or Subdisciplines. Ancient Greece; Ancient Rome; Medieval Constitutional and Legal; Medieval Social and Economic; Medieval Ecclesiastical and Religious; Medieval Intellectual and Cultural; 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 1800; History of Science Since 1800; Europe, Renaissance-Reformation; Europe, Renaissance to the French Revolution; Europe Since 1740; European Socio-Economic History: European Intellectual and Cultural History; Psychosocial History; 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; 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 chosen from the following: Afro-American, American Diplomatic, American West, American Indian, California, Antebellum and 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 (1) or (2) or both may be chosen as minor fields for the Ph.D.

In addition to the European fields listed above, a program in European Intellectual and Cultural History may be offered. Candidates working toward a doctorate in this program offer fields in: (1) the socio-political history of Modern Europe, (2) intellectual history, (3) one other area of study (such as medieval, ancient, or a given national history, etc.), and normally, (4) one field in some discipline outside the Department such as philosophy, literary criticism, psychology, linguistics, sociology of knowledge or art history. Students working in the earlier period (16th-18th centuries) must demonstrate minimal competency in Latin as well as in two modern European languages.

Candidates offering a field in Comparative History as a fourth field for the Ph.D. degree should choose a topic for comparison which would usually, but not necessarily, coincide with time-area spans of the other three fields defined for Ph.D. Qualifying Examinations. Each candidate offering a field in Comparative History will be required to submit a special written statement defining his or her particular field of study which must be approved by the candidate's proposed doctoral committee before petitioning the Graduate Guidance Committee for approval of the doctoral committee and four fields of examination.

Candidates in the history of science program must select three of the above fields and either the history of medicine or an allied field referred to below. The candidates must also demonstrate a detailed knowledge of the substance and historical development of a particular science, or of a type of engineering or technology, as a subfield common to the historical fields.

Foreign Language Requirement. A reading knowledge of the languages prescribed below for the major fields is required. If only two languages are prescribed, the student will display his/her competence in them by passing examinations administered by the Educational Testing Service (a score of 500 on the GSFLT for French, German, Russian and Spanish) or the appropriate language department. For a third or fourth language, evidence of competence satisfactory to the chair of the doctoral committee will be considered acceptable.

Every student is urged, when possible and practical, to take a Graduate School Foreign Language Test before entering the Department's graduate program as an effort toward fulfilling the foreign language requirements as quickly as possible. No Oral Qualifying Examination for the Ph.D. may be scheduled until the student has passed an examination, in at least
two foreign languages, except for students in United States History, where only one foreign language is required. Students of United States and African History may use departmentally administered translation examinations in French, Spanish, or German in place of European History must satisfy foreign language requirements by passing departmentally administered examinations.

1. African History. French and at least one other European or African language needed for the student's research and approved by the chair of the Ph.D. committee.

2. Ancient History. French, German, Latin and Greek.

3. Ancient Near East. French, German and two ancient languages, one of which should be either Akkadian, Egyptian or Hebrew. The other ancient language may be Sumerian, Hittite, Ugaritic, Phoenician, Aramaic, Greek or Latin, depending on individual programs. It is expected that the ancient languages, with all attendant problems of philological and textual criticism, will normally constitute the fourth field of the doctoral examination.

4. Armenian History. Armenian, French, and an additional language or languages deemed necessary for the research to be undertaken. Students specializing in the Ancient and Medieval periods will be encouraged to prepare in Greek and/or Latin, while students specializing in the Modern period will be encouraged to prepare in Turkish and/or Russian.

5. Asian History. (a) India: three languages chosen from the following: French and/or German, Dutch or Portuguese, plus Hindi and/or one classical or modern regional language of India; (b) East Asia: 1) for the M.A. degree: two years of Chinese or Japanese, or one European language certified by a GSFLT score of 500, or better; 2) for the Ph.D. degree in Chinese history: French or German or Russian plus Chinese and Japanese, for the Ph.D. degree in Japanese history: French and either German or Dutch plus Japanese. Admission to candidacy for the Ph.D. in the Chinese and Japanese fields requires the completion of a research seminar in the major field. Students are advised that successful completion of this seminar usually requires the equivalent of at least four years of superior college level language work in Chinese or Japanese.

6. British History. French and German, with the possibility of substitution.

7. European History (Modern) and History of Science. Either French or German and a language needed by the student in his/her research and approved by the Graduate Guidance Committee. Proficiency in foreign languages is to be determined by a departmentally administered examination.

8. Jewish History. Hebrew plus another European language or Arabic.

9. Latin American History. Two of the following: Spanish, Portuguese or special methodological studies.

10. Medieval History. French and German for all candidates; in addition, Greek for those specializing in Byzantine history and Latin for those specializing in Western medieval history. Students are expected to have French or German at the beginning of their graduate studies.

11. Near Eastern History. Two Western and one Near Eastern language, to be selected on the basis of the candidate's specialization. The two Western languages will generally be French and German, but Russian may be substituted for one of those in certain cases. Competence in all three foreign languages must be proven by passing examinations administered by the relevant department or GSFLT.

12. History of Religions. French and German plus (in most cases) a classical or ancient language in the religious tradition of the specialization.

13. Russian History. Russian and German as well as French or another language deemed necessary by the instructor for the candidate's research.

14. Southeast Asia. Two languages; one chosen from the following: French, Dutch or Spanish and one of the languages of the area.

15. United States History. One modern foreign language to be fulfilled through a departmentally administered reading exam or a score of 500 on the GSFLT.

Except in the fields of African, Asian, British and United States History, reading knowledge of an appropriate language is usually required for admission to all graduate seminars.

Course Requirements. A candidate for the degree of Doctor of Philosophy in history must meet the following requirements for admission to the Doctoral Program listed above: and (b) the general requirements set forth under the Graduate Division. Attention is directed to the requirement that a program, extending over the full time of study, must be approved by the Department. A command of good English, spoken and written, the ability to read at least two foreign languages (except for the field of United States History where only one foreign language is required), and an acquaintance with general history are expected of all candidates. The candidate is required to complete at least one continuing 2- or 3-quarter seminar or, alternatively, a continuing sequence of at least two graduate courses approved by the Graduate Guidance Committee. This seminar or its alternative must include completion of a substantial research paper based at least in part on primary sources. If this requirement is met entirely or in part by a sequence of directed study courses (History 596), the candidate must take the course(s) for a letter grade. Students of United States History should complete History 245 and in addition to the seminar should write a dissertation prospectus (which could be written for credit as a History 596 or 597) expected to contain: a) a full statement of the dissertation topic; b) an historiographical discussion of the literature bearing on the topic; c) a statement of the methodology to be employed; and d) a survey of the sources sufficient to demonstrate the viability of the topic. The prospectus must be submitted in writing and approved by the dissertation adviser prior to the oral part of the Qualifying Examinations. After approval, copies will be given to each member of the examining committee. Students of European History must complete History 225 and students of African History must complete 275 unless exempted by special petition. Faculty serving on doctoral committees may require such courses as they deem necessary for preparation for Qualifying Examinations. Courses taken to fulfill M.A. degree requirements may also be used to satisfy Ph.D. requirements.

Teaching Experience. The Department cannot provide teaching experience for all Ph.D. candidates and cannot therefore require it for the degree. Candidates should, however, be able to demonstrate ability to give instruction in their fields.

Written and Oral Qualifying Examinations. Before admission to candidacy, students must pass oral and written examinations. In these examinations, students are expected to show not only a mastery of their special subject but also an adequate grasp of the wider field of historical knowledge and an ability to correlate historical data and to explain their significance. These examinations are designed to test not merely factual knowledge but also powers of historical analysis and synthesis, critical ability, and capacity for reflective thinking. A knowledge of the history of any area includes a reasonable knowledge of its historiography and bibliography; of its geography; and of its political, cultural, economic, and other historical aspects.

In the oral examination the candidate is to be examined in four fields, one of which may be an approved field in anthropology, economics, geography, language and literature, philosophy, political science, or other allied subjects. This allied field must be comparable in size and scope to the history fields listed above. The candidate should select the fields in consultation with his/her faculty sponsor and must receive the Department's approval of all four fields not less than six months before the Written Qualifying Examination is taken. To obtain this approval, the student should supply the Graduate Guidance Committee with the name of the faculty member who has agreed to serve as the sponsor of the doctoral work and with the details of the proposed program. A full-time graduate student must begin the Written Qualifying Examinations not later than the end of the ninth quarter of graduate work. (See Time to Degree listed below.)

The Written Qualifying Examination includes the major field only. The oral examination will
cover all four fields and will normally be held shortly after the written examination, but at the
discretion of the doctoral committee it may be
held as late as six months after the written
examination. Both the written and oral exami-
nations are to be considered by the committee
as a whole in arriving at a judgment of the
student's performance. The Written Qualifying
Examination is normally prepared and admin-
istered by the chair of the student's doctoral
committee and read by the entire committee
before the Oral Qualifying Examination.

The Written Qualifying Examination must be
passed before the Oral Qualifying Examination
can be taken. The members of the doctoral
committee determine whether or not an exami-
nation can be taken
written and oral examinations within a speci-
fied period of time to be designated by the
doc toral committee, but not to exceed one cal-
endar year.

For students in United States History, the writ-
 ten Ph.D. examination will be administered
twice a year, in May and November, and will be
composed of questions solicited from faculty in
the entire field of United States History. A com-
mitee of three faculty members in United
States History will make up and read the ex-
aminations for all students taking the examina-
tion during the academic year. The examination
is intended to test a comprehensive, broad
understanding of American history both before
and after the independence of the United
States. All facets of history (political, social,
diplomatic, etc.) are included. An ability to syn-
thesize factual information, sometimes across
long chronological periods, is consequently
essential. Knowledge of the scholarly literature
and of the principal historiographical contro-
versies arising out of it are tested along with
the examinee's own interpretive capabilities.

Passing of the examination implies that the
examinee is qualified, in the judgment of the
United States Field, to teach courses in United
States History at the college level. Questions
relating to the planning of such courses may
appear on the examination. The written exami-
nation, if failed, must be retaken at the next
administration of the examination; if a student
fails the oral examination he/she must retake it
at a time specified by the doctoral committee
but not to exceed six months. Any variance
from these time limits must be approved by the
American Field before going to the Graduate
Guidance Committee for final approval.

Doctoral Committee. Constitution of doctoral
committees conforms to the Graduate Council
specifications.

Final Oral Examination Following Comple-
tion of the Dissertation. If required by the
qualifying examination committee, a Final Oral
Examination will be conducted upon comple-
tion of the dissertation to cover the field within
which the dissertation fails. The candidates
will be expected to show a mastery of their
special fields, and such an acquaintance with
the literature, general and special, bearing on
them as would qualify them to give instruction
to mature students. After approving a disserta-
tion, the chair of the doctoral committee may,
with the unanimous consent of the entire com-
mitee, recommend a waiver of the Final Oral
Examination.

Time to Degree. Normal progress toward the
Ph.D. has been established as follows:
A. From admission to graduate status to eval-
uation for continuance to Ph.D.:
1. For students entering with only the B.A.
degree, six quarters maximum (including
award of the M.A.).
2. For students entering with M.A. from an-
other department, three quarters maximum.
B. From graduate admission to the Written
and Oral Qualifying Examinations, maximum
nine quarters.
C. From Qualifying Examinations (and ap-
proval of dissertation prospectus) to submis-
sion of dissertation and award of degree, 12
quarters.
D. From graduate admission to award of de-
gree, 18 quarters for United States, Modern
Europe, England, British Empire, Science and
Psychohistory, and 21 quarters for Ancient,
Ancient Near East, Medieval (including
Byzantine), Asian, African, Latin American,
Near Eastern, Jewish, Russian and History of
Religions.

Candidates in Philosophy Degree. Students are eligible for the Candidate in Philosophy
degree on advancement to candidacy for the
Ph.D.

Disqualification and Appeal of Disqualifi-
cation. The disqualification and appeal pro-
dure for the Ph.D. up to the Qualifying Exam-
inations is, the same as for the M.A. degree.

A Ph.D. candidate is expected to complete a
dissertation within 18 quarters of the date of
entry into the graduate program for United
States, Modern Europe, England, British Emp-
ire, Science, and Psychohistory and within 21
quarters of the date of entry into the graduate
program for all other fields. Candidates may be
granted a 1-year extension of time upon peti-
tioning the Graduate Guidance Committee
and showing evidence that the dissertation
 candi date has completed within one additional
year. Further extensions are considered on an indi-
vidual basis, taking into consideration the ex-
tent and type of research required, availability
of source material, and other sometimes per-
sonal factors which may cause delays. It is the
student's responsibility to keep both his/her
chair and the graduate office advised of pro-
gress (or lack thereof) and estimated com-
pletion dates. Students may be dropped from
the program after 21 quarters if there has been
no communication with the Department after
the Oral Qualifying Examinations.

Students who fail to proceed according to
"Normal Progress" stipulations (as defined
above) are subject to dismissal, but every op-
portunity is given a student to petition for ex-
tensions of time limitations if extenuating cir-
cumstances prevent his/her meeting specified
deadlines.

Other Relevant Information
Dissertation — Candidates are required to
present a dissertation on a subject of their
choice of such character as to show a thorough
mastery of the sources of information, the abil-
ity to carry on independent research, and to
communicate its results in good literary form.
In lieu of the customary type of dissertation, a
student may in certain cases edit, or translate
and edit, some historical source. Such a proj ect
involves careful textual criticism, explaina-
tory annotations, and an historical intro-
duction clearly showing the contribution of the
source to historical knowledge. The nature and
topic of a dissertation may require field re-
search. This is the case especially in fields
such as Armenian/Near Eastern, African, Latin
American, East Asian, and frequently Europe-
an History.

A departmental brochure describing the gradu-
ate History program in some detail is available
in the Graduate Adviser's Office (6273 Bunche
Hall) to any interested student.

*Graduate Courses

Admission to all graduate courses is subject to
the instructor's approval and to appropriate
language qualifications. For multi-term
courses, credit and grades will be given only
on completion of the full seminar sequence,
with IP grading until the last term unless other-
wise noted. Topics courses and seminars may
be repeated.

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Research

200A-200U. Advanced Historiography. (Formerly
numbered 2303A-2307T). A. Ancient Greece; B.
Ancient Rome; C. Medieval; D. Early Modern Europe; E.
Modern Europe: F. Russia/Eastern Europe; G. Brit-
ain; H. United States; I. Latin America; J. Near East;
K. India; L. China; M. Japan; N. Africa; O. Science/
Technology; P. History of Religions; Q. Theory of His-
tory; R. Jewish History; S. Armenia and the
Caucuses; T. Southeast Asia; U. Psychohistory. May
be repeated for credit.

M200V. Advanced Historiography — Afro-Ameri-
can. (Same as Afro-American Studies M200A).
Advanced Historiography, Afro-American History. May
be repeated for credit.

M200W. Advanced Historiography — American
Indian Peoples. (Same as American Indian Studies,
M200A.)

*For concurrently scheduled courses ('C' prefix) suitably sep-
ate activities and/or standards for performance and evalua-
tion will be applied for graduates and undergraduates.
Mr. Grele

201A-201U. Topics in History. (Formerly numbered 240A-240T). A through U as for 200. A graduate course involving reading, lecturing, and discussion of selected topics. This course, plus four of the following seminars, will fulfill the seminar requirements for the Ph.D. degree. May be repeated for credit. When offered jointly with 197, undergraduates need instructor's consent to enroll. 

202A-B. Seminar in Comparative Modern Economic History. Discussion, three hours. Prerequisites: graduate standing. This course will focus on the 19th and 20th centuries. It will deal with the study of modern economic systems including such topics as industrialization, growing, demography, urbanization, agrarian surplus, and economic change. Grading in progress. 
Ms. Yeager

203. Topics in Comparative History. (Formerly numbered 240Z). Prerequisite: consent of instructor. Course will be in the general format of the 201 (Topical) series. Possible topics that it might cover could include: study of European expansion and its impact on non-European societies; the American Revolution in an international perspective, etc.

204A-204B. Seminar in Near and Middle Eastern History. (Formerly numbered 267A-267B). Methodology, socio-economic and political change in the Arab world. 
Mr. Marsot

205A-205B. Seminar in Medieval Middle Eastern History. (Formerly numbered 291A-291B). 

206A-206B. Seminar in the Social History of the Middle East. (Formerly numbered 284A-284B). The interrelationship of city, tribe, and village in the Middle East; the role of such definable social groups as women, religious classes, middle classes, landlords, peasants, and social classes. 
Ms. Keddie

207. Seminar in Ancient Mesopotamia. (Same as Ancient Near East Languages and Cultures M250.) Prerequisites: consent of instructor. Selected topics on the political, social and intellectual history of ancient Mesopotamia, may be repeated for credit. 
Mr. Buccellati

209A-209B. Seminar in Ottoman and Modern Turkish History. (Formerly numbered 263A-263B).

211A-211B. Seminar in Armenian History. (Formerly numbered 286A-286B). 
Mr. Hovannisian

212. Methods in Armenian Oral History. (Formerly numbered 228). Prerequisite: proficiency in the Armenian Language. Lectures and laboratory in the methods of interviews and oral sources for Armenian history. The course will include a project assignment in the field. May be concurrently scheduled with course C112D. 
Mr. Hovannisian

215A-215B. Seminar in Ancient History. (Formerly numbered 250A-250B). 
Mr. Chambers, Mr. Mellor

216A-216B. Seminar in Byzantine History. (Formerly numbered 252A-252B-252C). 
Mr. Vryonis

217. Sources and Handbooks of Medieval History. Prerequisite: reading knowledge of German or French. An introduction to types of medieval source materials and the handbooks needed to use them. 
Mr. Rousse

218. Medieval Latin Literary History. (Formerly numbered 222A-222B). Prerequisites: reading knowledge of Latin and German or French. An introduction to the manuscript book from antiquity through the Carolingian renaissance with emphasis on dating and localization as well as on proficiency in reading. Offered in alternate years. 
Mr. Rousse

219B. Paleography II. Prerequisites: 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. Offered in alternate years. 

220A-220B. Seminar in Church and Monarchy in the Middle Ages. (Formerly numbered 251A-251B). 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 century to the 14th. 
Mr. Benson

221A-221B. Seminar in Medieval History. (Formerly numbered 253A-253B). Prerequisite: consent of instructor. 
Mr. R.I. Burna

222A-222B. Seminar in Medieval Intellectual History and History of Science. (Formerly numbered 278A-278B). Selected problems from medieval and early modern philosophy, science, political theory, and the philosophy, curriculum, structural organization, and functions of education at all levels. 
Mr. Funkenstein

225. Colloquium for Entering Graduate Students in Modern European History. (Formerly numbered 216). Prerequisite: admission to graduate study in Modern European history. An introduction to the topics, methods, and historiography of Modern European history. Required of all graduate students in Modern European history. 
Mr. Loewenberg and Staff

229A-229B. Seminar in Early Modern European History. (Formerly numbered 257A-257B). 
Mr. Lossky, Mr. Martines, Mr. Symcox


231A-231B. Seminar in Modern European Intellectual and Cultural History. (Formerly numbered 261A-261B). 
Mr. Weber, Mr. Wohl

233A-233B. Seminar in Russian History. (Formerly numbered 263A-263B). 
Mr. Rogger

234A-234B. Seminar in the Modern History of Spain, Portugal, and Italy. (Formerly numbered 262A-262B). 
Ms. Kaplan, Mr. Wohl

239A-239B. Seminar in English History: Middle Ages. (Formerly numbered 258A-258B). 

240A-240B. Seminar in English History: Modern History. (Formerly numbered 259A-259B). 

244A-244B. Seminar in British Empire History. (Formerly numbered 264A-264B). 
Mr. Galbraith

245. Colloquium in U.S. History. (Formerly numbered 265). 
Mr. Nash

246. Colloquium in 17th Century. 
Mr. Nash

247A-247B. Seminar in Early American History. (Formerly numbered 269A-269B). 
Mr. Nash, Mr. M. G. Smith

249A-249B. Seminar in Jacksonian America. (Formerly numbered 275A-275B). 
Mr. Nash

250A-250B. Seminar in United States History of the 19th and 20th Centuries. (Formerly numbered 272A-272B). 
Mr. Matl, Mr. Howe, Mr. Saxton

252A-252B. Seminar in Recent United States History. (Formerly numbered 270A-270B). 
Mr. Coben, Mr. Hines

253A-253B. Seminar in Recent United States History since 1930. (Formerly numbered 271A-271B). 
Mr. Hines, Mr. Weiss

254A-254B. Seminar in United States Social and/or Intellectual History. (Formerly numbered 273A-273B). 
Mr. Howe, Mr. Saxton

255A-255B. Seminar in American Diplomatic History. (Formerly numbered 274A-274B). 
Mr. Dailey

Mr. Monkkonen

258A-258B. Seminar in Working Class History. (Formerly numbered 288A-288B). 
Mr. Laslett, Mr. Saxton

259A-259B. Seminar in Social History of Women in the U.S. (Formerly numbered 290A-290B). 

Mr. Morrison

261A-261B. Seminar in Afro-American History. (Formerly numbered 277A-277B). Social and political history of the Afro-American including an emphasis on the development and structure of race relations in America, and racial concepts and dilemmas, black and white. 
Mr. Creel, Mr. Hill

262A-262B. Seminar in Chicano History. (Formerly numbered 289A-289B). 
Mr. Gómez-Quiones

263A-263B. Seminar in the History of the American West. (Formerly numbered 274A-274B). 
Mr. Hundleby

M264. History of American Education. (Formerly numbered M215C). (Same as Education M210C). The aim is to depict the social forces impinging on American education from the 1860s to the present, and to analyze the relations between these social forces and the philosophy, curriculum, structural organization, and functions of education at all levels. 
Mr. S. Cohen

M265. Latin American Research Resources. (Formerly numbered M221). (Same as Latin American Studies M200, and Library and Information Science M225.) The course will acquaint students with general and specialized materials in fields concerned with Latin American studies. Library research techniques will provide the experience and competency required for future bibliographic and research sophistication as the basis for enhanced research results. 
Mr. Laufer

266A-266B. Seminar in Colonial Latin American History. (Formerly numbered 266G-266H). 
Mr. Lockhart

267A-267B. Seminar in Latin American History: 19th and 20th Centuries. (Formerly numbered 266A-266B). 
Mr. Burr

268A-268B. Seminar in Recent Latin American History. (Formerly numbered 266E-266F). Prerequisites: course 167A or 1678 or 171, or concurrent enrollment in same, or equivalent. 
Mr. Wilkie

275. Introduction to the Professional Study of African History. (Formerly numbered 212). Required of all entering graduate students in African History. Source identification, research methodologies, historiographical traditions, historical interpretation, and approaches to teaching are examined. Strongly recommended for History concentrators in M.A. African Studies Program. 

276. African Archaeology-Field Techniques. (½ to 2 courses). (Formerly numbered 221A). 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. Posansky

277. African Archaeology-Data Analysis. (½ to 2 courses). (Formerly numbered 221B). Course 276 (African Archaeology-Field Techniques) must be taken before or in conjunction. A field course to equip a student to handle finds from excavations. The course will involve analysis, description, illustration and interpretation of an actual archaeological and/or ethnographic collection. 
Mr. Posansky


Mr. Farquhar, Mr. Huang


Mr. Nishihara

288A-288B. Seminar in South Asia. (Formerly numbered 286A-286B).

Mr. Wolpert

288A-288B. Seminar in Southeast Asia. (Formerly numbered 286A-286B).

Mr. SarDesai

291A-291B. Seminar in Jewish History. (Formerly numbered 268A-268B). Studies in the intellectual and social history of the Jewish people from ancient times to the modern period. Mr. Funkenstein

293A. Numbered 227). Prerequisite. (295. Theories of Scientific Change

trated in students)

2970. (Formerly numbered 280A-280B).

Mr. Westman

295. Theories of Scientific Change. (Formerly numbered 227). Prerequisite: consent of instructor. Historical and philosophical discussions on science focusing upon the rationality of scientific change and the logic and psychology of scientific discovery. Readings and seminar-style discussions of such authors as: Popper, Kuhn, Toynbee, Lakatos, Holton, Buchanan, Feynman and others. Mr. Westman

297A-297B. Seminar in the History of Science. (Formerly numbered 256A-256B).

Mr. Westman, Mr. Wise

Individual Study and Research

490. Writing Workshop for Graduate Students. 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, will help students improve their own writing. Offered on a satisfactory/unsatisfactory (S/U) grade basis only. May be repeated once. Ms. Stranski

495. The Teaching of History. Prerequisite: Graduate Standing; required of all new teaching assistants. Consisting of lectures, readings, discussions, and practice teaching sessions within the structure of a seminar; students receive unit credit toward full-time equivalence, but not towards the nine course requirement for the M.A. degree. Graded S/U.

501. Cooperative Program. (1/2 to 2 courses) Prerequisites: Approval of UCLA Graduate Advisor and Graduate Dean. Approval of 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. To be graded S/U.

596. Directed Studies. (1/2 to 2 courses) Prerequisites: Graduate Status, permission of instructor. Individual directed reading arranged with professor. M.A. candidates may take this course only once. Number of times doctoral candidates may take this course is subject to approval of Interdepartmental Studies Committee. May be taken S/U or letter grade.

597. Directed Studies for Graduate Examinations. (1/2 to 2 courses) Preparation for either the Master’s Comprehensive Examination or the Ph.D. Qualifying Examinations.

599. Doctoral Research and Writing. (1/2 to 2 courses) Open only to students who have passed the qualifying examination for the Ph.D. degree.

Indo-European Studies

(Interdepartmental)

Raimo A. Anttila, Ph.D., Professor of Indo-European and General Linguistics.

Henrik Birnbaum, Ph.D., Professor of Slavic Languages.

Patrick K. Ford, Ph.D., Professor of Celtic Studies (Chair of the IES Committee).

Marja Gimbutas, Ph.D., Professor of European Archaeology (Department of Slavic Languages).

Bengt T. M. Lofstedt, Ph.D., Professor of Classics.

Jean Pulver, Ph.D., Professor of Classics and Indo-European Studies.

Hartmut Scharfe, Ph.D., Professor of Indo Studies (Department of Oriental Languages).

Hanns-Peter Schmidt, Ph.D., Professor of Indo-Iranian Studies (Department of Near Eastern Languages).

Donald J. Ward, Ph.D., Professor of Folklore and Germanic Studies.

Terence H. Wilbur, Ph.D., Professor of Germanic Linguistics and Philology.

Alan H. Timberlake, Ph.D., Associate Professor of Slavic Languages.

Joseph F. Nagy, Ph.D., Assistant Professor of English.

The Ph.D. Degree

Admission Requirements. Students admitted to graduate status must have an A.B. degree with a major in an Indo-European language field (e.g., German, Slavic, Celtic, Romance Languages, Latin, Greek), Linguistics (with concentration on historical and comparative linguistics), Anthropology, or Archaeology. Letters of recommendation (at least two, preferably three or four) are required; GSAT not required. Potential applicants may request a brochure by writing to: Indo-European Studies Program, c/o Folklore and Mythology Center, 1037 GSM — Library Wing, University of California, 405 Hilgard Avenue, 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, an applicant may be granted provisional admission and directed to remove those deficiencies in the initial period of enrollment.

Advising. The general Graduate Adviser is the Chair of the Interdepartmental Degree Committee; he/she may be contacted at the above address. When the student has determined clearly the area of specialization in which he or she will work (usually by the end of the first year), a personal adviser will be assigned. Should the student change the area of specialization, a different adviser may be assigned. Students are expected to be in close touch with their advisers regarding their progress in the program. When the student approaches the time for the doctoral examinations, a committee selected by the student in close consultation with the personal adviser will be nominated and formally appointed by the Dean of the Graduate Division.

Major Fields or Subdisciplines. The doctorate 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. During the first year of graduate study, the student is expected to pass the standard reading examination set by the Graduate Division (ETS) in any two of German, French, and Russian. The remaining language is to be passed in the second year, unless the student has demonstrated in some other way the ability to use the language as a research tool.

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, Homeric Greek, one upper division course in Latin, basic competence in Indo-European linguistics (including the introductory IES 150 and 210), mythology (e.g., Classics 168) and Archaeology (including IES 131, 132). Additional requirements by field as follows:

1) Linguistics — an advanced seminar in comparative grammar, a minimum of five 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 chosen in consultation with the student’s personal 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 chosen in consultation with the student’s personal 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 chosen in consultation with the student’s adviser.

Teaching Experience. Teaching experience is highly desired, but not available within the IES Program; therefore, it is not required. The Program works closely with its constituent departments in an attempt to provide some teaching experience.

Written and Oral Qualifying Examinations. When the student has completed the required coursework and prior to advancement to candidacy, 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, an oral examination, based on the written examinations and the candidate’s dissertation prospectus will be administered. The latter examination, administered by the doctoral committee, is intended to probe the candidate’s grasp of the entire field. Should the student fail either the written or oral examinations, the Interdepartmental Degree Committee may vote to allow reexamination.

Doctoral Committee. The doctoral committee is established with the same requirements as those of the Graduate Council.
Final Oral Examination Following Completion of the Dissertation. The Final Oral Examination is designed to allow the committee to evaluate the dissertation within the discipline and within the student's own specialization. Although it is stated as a requirement of all students, individual circumstances have on occasions dictated waiver of the Final Oral Examination.

Time to Degree. Provided that no deficiencies exist, a full-time student should complete his or her coursework and be prepared for the doctoral examinations within 14 academic quarters. Following this, the dissertation may be completed in seven additional quarters. Thus, the total time to degree from admission to the program is approximately 21 academic quarters. Because the program is unique and the qualifications of incoming students considerably vary, time to degree will vary also.

Candidate in Philosophy Degree. Upon successful completion of the written and oral examinations, the student will be advanced to candidacy and awarded the C.Phil degree.

Disqualification and Appeal of Disqualification. Failure to maintain a minimum average of 3.0 (B) constitutes the usual grounds for a recommendation of termination. In this, and in other cases, the Interdepartmental Degree Committee is the recommending body and the body to which appeal of such recommendation must be made.

Other Relevant Information. Because Indo-European Studies is an interdepartmental program, many of the courses that constitute the major are listed as "Related Courses in Other Departments." However, certain basic courses are specifically and solely IES courses. Those are listed below.

Upper Division Courses

131. European Archaeology: From the Neolithic to the Bronze Age.
132. European Archaeology: The Bronze Age.
M160. Introduction to Indo-European Linguistics. (Same as Linguistics M150.)
198. Special Studies. (1/2 to 2 courses)

Graduate Courses

220A-220B. Field Work in Archaeology.
250A-250B. Laboratory Analysis in Archaeology.
261A-261B. Celtic Folklore.
262. Celtic Mythology.
263. Celtic Folklore and Mythology.
264. Celtic Folklore.
265. Celtic Folklore.
266. Celtic Folklore.
267. Celtic Folklore.

Related Courses in Other Departments


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.
Scandinavian (Germanic Languages) 151. Elementary Old Icelandic.
152. Intermediate Old Icelandic.
M245. Germanic and Scandinavian Mythology.
Semitic (Near Eastern Languages) 140A-140B. Elementary Akkadian.
141. Advanced Akkadian.
220A-220B. Ugartic.
Slavic 177. Baltic Languages and Cultures.
M179. Baltic and Slavic Folklore and Mythology. 201. Introduction to Old Church Slavic.
251. Introduction to Baltic Linguistics.

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 and to graduate students assigned to the colloquia by their advisers. Graduate 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 to the Dean of the College of Letters and Sciences, (213) 825-4453.

African Studies

The African Studies Center annually sponsors at least one interdisciplinary colloquium on Africa. These colloquia focus on topics in the social sciences or humanities which cross disciplinary boundaries. Previous colloquia have dealt with such subjects as cultural pluralism, constraints on development and the adaptation of legal systems. It is the policy of the African Studies 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. The interdisciplinary colloquium for the academic year 1982-83 will be on the subject of "Critical African Issues in U.S. Foreign Policy." The organizer of this colloquium will be Professor Richard Sklar of the UCLA Political Science Department. Inquiries may be directed to Prof. Sklar at this Center.

For further information about African Studies Center colloquia, please contact the Assistant to the Graduate Adviser, Ms. Maxine Driggers, Phone (213) 825-2944.
The Jacob Marschak Interdisciplinary Colloquium on Mathematics in the Behavioral Sciences

The Marschak Colloquium provides a forum for interaction among faculty and students interested in the application of mathematics (and statistics) to the behavioral sciences, including 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.

The Colloquium sponsors presentations by leading experts in these fields, including faculty members from UCLA, other UC campuses, and other universities. The Colloquium meets on alternative Fridays, during the academic year from 1:00 to 3:00 in GSM 2270. Announcements of presentations, including abstracts of the papers to be presented, are circulated and posted on campus; announcements also appear in UCLA This Week.

Islamic Studies (Interdepartmental)

The interdepartmental program for the Master of Arts and Ph.D. degrees in Islamic Studies is designed primarily for the student desiring to prepare for an academic career. It may, however, be found useful also for the student seeking a general education and desiring a special emphasis in this particular area or for a student who plans 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 indicated below, the special course of studies is formulated for each candidate according to his/her experience and requirements.

The Master of Arts Degree

Admission Requirements. In addition to the general University requirements, a Bachelor of Arts degree in Near Eastern Studies or its equivalent is required. The Interdepartmental Degree Committee will pass on the application for admission to the program. A student entering the program is normally expected to have completed the equivalent of advanced intermediate Arabic (Arabic 102A-102B-102C); and advanced Persian (Persian 102A-102B-102C), or advanced Turkish (Turkish 103A-103B). In addition, the student is expected to have completed the equivalent of two years of Near Eastern history (classical and modern); some coursework in Islamic culture and institutions may be included 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 is required of graduates of American universities and recommended for overseas applicants.

No screening examination is required. Provided the student meets the admission requirements stated above, no specific coursework is required.

A departmental brochure can be obtained by writing to the G.E. von Grunebaum Center for Near Eastern Studies, 10286 Bunche Hall, UCLA.

Advising. Graduate Adviser: Students are to consult with the Chair of the Islamic Studies Committee, Professor Speros Vryonis, Jr., G.E. von Grunebaum Center for Near Eastern Studies.

Appointments for consultation with the Graduate Adviser should be made through the Center. Should consultation with other members of the Interdepartmental Degree Committee be in order, appointments will be scheduled through the Center. Students are apprised orally at the beginning of each quarter of their progress and/or deficiencies and a written record of the interview is kept in their files. Consultation data sheets are kept on file. All students will be reviewed at the end of their first year to determine whether their progress is sufficient to warrant continuation in the program.

Major Fields or Subdisciplines. Arabic, Persian, Turkish, History of the Near East, Political Science, Anthropology, Sociology.

Foreign Language Requirement. A candidate for the degree of Master of Arts in Islamic Studies will be required to show proficiency in either French or German. The student is expected to pass the graduate foreign language reading examination (Educational Testing Service) in French or German by the end of the third quarter of residence.

Course Requirements. A minimum of nine courses; no fewer than four courses on the appropriate level in the two Near Eastern languages of the candidate's choice and no fewer than five courses chosen from the relevant upper division and graduate courses in history, political science or any of the other fields represented in the program depending on the student's preparation and specific needs, with the provision that the selection must be limited to two of these disciplines. The omission of history may be approved only in exceptional cases. Of the nine courses for the M.A. degree, five must be on the graduate level.

Thesis or Comprehensive Examination Plan. Only the Comprehensive Examination Plan is acceptable. The candidate 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.

Time to Degree

<table>
<thead>
<tr>
<th>Academic Calendar</th>
<th>Quarters</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>From graduate admission to completion of required courses, approval of the Comprehensive Examination and award of the degree.</td>
<td>4*</td>
<td>1 1/2*</td>
</tr>
<tr>
<td>Upper time limit for completion of all requirements.</td>
<td>9</td>
<td>3</td>
</tr>
</tbody>
</table>

*Students who enter the program with deficiencies may require six quarters (two calendar years).

500 Series Course Limitations.

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Type of Grade</th>
<th>Number of Times May Be Repeated</th>
</tr>
</thead>
<tbody>
<tr>
<td>596 2-8</td>
<td>S/U</td>
<td>No limit</td>
</tr>
<tr>
<td>597 2-8</td>
<td>S/U</td>
<td>Normally one repeat in each discipline.</td>
</tr>
<tr>
<td>598 2-8</td>
<td>S/U</td>
<td>No limit established</td>
</tr>
</tbody>
</table>

Only 8 units of all types of 500 series courses may apply toward the total course requirement for the M.A. degree as well as toward the minimum graduate course requirement for the degree, providing they are not in the same discipline.

Disqualification. The decision to recommend termination of graduate status will be reached by the Chair of the Interdepartmental Degree Committee, upon consultation with the Graduate Adviser and appropriate faculty members. Such decision may be based upon the student's failure to maintain the required progress toward the degree, failure to maintain a grade point average of 3.0, or failure in passing the requisite examinations.

Appeals. The student may appeal the decision to recommend termination to the Interdepartmental Degree Committee.

The Ph.D. Degree

Admission Requirements. 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 is required of graduates of American universities and recommended for overseas applications.

A departmental brochure can be obtained by writing to G.E. von Grunebaum Center for Near Eastern Studies, 10286 Bunche Hall, UCLA.

Advising. Graduate Adviser: Students are to consult with the Chair of the Islamic Studies Committee, Professor Speros Vryonis, Jr., G.E. von Grunebaum Center for Near Eastern Studies.

Appointments for consultation with the Graduate Adviser should be made through the Center upon admission to the program and throughout the year as needed. After the first year (three quarters) an advisory committee for each candidate will be appointed. This committee, consisting of four faculty members, will supervise the four fields in which the candidate is to be examined. Consultation with these faculty members will be as frequent as needed. Students are apprised orally by the Graduate Adviser at the beginning of each quarter of their progress and/or deficiencies and a written record of the interview is kept in their files.

Major Fields or Subdisciplines. Arabic, Persian, Turkish, History, Anthropology, Sociology, Political Science.

Foreign Language Requirement. At the beginning of his/her first quarter in residence, the candidate will present to the Chair of the Interdepartmental Degree Committee, a written statement explaining his/her preparation in one of the two modern languages required by the University (generally French and German). He/she is expected to pass the graduate foreign language reading examination in both languages by the end of his/her second year of residence. For work in some fields, a reading knowledge of Italian or Spanish or Russian may be substituted for one of the above European languages after satisfactory advisement.

The Educational Testing Service examination is acceptable.

Course Requirements. Course requirements for the student entering directly into the Ph.D. program are as in the M.A. program. Beyond this, the student will continue advanced courses in his/her two Near Eastern languages, in Near Eastern history and in one of the social sciences, upon specific advisement of the Interdepartmental Degree Committee.

Written and Oral 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). Upon successful completion of the written examinations, the student must present himself/herself for the oral examination before the entire doctoral committee. Reexamination in any field is at the discretion of the doctoral committee in consultation with the Chair of the program.

Research proposals, dossiers, research papers, propositions, etc. are not permitted as alternatives to the Written Qualifying Examinations.

Doctoral Committee. The committee is to be appointed by consultation between the student and the Chair of the Interdepartmental Degree Committee.

Final Oral Examination Following Completion of the Dissertation. With the approval of the doctoral committee at the time of the Oral Qualifying Examination, the Final Oral Examination may be waived.

Time to Degree.
1) From graduate admission to Written and Oral Qualifying Examinations: nine quarters.
2) From graduate admission to the approval of the dissertation prospectus: nine quarters.
3) From advancement to candidacy to the Final Oral Examination: three to six quarters.
4) From graduate admission to the award of the degree: 15 quarters.

(Students with an M.A. degree in the program may be able to complete all requirements and the dissertation in as few as 10 quarters.)

Candidate in Philosophy Degree. Students are eligible to receive the C.Phil. degree on advancement to candidacy.

Disqualification and Appeal of Disqualification. The decision to recommend termination of graduate status will be reached by the Chair of the Interdepartmental Degree Committee, upon consultation with the Graduate Adviser and the student's doctoral committee. Such decision may be based upon the student's failure to maintain the required progress toward the degree, failure to maintain a grade point average of 3.0, or failure in passing the requisite examinations. The student may appeal the decision to recommend termination to the Interdepartmental Degree Committee.

Upper Division Courses

Anthropology
130. The Study of Culture.
135P. Social and Psychological Aspects of Myth and Ritual
150. Comparative Society.
156. Comparative Religion
161. Development Anthropology
163. Women in Culture and Society
167. Urban Anthropology
176. Cultures of the Middle East

Arabic
102A-102B-102C. Intermediate Arabic
103A-103B-103C. Advanced Arabic
111A-111B-111C. Spoken Arabic
112. Spoken Egyptian Arabic
113A-113B-113C. Spoken Iraqi Arabic
114A-114B-114C. Spoken Moroccan Arabic
130A-130B-130C. Classical Arabic Texts
132A-132B-132C. Philosophical Texts
140A-140B-140C. Modern Arabic Texts
141. Modern Arabic Literature
150A-150B. Survey of Arabic Literature in English
199. Special Studies in Arabic

Armenian
130A-130B. Elementary Classical Armenian
131A-131B. Intermediate Classical Armenian
132A-132B. Advanced Classical Armenian

Art
104B-104C-104D. Architecture and the Minor Arts of Islam in the Middle Ages
105E. Byzantine Art

Berber
101A-101B-101C. Elementary Berber
102A-102B-102C. Advanced Berber
120A-120B-120C. Introduction to Berber Literature
130. The Berbers
199. Special Studies in Berber Languages

Classics
M170A-170B. Byzantine Civilization (Same as History M122A-122B)

French
121A. Franco-African Literature

Geography
187. The Middle East
186. Northern Africa

History
106A-106B-106C. Survey of the Middle East From 500 to the Present
107A-107B. Islamic Civilization
108A-108B. History of the Arabs
109A-109B. History of North Africa From the Moslem Conquest
110A-110B. Iranian History
111A-111B. History of the Turks
123A-123B. Byzantine History
166. Recent History of India and Pakistan
190A-190B. History of Southeast Asia

Iranian
101A-101B-101C. Elementary Persian
102A-102B-102C. Intermediate Persian
103A-103B-103C. Advanced Persian
140. Contemporary Persian Belle Lettres
141. Contemporary Persian Analytical Prose
150A-150B. Survey of Persian Literature in English
169. Civilization of Pre-Islamic Iran
170. Religion in Ancient Iran
190A-190B. Introduction to Modern Iranian Studies
199. Special Studies in Iranian

Islamics
110. Introduction to Islam

Jewish Studies
110. Social, Cultural and Religious Institutions of Judaism

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

Sociology
132. Population and Society in the Middle East
133. Comparative Sociology of the Middle East
151. Culture and Personality

Turkish Languages
101A-101B. Elementary Turkish
102A-102B. Intermediate Turkish
103A-103B. Advanced Turkish
112A-112B-112C. Uzbek
114A-114B-114C. Bashkir
160A-160B. Cultural History of the Turks
180A-180B-180C. Introduction to Turkic Studies
199. Special Studies in Turkic Languages

Graduate Courses

Anthropology
215. Field Training in Archaeology
220P. Ethnology
230Q. Cultural Anthropology
232P. Cultural Modes of Thought
232Q. Myth and Ritual
239P. Selected Topics in Field Training in Ethnography
239Q. Analysis of Field Data
259. Kinship
273. Cultures of the Middle East

Arabic
220A-220B-220C. Islamic Texts
230A-230B-230C. Arabic Poetry
240A-240B-240C. Arab Historians and Geographers
250A-250B-250C. Seminars in Arabic Literature
260A-260B-260C. Introduction to Modern Arabic Dialects
280. Structure of Classical Arabic
596. Directed Individual Study
597. Examination Preparation
599. Dissertation Research and Preparation

Archaeology
259. Field Work in Archaeology
596. Individual Studies for Graduate Studies
597. Preparation for Doctoral Qualifying Examinations

Armenian
210. History of the Armenian Language
220. Armenian Literature of the Golden Age (A.D. Fifth Century)

Art
Problems in Islamic Art

Classics, Greek
231A-231B-231C. Seminar in Later Greek and Byzantine Literature

French
221A. Introduction to the Study of the French-African Literatures
221C. French-African Literature of Berbero-Sudanese and Arabo-Islamic Africa
257A-257B. Studies in French-African Literatures

Geography
287. Middle East
288. Northern Africa

Hebrew
230. Seminar in Medieval Hebrew Literature
231. Texts in Judaeo-Arabic

History
204A-204B. Seminar in Near and Middle Eastern History
205A-205B. Seminar in Medieval Middle Eastern History
206A-206B. Seminar in the Social History of the Middle East
209A-209B. Seminar in Ottoman and Modern Turkish History
216A-216B. Seminar in Byzantine History
596. Directed Studies
597. Directed Studies for Graduate Examinations
599. Doctoral Research and Writing

Iranian
210A-210B. The History of the Persian Language
211A-211B. Modern Iranian Dialects
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. Dissertation Research and Preparation

Islamics
596. Directed Individual Study
597. Examination Preparation
598. Thesis Research and Preparation
599. Dissertation Research and Preparation

Linguistics
220. Linguistic Area
225. Linguistic Structures

Music
282. Music of Iran and Other Non-Arabic Speaking Communities
294. 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
250. Seminar in Paleography
596. Directed Individual Study
597. Examination Preparation
599. Dissertation Research and Preparation

Political Science
250F. Seminars in Regional and Area Political Studies. Middle Eastern Studies
250K. North African Studies

Semiotics
215A-215B. Syriac

Sociology
238. Social Change in the Middle East
237. Social Stratification in the Middle East

Turkish Languages
210A-210B-210C. Ottoman
211. Ottoman Diplomats

220A-220B-220C. Chaghatay
230A-230B-230C. A Historical and Comparative Survey of the Turric Languages
235A-235B-235C. Middle Turkic
240A-240B-240C. Islamic Texts in Ottoman
250A-250B-250C. Islamic Texts in Chaghatay
290A-290B. Seminar in Modern Turkish Literature
290A-290B. Seminar in Classical Turkish Literature
596. Directed Individual Study
597. Examination Preparation
599. Dissertation Research and Preparation

Urdu
101A-101B-101C. Elementary Urdu
199. Special Studies in Urdu

Italian

(Office, 340 Royce Hall)

Giovanni Cecchetti, Dottore in Lettere, Professor of Italian.
Friedi Chiappelli, Dottore in Lettere, Dott. Lett. "Honoris Causa", Professor of Italian.
Margherita Cottino-Jones, Ph.D., Dottore in Lettere, Professor of Italian (Chair of the Department).
Pier Maria Pasinetti, Ph.D., Dottore in Lettere, Professor of Italian and Comparative Literature.
Charles Speroni, Ph.D., Emeritus Professor of Italian.
Franco Betti, Ph.D., Associate Professor of Italian.
Edward F. Tuttle, Ph.D., Associate Professor of Italian (Upper Division Undergraduate Adviser and Graduate Adviser).
Lucia Re, Dottore in Lettere, Assistant Professor of Italian.

Mirella Cheeseman, Dottore in Legge, Lecturer in Italian (Director of Language Instruction Program).
Althea Reynolds, B.A., Lecturer in Italian (Lower Division Undergraduate Adviser).

The Master of Arts Degree

Admission Requirements. Three letters of recommendation are required. The address is:
Department of Italian, Royce Hall 340, Att: Graduate Counselor, UCLA, Los Angeles, California 90024.

No application form in addition to the one used by the Graduate Admissions Office is required.

Files of prospective graduate students meeting the University minimum requirements are screened by the Departmental Committee on Admissions. This committee decides whether any of the students need additional undergraduate courses to integrate his/her curriculum. This applies particularly to graduates entering with a major other than Italian as well as to those coming to UCLA from another institution. In case the student's file shows a degree of deficiency in preparation that, without ruling out admission, raises doubts on the possibilities of working up to the Department's standards, the Committee recommends admission on a provisional basis.

Advising. Graduate Adviser: Dr. Edward Tuttle, Department of Italian, Royce Hall 340, UCLA, Los Angeles, California 90024.

All graduate students entering the M.A. program are introduced to the faculty in a general
meeting. All new students must meet with the Department Graduate Adviser who will specify the requirements for their first year of their graduate study according to Department regulations and Universitywide requirements. The Graduate Adviser is available for consultation with students as often as needed. Students, however, should contact the Graduate Adviser at least once every term.

**Major Fields.** No major fields or areas of specialization are allowed. Our master's degree aims at providing our students with a broad and sound knowledge of all main areas of Italian Literature.

**Foreign Language Requirements.** A reading knowledge is required of one other foreign language approved by the Graduate Adviser or evidence of successful completion of courses through at least level 3. This requirement must be met at least one quarter before the date of the Comprehensive Examination.

### Course Requirements

**Master of Arts in Italian Literature**

1. Thesis Plan: nine courses, of which a minimum of six must be in the Italian 200 series; Italian 200 ABC and Italian 205B are required.

2. Comprehensive Examination Plan: 12 courses, four of which are required, Italian 200 ABC and Italian 205B. The other eight must be distributed in three main literary periods—Middle Ages, Renaissance, Modern times, (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 and 205B and Art 230, are strongly recommended.)

**Master of Arts in Italian Language**

1. Thesis Plan: 12 courses, of which a minimum of six must be in the 200 series, and the following are required: Italian 200ABC, 259 A and B, Latin 232, Linguistics 100 or 140 or both.

2. Comprehensive Examination Plan: 12 courses of which the following are required: Italian 130, 200 ABC, 259 A and B, Latin 232, or Italian 210A or both. The others should be taken respectively in the Medieval period (seminar on Dante strongly recommended), in the Renaissance, and in the Modern period.

**Thesis or Comprehensive Examination Plan.**

**Thesis Plan:** In order to favor research-oriented students of exceptional merit, the Department has established the following Thesis Plan. Any student who has completed a first year of graduate work with at least a 3.70 grade point average rating, may be nominated by one of the faculty members of the Department for application to the M.A. in Italian, Thesis Plan. At this point in their graduate preparation, the students must have completed the 200ABC series, 205B and at least two other graduate courses in Italian. A Guidance Committee composed of three members of the Department will evaluate the student's application. On acceptance, the Committee, together with the student, will have to include 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 the student's second year of graduate work; it must be directed by a faculty member of the Guidance Committee and it must be approved by the Guidance Committee. After completion of the thesis, the candidate must pass an oral examination testing his/her knowledge in the field of the thesis and his/her general competence in Italian Literature.

**Comprehensive Examination Plan:** In general, the Department favors the Comprehensive Examination Plan. The Comprehensive Examination Committee is appointed by the Chair of the Department in consultation with students and their faculty advisers and consists of a minimum of a 4-hour written examination to be given the next to the last week preceding the final examination period of the Fall and Spring Quarters. It is a broad testing of the candidate's general competency and does not have major and minor fields of emphasis. After the written examination, the candidate is required to take an oral examination. A candidate who has failed the Comprehensive Examination may be reexamined once, subject to approval by the Examination Committee and the Chair of the Department.

**Time to Degree.** The time to the master's degree is two years or, six academic quarters.

### 500 Series Course Limitations

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Unit Value</th>
<th>Type of Grading</th>
<th>Number of Times May Be Repeated</th>
</tr>
</thead>
<tbody>
<tr>
<td>596</td>
<td>2-8</td>
<td>S/U</td>
<td>Twice</td>
</tr>
<tr>
<td>597</td>
<td>2-8</td>
<td>S/U</td>
<td>None</td>
</tr>
<tr>
<td>599</td>
<td>2-8</td>
<td>S/U</td>
<td>No limit</td>
</tr>
</tbody>
</table>

No 500 Series courses can apply to the M.A. course requirements.

**Disqualification and Appeal of Disqualification.** Conditions which may lead to termination include failure to maintain a grade point average above 3.0, insufficient progress towards the degree, or failure of M.A. examinations. A student who fails to maintain an overall grade point average of 3.00 is placed on academic probation. If, in the first quarter of probationary status, the student succeeds to achieve a 3.0 overall grade point average, he/she will no longer be on probation; if the student does not maintain a grade point average of 3.0 for that quarter, the Department will normally recommend extension of probationary status for another quarter; if the student has not maintained a grade point average of 3.0 for that quarter, the Department will normally recommend dismissal.

**Appeals.** Every recommendation for probation and dismissal is discussed and decided upon by the Department faculty. The student may appeal to the Department, in writing, any recommendation for dismissal.

### The Ph.D. Degree

**Admission Requirements.** Three letters of recommendation are required. The address is Department of Italian/Att/Graduate Counselor, UCLA, Los Angeles, California 90024.

In addition to the University minimum requirements, at least two, and preferably three, letters of recommendation from professionals in the field of Italian studies are required.

Prerequisite for entering the Department's doctoral program is an M.A. from UCLA or from a university in the United States or the equivalent.

Graduate students entering the doctoral program in Italian with a master's degree from another institution, or the equivalent, will be required to take Part I of the Ph.D. Qualifying Examination by the end of their third quarter of residence. Students who fail Part I of the Qualifying Examination are not admitted to the Ph.D. program.

A student admitted to the Ph.D. program without the M.A. degree may expect to take the Qualifying Examination, Part II at the end of the 12th quarter in residence, carrying a normal course load.

Students holding the M.A. from UCLA will normally take Part II of the Qualifying Examination at the end of their sixth quarter in residence. Those holding their M.A. degree from another institution will take Part II of the Qualifying Examination after approximately eight quarters.

**Advising.** Graduate Adviser: Dr. Edward Tuttle, Department of Italian, Royce Hall 340B, UCLA, Los Angeles, California 90024.

All students continuing toward the Ph.D. in Italian with an M.A. from UCLA have an assigned faculty adviser who may become the chair of their Doctoral Guidance Committee. New students who are entering the Ph.D. program in Italian are introduced to the faculty in a general meeting and according to their academic interests each of them will be assigned a faculty adviser. All students must have selected their doctoral committee chair during the first quarter they are enrolled in the Ph.D. program. By the end of the second quarter they must have selected the departmental members of their Doctoral Guidance Committee. The chair of the doctoral committee in consultation with the student and eventually with the other members of the student’s doctoral committee plans the student’s program.

The Doctoral Guidance Committee prepares and administers Part II of the Written Qualifying Examination after the student has completed the 10-course requirement and other preparatory work — usually within six quarters after completion of Part I.

**Major Fields or Subdisciplines**

**Major fields:** two centuries of Italian Literature either in the Medieval, Renaissance and Baroque, or Modern areas.

**Minor fields:** two centuries of Italian Literature from any of the areas mentioned above.
Candidates may choose a major in a literary genre or a minor outside the Department, provided that it relates to their major fields of specialization. This field must have the approval of the candidate's entire Department.

**Foreign Language Requirements.** A student will normally pass this requirement by giving evidence of successful completion of courses through level 3 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 credited toward fulfillment of this requirement. The language requirement must be satisfied prior to taking Part III of the Qualifying Examinations, either by Educational Testing Service or departmental examination or by petition for course credit to the Graduate Division.

**Course Requirements.** Required courses: in addition to those required for the master's degree, at least 10 other quarter courses, of which no more than two 596 courses may apply. In addition, the student will take such courses as his/her guidance committee will prescribe for the Qualifying Examinations: such as 596 or 597.

**Qualifying Examination.** Part I. The Comprehensive Examination for the M.A. in Italian at UCLA corresponds to Part I of the Ph.D. program Qualifying Examinations. Graduate students entering the Ph.D. program in Italian with an M.A. from another university or the equivalent, will be required to take Part I by the end of their first three quarters at UCLA.

**Qualifying Examination: Part II.** The Department requires both a Written and an Oral Qualifying Examination, 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: one 8-hour examination in the candidate's major field, consisting of an essay in the history of the literature and a critical analysis of a literary text selected from material covering two centuries of Italian literature; one 6-hour examination in the candidate's minor field, consisting of an essay in the history of the literature and five brief discussion topics selected from two centuries of Italian literature other than those comprising the major. In the case of the major field, both centuries must be within the same area: Medieval, Renaissance and Baroque, or Modern; for the minor field, the two centuries may belong to different areas. Additionally, a 2-hour oral examination is required which shall include a discussion of the written examinations, an analysis of a text from the area of the major, a general discussion of Italian literature, and the presentation of a brief written statement of the dissertation prospectus. A summary of requirements entitled "Regulations for the Ph.D. Examination" is available in the Department.

A student who fails Part II of the Qualifying Examination may be reexamined upon unanimous approval of the Guidance Committee, and only after at least one academic quarter of additional residence.

**Doctoral Committee.** The student's doctoral committee will consist of a minimum of three faculty members actually participating in the Department of Italian and a minimum of two "outside" members, at least one of which is from the student's related discipline. The doctoral committee will consider and approve the student's dissertation topic. A successful oral defense of the dissertation will constitute the final examination for the degree.

**Final Oral Examination Following Completion of the Dissertation.** After acceptance of the dissertation in its final form, the candidate may be required to take an oral examination which will cover principally the field within which the dissertation falls.

**Time to Degree.** Six years from beginning of graduate status.

**Candidate in Philosophy Degree.** The Department of Italian grants the C. Phil degree after advancement to candidacy for the Ph.D., and upon application to administrative authorities.

**Disqualification and Appeal of Disqualification.** Conditions which may lead to termination include failure to maintain a grade point average above 3.0, insufficient progress toward the degree, or failure of M.A. examinations. A student who fails to maintain an overall grade point average of 3.00 is placed on academic probation. If, in the first quarter of probationary status, the student achieves a 3.0 overall grade point average, he/she will no longer be on probation; if the student maintains a grade point average of 3.0 for that quarter, the Department will normally recommend extension of probationary status for another quarter; if the student has not maintained a grade point average of 3.0 for that quarter, the Department will normally recommend dismissal.

Every recommendation for probation and dismissal are discussed and decided upon by the Department faculty. The student may appeal to the Department, in writing, any recommendation for dismissal.

**Other Relevant Information.** All courses from Italian 201 on can be taken towards a Ph.D.

**Graduate Courses**

200A. Readings in Italian Literature. Class meets three hours weekly. Prerequisite: Graduate Standing. Italian 200A will cover the literature of the generation dominated by the Franciscan movement and proceed through the culture of Frederick II's court to the three classics of the XIV century, Dante, Petrarch, and Boccaccio. Finally, it will encompass the early humanists, the post-classics generation, and the cultural boom- ing under Lorenzo Il Magnifico. Ms. Chiappelli, Mrs. Cottino-Jones

200B. Readings in Italian Literature. Class meets three hours weekly. Prerequisites: Graduate Standing, Italian 200A. Italian 200B will cover the literature of the High Renaissance of Central Italy in its three most popular genres, lyric poetry, chivalric poem, and theater, and proceed through the counter-reformistic culture, especially of Northern and Southern Italy. Finally, it will encompass the main Enlightenment figures, and the cultural evolution stemming from them. Mr. Betti, Mr. Chiappelli

200C. Readings in Italian Literature. Class meets three hours weekly. Prerequisite: Graduate Standing, Italian 200B. Italian 200C will cover the literature of the Romantic era and proceed through a study of the literary figures of the Italian "Risorgimento". Finally, it will encompass the various "avant-gardists", movements, the literature between the two wars, and the contemporary generation. Mr. Betti, Mr. Cecchetti, Ms. Re

201. Bibliography and Methods of Research. Class meets three hours weekly. Mrs. Cottino-Jones

205A-205B. Methods of Literary Criticism. Classes meet three hours weekly.

205A. Brief History of Literary Criticism.

205B. Discussion of Modern Critical Approaches. Mrs. Cottino-Jones

210A-210B-210C. Early Italian Literature. Classes meet three hours weekly.

210A. The Origins of Italian Language and Early Texts.

210B. The Scuola Siciliana and Early Poetry in Central and Northern Italy. Mr. Tuttle

210C. The Dolce stil novo. Mr. Chiappelli

212A. Theory of Textual Criticism. Prerequisite: graduate standing. A presentation and discussion of the methods to be employed in the preparation of a critical edition of a Medieval and/or Renaissance literary text. Mr. Chiappelli


214A. Dante's Vita Nuova and Rime. Mr. Chiappelli

214B. Convivio and De Vulgari Eloquentia. Mr. Chiappelli

214C. The Commedia and the Monarchia. Mrs. Cottino-Jones

214D. Petrarcha. Mr. Chiappelli

214E. The Decameron. Mrs. Cottino-Jones

214F. Boccaccio's Other Works. Mrs. Cottino-Jones

214G. Sacchetti and Other Prose Writers. Mrs. Cottino-Jones


215A. Fiction and Other Prose Texts. Mr. Chiappelli

215B. Writings of the Humanists. /

215C. The Age of Lorenzo de'Medici and Poliziano. Mr. Betti

216A-216B. Italian Literature of the Sixteenth Century. Classes meet three hours weekly.

216A. Machiavelli. Mr. Chiappelli

216B. Ariosto.

216C. Bembo, Folengo, Aretino, and the Theatre. Mrs. Cottino-Jones

216D. Prose (Castiglione, Della Casa, Guicciardini, Cellini).

216E. Tasso. Mr. Chiappelli

217A-217B-217C. Italian Literature of the Seventeenth Century. Classes meet three hours weekly.

217A. Bruno, Campanella, Galilei, Magalotti. Mrs. Cottino-Jones

217B. Commedia dell'arte and the Theatre. Mrs. Cottino-Jones

217C. Marino and Marinisti. Mrs. Cottino-Jones

218A-218B. Italian Literature of the Eighteenth Century. Classes meet three hours weekly.

218A. The Prose from Vico to Cesaretti. Mr. Betti

218B. Essayists and Autobiographical Writers. Mr. Betti

218C. The Theater, Especially Metastasio, Goldoni, C. Gozzi. Mr. Pasinetti

218D. Parini and the Poets of Arcadia. Mr. Pasinetti

218E. Affieri. Mr. Betti

219A-219B. Italian Literature of the Nineteenth Century. Classes meet three hours weekly.

219A. Foscolo. Mr. Chiappelli

219B. Stendhal. Mr. Chiappelli

219C-219E. Italian Literature of the Twentieth Century. Classes meet three hours weekly.
Seminars

250A-250D. Seminar on Dante. Course meets three hours weekly. Mr. Chiappelli
251. Seminar on Petrarch. Course meets three hours weekly. Mr. Chiappelli
252. Seminar on Boccaccio. Course meets three hours weekly. Mrs. Cottino-Jones
253A-253B. Seminar on Chivalric Poetry in Italy. Course meets three hours weekly. The relationship between the genre and its French medieval antecedents will be considered in its national language and the acceptance of Florentine speech, and its evolution into the national language. Mr. Tuttle
254. Seminar on Machiavelli. Course meets three hours weekly. Mr. Chiappelli
255A-255B. Seminar on the Baroque. Course meets three hours weekly. Mrs. Cottino-Jones
256A-256B. Seminar on the Eighteenth Century. Course meets three hours weekly. Mr. Pasinetti
257A-257B. Seminar on Romanticism. Course meets three hours weekly. Mr. Pasinetti
258A-258B. Seminar on Contemporary Italian Literature. Course meets three hours weekly. Mr. Cecchetti
259A-259B-259C. Studies in the History of Italian Language. 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 will be considered in its areal dimension. Specific geolinguistic problems and solutions will illustrate the growth of the discipline up to its present merging with sociolinguistics as Italian dialects become more vertically defined. Mr. Tuttle
259D. Variable Topics in Italian Studies. Lecture, three hours; discussion: one hour. Prerequisite: Graduate Standing or consent of instructor. Seminar course focusing on Themes and Issues outside of the uniquely Italian Literature topics covered in regular Departmental Graduate course.

370. Problems and Methods in the Teaching of Italian. Course meets two hours weekly. Mrs. Cheeseman

Individual Study and Research

495A-495D. The Teaching of Italian at the College Level. (1 to 2 courses) Prerequisite: consent of instructor
495A. Techniques in Teaching Italian Literature
495B. Techniques in Teaching Italian Culture
495C. Techniques in Teaching Italian Conversation
495D. Techniques in Teaching Italian Film

501. Cooperative Program. (1 to 2 courses) Prerequisites: approval of UCLA Graduate Adviser and Graduate Dean. Approval of 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. To be graded S/U.
596. Directed Individual Studies. (1 to 2 courses)
597. Preparation for Comprehensive Examinations. (1 to 2 courses)
599. Doctoral Research and Writing. (1 to 2 courses)

Kinesiology

(Office, 206 Men's Gymnasium)

R. James Barnard, Ph.D., Professor of Kinesiology
Camille Brown, Ed.D., Professor of Kinesiology
Bryant J. Cratty, Ed.D., Professor of Kinesiology

Admission Requirements. Applicants for graduate study in the Department of Kinesiology 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) on all upper division undergraduate coursework is required. Applicants who meet University minimum requirements are considered by a departmental faculty committee on the following bases: (1) prior scholastic performance, (2) three letters of recommendation, and (3) applicant's statement of purpose. The statement of purpose is given close consideration by the selection committee and should include:

a) Relevant background or preparation (previous academic specialization, work experience, personal experience, etc.).
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 applicant's study interest.

A list of faculty names and research interests is available from the Department. Applicants are encouraged to communicate directly with the faculty and personal interviews are encouraged. Further information may be obtained by contacting the Graduate Adviser in Men's Gym 214, or by writing the Department of Kinesiology, UCLA, Los Angeles, California 90024.

Motor control, perceptual motor development and social/psychological determinants of human motor performance.

When applying for graduate work, the applicant should specify an interest in one of these general fields.

Admission Requirements. Applicants for graduate study in the Department of Kinesiology 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) on all upper division undergraduate coursework is required. Applicants who meet University minimum requirements are considered by a departmental faculty committee on the following bases: (1) prior scholastic performance, (2) three letters of recommendation, and (3) applicant's statement of purpose. The statement of purpose is given close consideration by the selection committee and should include:

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Aptitude tests, including the Graduate Record Examination 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 are reviewed only in January/February each year.

Faculty Graduate Adviser. The student is responsible for becoming acquainted with the faculty of the Department and for specifying a potential adviser whose area of specialization is common to the student's study/research interest. The graduate student works closely with the chosen adviser, and the program of study and research is basically a contract between the student and the faculty adviser or Guidance Committee.

Disqualification. Graduate students are expected to maintain a grade point average of 3.0. Students who fail to do so will be subject to review by the Graduate Affairs Committee which may make a recommendation to discontinue, to continue on contract, or to continue with warning. Students may be terminated if
they appear to be making insufficient progress toward a degree, have failed the Master's Comprehensive Examination twice (or have not been recommended for reexamination after a failure), have failed doctoral examinations, or are unable to maintain the required scholastic average.

Appeals. Appeal may be made to the Graduate Affairs Committee only with the support of a faculty adviser.

The Master of Science Degree
Undergraduate Preparation. 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 a minimum undergraduate preparation prior to their graduate work. Completion of course deficiencies may take as much as an additional year of coursework, which will not be credited toward the master's degree. The following undergraduate preparation is required:

**Basic preparation in the life and physical, and social sciences.** One course each: inorganic chemistry, organic chemistry, cellular biology, physics (mechanics), statistics, introductory psychology, and one additional introductory course in anthropology, psychology, or sociology.

**Basic preparation in kinesiology.** A lack of equivalent coursework in the following areas will necessitate acquiring undergraduate preparation by taking departmental core courses which will not be credited toward the master's degree. These core courses include (Kinesiology Department course numbers are given in parentheses): Introduction to Human Physiology (12), Human Neuromuscular Anatomy (14), Behavioral Bases of Movement (120, 120L), Biomechanical Bases of Movement (122, 122L), Cardiorespiratory Bases and Environmental Factors Affecting Movement (124, 124L), Neuromuscular and Metabolic Bases of Movement (126, 126L), plus 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/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 these nine courses must be graduate-level (200) courses, toward which one Individual Studies (Kinesiology 596) course may apply. Lists of approved related field and statistics or research design courses may be obtained from the Department.

**Thesis or Comprehensive Examination Plans**

_Nomination of the Thesis or Comprehensive Examination Committee._ The student is responsible for finding a faculty member who will serve as chair of the committee and for recruiting, with the advice and consent of the chair, two additional faculty members as committee members in accord with University regulations for the appointment of thesis committees. One committee member may be outside the department, and the student's faculty adviser need not serve as chair. Selection of the committee must be made by the time the student petitions to advance to candidacy.

**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, the student proposes a problem area or outline of study, conducts original research in a specific area, and reports the results. With committee approval, the student may either submit a thesis manuscript or a manuscript suitable for publication.

**Comprehensive Examination Plan.** Students who elect the Comprehensive Examination Plan must achieve a passing mark on a Comprehensive Examination. The general purpose of the Comprehensive Plan is to identify and 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.

The comprehensive examination committee is responsible for preparing, administering, and evaluating the written examination and reporting the results to the Graduate Affairs Committee. Each member of the comprehensive examination committee must mark the written examination as “Pass with Honors,” “Pass,” or “Fail.” An overall mark of “Pass” requires that only two committee members mark the examination as “Pass.” However, there must be an unanimous vote to award an overall mark of “Pass with Honors.”

While a written examination is required, the committee may choose to use additional means to evaluate the competency of the candidate. These supplementary procedures must be evaluated with a mark of “Pass” by at least two of the committee members.

A student who fails to successfully pass the Comprehensive Examination may not repeat the examination until the following quarter. A student may not take the examination a third time and may not change committee members without the permission of the Graduate Affairs Committee.

**Time to Degree.** Normal progress from graduate admission to completion of the required coursework is three to four quarters plus an additional one to three quarters for completion of a thesis or comprehensive examination. If preparation coursework is necessary, as much as three additional quarters may be required. Students are normally expected to complete all requirements for the master's degree in Kinesiology within seven quarters.

**500 Series Course Limitations.** A total of 8 units of 596 (Individual Studies) may be taken for credit; only one course (4 units) will count toward the minimum course requirement for the master's degree in Kinesiology. Courses 597 (Preparation for Master's Comprehensive Examination) and 598 (Research for the Preparation of the Master's Thesis) may not be used to fulfill any of the course requirements for the degree. There is no limit on the number of times a master's student may enroll in 597 or 598.

The Ph.D. Degree

**Undergraduate Preparation.** In addition to the preparation coursework required for master's students, all doctoral students are expected to have the following undergraduate preparation: two quarters of calculus and a second quarter of physics. Students must show a solid educational background in one of three general fields of kinesiology, and undergraduate and previous graduate coursework will be evaluated in terms of the student's declared field of interest. Course deficiencies will be identified after consultation with the adviser and must be made up before the First-Year Review (see below). Students admitted for one area may not specialize in another area unless all prerequisites are satisfied.

**Guidance Committee.** At the time of graduate admission, a faculty adviser is identified for doctoral students. During the first year of study, the student is responsible, with the advice and consent of the faculty adviser, for organizing the Guidance Committee. Faculty members constituting the Guidance Committee include the student's adviser and two others (one of whom must be in the Department) from the student's major and minor areas. Members of the Guidance Committee are responsible for approving the student's course of doctoral study, conducting a review of the student's progress at the end of the first year of study, and preparing and evaluating the Written Qualifying Examination. The Guidance Committee, with two additional faculty members, will subsequently constitute the student's doctoral committee.

**Major Fields or Subdisciplines.** From the three general content fields of the Department's instructional and research programs, eight areas of concentration have been identified:

1. Cardiorespiratory adaptations to exercise
2. Environmental factors influencing work capacity
3. Metabolic aspects of exercise
4. Neuromuscular adaptations to exercise
5. Biomechanics
6. Movement development
7. Movement performance and acquisition
8. Neutral control of movement
Each student will select one of the eight areas of concentration as a major and two areas as minors. These areas are expected to relate to the student’s proposed dissertation problem.

**Course Requirements.** Fourteen courses are specified for the doctoral degree, some of which may be satisfied by previous graduate work completed by the student. Selection of all courses must be approved by the student’s guidance committee and will be determined in part by the student’s selection of major and minor areas of concentration.

**Departmental courses.** A total of eight courses are required. Select three courses from: 210A, 210B, 210C, 230A, 240, 250, 260. Select five electives, including two seminars, from 211, 212, 221, 230B, 241, M243, 255, 258, 262, 281, 292, 294, 295. One Individual Studies (Kinesiology 596) may be applied as a non-seminar elective.

**Extracurricular courses.** A minimum of four courses or 16 units in a related field outside the Department is required. An approved list of courses in anatomy, biological chemistry, biology, biometrics, education, engineering, pharmacology, physiology, psychology, public health, and radiological sciences is maintained by the Department.

**Statistics courses.** Two advanced statistics courses are required of all doctoral candidates. A list of approved courses is maintained by the Department.

**Research competencies.** Each student must complete one foreign language competency test (scoring 500 or better on an Educational Testing Service Graduate Foreign Language Test), or demonstrate alternate competencies by completing courses in electronics, computer programming, or advanced statistics and research design.

**First-Year Doctoral Review.** After completion of three quarters of coursework, the student will compile a portfolio containing UCLA transcripts and other supporting materials, including at least two written papers which demonstrate knowledge in the major and minor areas of concentration and competency in scientific writing. After evaluation of the portfolio and an interview with the student, the Graduate Affairs Committee, in consultation with faculty, will recommend that the student: (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 Requirement.** Each candidate will serve in an instructional capacity for a minimum of two quarters. Teaching effectiveness will be assessed quarterly by the instructor in charge of the course and the students in the class. All teaching evaluations will become a permanent part of the student’s departmental record.

**Written Qualifying Examinations.** Each doctoral student must take three written qualifying examinations: one in a major area and one in each of two minor areas. Written qualifying examinations are scheduled by the Department on a regular basis and may be taken when the student and Guidance Committee consider appropriate. These examinations, administered once per academic quarter, are prepared and evaluated by faculty members from the Department in each area of concentration and 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 the doctoral program, a student must pass each examination at the Ph.D. level of achievement. The student who fails to do so may elect to: (1) complete the master’s degree, (2) discontinue graduate work in the Department, or (3) reschedule the area examinations at the discretion of the Guidance Committee. Permission to reschedule any area examination a third time will not be granted.

**Oral Qualifying Examination.** After successfully passing the Written Qualifying Examinations, an 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 after the student has completed two quarters of research work with the major professor. The oral examination will deal primarily with the student’s dissertation prospectus and the student’s ability to communicate scientific ideas orally. The examination will be scored “Pass” or “Fail.” If the student does not pass, the Oral Qualifying Examination may be rescheduled at the discretion of the doctoral committee.

**Dissertation.** The candidate must submit a report of an original research study which meets the approval of the doctoral committee. The committee will be comprised minimally of the student’s guidance committee and two additional professors, in accord with Graduate Division regulations.

**Final Oral Examination Following Completion of the Dissertation.** A Final Oral Examination is generally required. The members of the doctoral committee are to approve the dissertation have the option to waive this final examination, but it is expected that a Final Oral Examination will be required in all but exceptional cases. The major emphasis in this examination will be a defense of the dissertation. The oral defense will be rated “Pass” or “Fail.” If the student does not pass, the Final Oral Examination may be rescheduled at the discretion of the doctoral committee.

**Time to Degree.** Students entering the doctoral program with no deficiencies may be expected to complete the doctoral program within four years. Normative time-to-degree is formally specified as five years.

**Graduate Courses**


207. Respiratory Function During Exercise. (Formerly numbered 210A). Prerequisites: courses 124, 124L. Topics include the acute and chronic effects of exercise upon pulmonary gas exchange, gas transport across the body control, and limiting factors in aerobic function. Mr. Gardne

208. Neuromuscular and Metabolic Factors in Exercise. (Formerly numbered 210B). Prerequisites: course 118 or consent of instructor. Fundamental aspects of skeletal muscle contraction and metabolism, demands under various exercise and training conditions, including neural and endocrine mechanisms potentially involved in inducing specific training effects on factors of muscle, liver, kidney, gastrointestinal tract and brain. Mr. Edgerton

209. Environmental Factors in Exercise. (Formerly numbered 210C). Prerequisites: courses 122, 122L, 124, 124L, and 126, or consent of instructor. Environmental influences on performance and endurance, water diving as well as temperature factors as they affect work performance; adaptation to unusual environments. Mr. Egstrom

211. Advanced Exercise Cardiovascular Physiology. Three hours. Three credits. Prerequisites: Physiology 101. Attention is focused on cardiovascular adaptations to acute as well as adaptations associated with regular exercise training. Mr. Barnard

212. Advanced Cardiovascular Research Techniques. Lecture, one hour; laboratory, four hours. Prerequisites: course 211 and consent of instructor. One hour of lecture and four hours of laboratory per week to provide experience in working with experimental animals, biomechanical preparation, and an understanding of 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, 122L, and 124, or consent of instructor. Biomechanical, physiological, methodological and behavioral limitations to underwater activity. Mr. Egstrom

230A. Muscle Dynamics. Prerequisites: courses 122, 122L, 134A recommended. Integrated study of electrical and dynamic parameters of muscle-action to include topics in length-tension and force-velocity interactions and other electromyo- graphic and digital computer techniques. Mr. Grego

230B. Musculoskeletal Mechanics. Prerequisites: courses 122, 122L; Mathematics 3A, 3B. Mechanical principles of the musculoskeletal system including the use of cinematographic, force platform and digital computer techniques; topics include biomechanics, biodynamics, and empirical data modeling. Mr. Zernicke

1239. Advanced Kinesiotherapy. Prerequisites: course 137 or consent of instructor. Selected studies in therapeutic exercises. Mr. Morehouse

240. Neural Systems for Motor Control. Prerequisites: course 140 and Psychology 115 (or equivalent). Proprioception, the skeleton motor and fusimotor systems and their control by spinal reflexes and supraspinal centers including the cerebellum, basal ganglia and cerebral cortices. Mr. Smith

241. Theories of Voluntary Motor Control. Prerequisites: one hour of laboratory and discussion of neural control system for voluntary movement, including alpha-gamma linkage and closed versus open loops. Some attention will be given to neural models for motor learning and memory. Ms. Smith, Ms. Shapiro

2524. Brainstem Control of Rhythmical Movements. (Same as Anatomy M226; lecture is the same as Oral Biology 207, which is for four hours only). Lecture, 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 is on the interaction among brain stem reflexes, pattern generators and "voluntary" control centers. Mr. Goldberg, Mr. Chandler
496. Inservice Practicum for Teaching Assistants in Kinesiology (1/2 course). Prerequisite: consent of instructor. Supervised practicum in teaching laboratory courses in kinesiology; material preparation and use of teaching aids. Course required for all teaching assistants. Units do not apply toward degree objectives. Grading S/U basis only.

Individual Study and Research

501. Cooperative Program. (1/2 to 2 courses) Prerequisites: approval of U.C.L.A. Graduate Advisor and Graduate Dean. Approval of host campus instructor, Department Chair and Graduate Dean. The course is used to record the enrollment of courses taken under cooperative arrangements with surrounding institutions. To be graded S/U.

506. Individual Studies for Graduate Students. (1/2 to 2 courses) Prerequisites: course petition signed by the faculty sponsor, graduate advisor and Graduate Affairs Committee Chair shall be submitted prior to the second week of class. The course section will be identified by a two-letter code using the initials of the faculty sponsor (see department for code). A total of 8 units may be taken for credit; only one course (4 units) will apply toward formal graduate course requirements for graduate degrees in Kinesiology. Offered on a letter-graded basis only.

507. Preparation for Master's Comprehensive Examination or the Doctoral Qualifying Examination. (1/2 to 2 courses) To be arranged with the faculty member serving as the student's comprehensive examination chair or doctoral committee chair. The course section will be identified by a two-letter code using the faculty member's initials (see department for code). Course 507 may not be used to fulfill any course requirements for the Master's or Doctoral degree but may be repeated as necessary. Graded on a S/U basis.

508. Research for the Preparation of the Master's Thesis. (1/2 to 2 courses) To be arranged with the faculty member serving as the student's thesis committee chair. The course section will be identified by a two-letter code using the faculty member's initials (see department for code). Course 508 may not be used to fulfill any course requirements for the Master's Degree but may be repeated as necessary. Graded on a S/U basis.

509. Research for and/or Preparation of the Doctoral Dissertation. (1/2 to 2 courses) The course section will be identified by a two-letter code using the faculty member's initials (see department for code). Course 509 may not be used to fulfill any course requirements for the Ph.D. degree but may be repeated as necessary. Graded on a S/U basis.

Latin American Studies

(Interdepartmental)

(Office, 10347 Bunche Hall)

Shirley L. Arora, Ph.D., Professor of Spanish.
George Bartholomew, Ph.D., Professor of Biology.
Ruben Bentz, Ph.D., Professor of Spanish.
Charles F. Bennett, Ph.D., Professor of Geography.
R. Ringer, Ph.D., Professor of Anthropology.
Geo. D. Bynum, Ph.D., Professor of Anthropology.
C. R. Geoghegan, Ph.D., Professor of Anthropology.
William O. Bright, Ph.D., Professor of Linguistics and Anthropology.
Henry C. Barham, Ph.D., Professor of Geography.
E. Bradford Burke, Ph.D., Professor of History.
Leland S. Burns, Ph.D., Professor of Urban Planning.
Robert Burns, S.J., Ph.D., Professor of History.
Robert N. Burns, Ph.D., Professor of History.
Bertram Russell, Ph.D., Professor of Engineering.

Martín L. Cody, Ph.D., Professor of Biology.
Edwin L. Cooper, Ph.D., Professor of Anatomy.
Robert Detels, M.D., M.S., Professor of Public Health.
Christopher Donnan, Ph.D., Professor of Anthropology.
David K. Eltman, Ph.D., Professor of Finance.
Howard Freeman, Ph.D., Professor of Sociology.
John A. Gerhards, Ph.D., Professor of Planning.
Juan Gomez-Quiones, Ph.D., Professor of History.
Edward Gonzalez, Ph.D., Professor of Political Science.

James T. La Belle, Ph.D., Professor of Education.
James Lockhart, Ph.D., Professor of History.
Robert H. Mason, Ph.D., Professor of International Business.
Clement W. Meighan, Ph.D., Professor of Anthropology.

Frank C. Mittelbach, M.A., Professor of Management.

Alfred K. Neumann, M.D., Professor of Public Health in Residence.

Park S. Nobil, Ph.D., Professor of Biology.
Henry B. Nicholson, Ph.D., Professor of Anthropology.
Russell R. O'Neil, Ph.D., Professor of Engineering.
Antony R. Orme, Ph.D., Professor of Geography.
Carlos P. Otero, Ph.D., Professor of Spanish and Romance Linguistics.

Joseph Ortega, Ph.D., Professor of Spanish.
Amado M. Padilla, Ph.D., Professor of Psychology.
Stanley L. Robe, Ph.D., Professor of Spanish.

Milton I. Roemer, M.D., M.P.H., Professor of Public Health.

Jonathan D. Sauer, Ph.D., Professor of Geography.
C. A. Schroeder, Ph.D., Professor of Botany.
Carol Scottorn, M.A., Professor of Dance.
Allegre Snyder, M.A., Professor of Dance.
Edward W. Soja, Ph.D., Professor of Planning.

David Stea, Ph.D., Professor of Architecture.

Urban Design and Urban Planning.

Robert M. Stevenson, Ph.D., Professor of Music.

Richard A. Tewey, Ph.D., Professor of Geography.

Hartmut Walter, Ph.D., Professor of Geography.

Johannes Wilbert, Ph.D., Professor of Anthropology.

James W. Wilkie, Ph.D., Professor of History.


Maurice Zeitlin, Ph.D., Professor of Sociology.
Mildred E. Mathias, Ph.D., Emeritus Professor of Botany.

Ihara del Pozo, Ph.D., Associate Professor of Management.

Theodore Andersen, Ph.D., Associate Professor of Business, Economics and Finance.

Alfonso F. Cardenas, Ph.D., Associate Professor of Business Administration.

Leo Estrada, Ph.D., Associate Professor of Planning.

Pierre-Michel Fontaine, Ph.D., Associate Professor of Political Science.

John Hawkins, Ph.D., Associate Professor of Education.

Henry A. Hespenthal, Ph.D., Associate Professor of Biology.

Allen Johnson, Ph.D., Associate Professor of Anthropology.

Marvin Kano, M.D., Associate Professor of Psychiatry.

Eddy Kaufman, B.D., Visiting Associate Professor of Political Science.

Cecilia Klein, Ph.D., Associate Professor of Art.

David Kurzle, Ph.D., Associate Professor of Art.

David E. Lopez, Ph.D., Associate Professor of Sociology.

Attilio Munro, Ph.D., Associate Professor of Linguistics.

Alfred E. Osborne, Ph.D., Associate Professor of Management.

David O'Driscoll, Ph.D., Associate Professor of Education and Sociology.

Dwight E. Read, Ph.D., Associate Professor of Anthropology.

Richard E. Stevens, Ph.D., Associate Professor of Spanish (Chair of the Program).

Hans Schollhammer, M.B.A., D.B.A., Associate Professor of Management.
Students are admitted each quarter. Application deadlines are:
- Winter Quarter — November 1
- Spring Quarter — February 1
- Fall Quarter — July 1

Fellowship applications for the academic year are due on January 31 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.

Advising. Academic Programs Office, Latin American Studies, 10347 Bunche Hall, UCLA, Los Angeles, CA 90024. Tel (213) 206-6571.

Academic advising is supervised by the Coordinator of Academic Planning and Student Programs who serves under the direction of the Chair of the Committee to Administer the Interdepartmental Program in Latin American Studies (M.A.). In addition to the Coordinator, who is a teaching member of the Latin American Center, the Office of Academic Programs is staffed by a full-time student affairs coordinator who assists in program counseling, preparation of student petitions, and processing of student records.

Major Fields or Subdisciplines. Students are expected to develop and integrate three fields in Latin American Studies, to be selected from among 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 chosen fields must be a social science.

Foreign Language Requirements. 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. Since these courses do not count toward the M.A. degree, students are encouraged to pass these proficiency levels by examination. A major Indian language of Latin America may be substituted for either Spanish or Portuguese. Students must fulfill the foreign language requirements by examination or petition for a waiver of the examination if they have gained competency in another manner (i.e., native speaker, upper division coursework, Peace Corps Service).

Course Requirements. Two plans are available. For the Comprehensive Examination Plan, a minimum of nine courses are 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 falling in each of the three fields.

For the Thesis Plan (which requires prior approval), a minimum of 10 courses are required, to be distributed 4-3-3 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 Latin American Studies Courses. Other courses must be petitioned in advance.

Language courses, in contrast with linguistics and literature courses, cannot be applied to the M.A. degree.

Courses numbered in the 300-400 level series are not applicable to the M.A. degree.

Graduate courses may be repeated unless they are of the lecture type.

Comprehensive Examination Plan and Thesis Plan.

Comprehensive Examination Plan. In addition to course requirements, students completing the M.A. degree under the Comprehensive Examination Plan must prepare a research paper on an approved topic that integrates two of the three fields in which coursework has been undertaken.

Prior to their final quarter of coursework, students will choose a 3-member faculty committee responsible for supervising preparation of the research paper. The committee will consist of one professor from each of the student’s two preferred disciplines, one of whom will chair the committee, and a third professor from the student’s third discipline who will serve as a field observer, or outside reader. Committee members must approve the student’s topic in advance and must receive a draft of the research paper at least five weeks prior to the end of the quarter in which the student plans to graduate. After reviewing the draft with the student, committee members will make recommendations for revision and indicate whether the student should proceed to prepare a final draft. The committee members will evaluate the final draft and, if the candidate’s work meets the University standards of scholarship, will recommend the award of the M.A. degree. A copy of the research paper is filed in the Academic Programs Office of the Latin American Center.

Thesis Plan. Although students are generally expected to follow the M.A. Comprehensive Examination Plan, in special cases they may be allowed to follow the M.A. Thesis Plan. The Thesis Plan is especially justified when it involves fieldwork or when it is developed in relation to the Latin American Studies Seminar 250 AB.

Students wishing to follow the Thesis Plan must develop a carefully prepared proposal to be approved by the Academic Coordinator in consultation with the student’s faculty committee chair. To be approved, the proposal must provide sound justification for the Thesis Plan, including provisions for funding any planned field research.

Once the Thesis Plan option has been approved, the student will choose a 3-member faculty thesis committee consisting of one professor from each of the student's three disci-
plines, one of whom has already agreed to serve as chair. The thesis committee will work closely with the student in the development, writing, and revision of the thesis and will be responsible for reading, evaluating, and approving the drafts and final version of the student’s thesis, ensuring thereby that it meets the University standards of scholarship. Once the final version is approved, the thesis committee recommends the award of the M.A. degree. The thesis is filed with the Graduate Division for deposit in the University Research Library.

Advancement to Candidacy and Award of Degree. By the end of the quarter prior to that of graduation, the student must file for advancement to candidacy with the Graduate Division. Two positive votes among the 3-member faculty examination committee constitutes a pass on the results. The committee will evaluate the paper in the following terms: Honor Pass (a unanimous vote), Pass, and Fail (majority vote). No reexaminations are permitted.

Time to Degree. A full-time student with no deficiencies upon admission can expect to complete all requirements for the M.A. degree within four academic quarters. Students who undertake field research in conjunction with the thesis plan may take up to seven academic quarters.

500 Series Courses. No more than 8 quarter units of 500 series courses may apply toward the total course requirements for the M.A. degree. No more than 4 quarter units of 500 series courses may be applied toward the minimum five graduate level courses for the M.A. degree.

<table>
<thead>
<tr>
<th>Course</th>
<th>Unit Value</th>
<th>Type of Grading</th>
<th>Number of Times May Be Repeated</th>
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<tbody>
<tr>
<td>596</td>
<td>2-8</td>
<td>S/U</td>
<td>No limit</td>
</tr>
<tr>
<td>597</td>
<td>2-8</td>
<td>S/U</td>
<td>Normally only one</td>
</tr>
<tr>
<td>598</td>
<td>2-8</td>
<td>S/U</td>
<td>Normally only one</td>
</tr>
</tbody>
</table>

Disqualification. The specific conditions which may lead to termination are: 1) scholarship (failure to maintain a 3.0 average beyond a time determined to be satisfactory by the M.A. committee), or 2) failure to make normal progress toward the degree (e.g., completion of language requirements, courses within the selected fields of concentration, and research for the M.A. project). Recommendations for termination are made by the M.A. committee, acting in consultation with the Academic Coordinator and, when appropriate, the student’s M.A. committee. If deemed necessary, the student will then be informed that he/she is to be dropped from the program.

Appeals. A student may appeal termination by submitting a letter to the chair of the M.A. committee stating the reasons why he/she should remain in the program, which the chair will submit to the entire M.A. committee for final consideration.

Other Relevant Information

Articulated and Concurrent Degree Programs. Several options are available to combine the M.A. in Latin American Studies with a professional degree. Upon acceptance by both the Latin American Studies program and the respective professional school, students may pursue both degrees simultaneously. These double degree programs permit students to complete their work in less time than would be required if the degrees were pursued separately. Professionalization options are currently available with the Schools of Education, Engineering, Library and Information Science, Management, Public Health, and Urban Planning.

Individual Doctoral Programs. Students may design an individual doctoral program in Latin American Studies. An explicit proposal must be submitted to the student’s M.A. committee for analysis and endorsement, and then be submitted to the Graduate Council for approval.

Certificate of Resident Study for Foreign Students. This certificate may be issued to foreign students who do not seek the M.A. degree but (a) complete at least nine courses in full-time resident study with a grade point average of at least 3.00; (b) conduct satisfactorily a program of organized studies; (c) have a student visa requiring return to home country upon completion of studies in the United States.

Graduate Courses

M200. Latin American Research Resources. (Same as History M265 and Library and Information Science M225.) The course will acquaint students with general and specialized materials in fields concerned with Latin American Studies. Library research techniques will provide the experience and competency required for future bibliographic and research sophistication as the basis for enhanced research result.

M201. Statistical Resources for Latin American Research. The course will acquaint students with the contemporary statistical materials important for research in Latin American Studies. Discussion will focus 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.

M232. Disease Problems of Socio-Economic and Political Impact in Latin America. (Same as Public Health M232.) Prerequisite: consent of instructor. A graduate course for students with knowledge of the geography and social and political systems of the diverse nationalities which constitute Latin America. The focus will be on important disease problems in respect to their social, economic and political impact on Latin American countries with only a minimum of medical and technical details necessary to understand the nature of the disease as it affects individuals and populations.

M250A. Indians of South America. (Same as Anthropology M272.) Prerequisite: consent of instructor. Survey of the literature and research topics related to Indian cultures of South America. This course may be repeated for credit.

M250B. Interdisciplinary Seminar in Latin American Studies. Prerequisites: consent of instructor. Problem-oriented on critical areas stressed in the University's cooperative programs in Latin America.

250C. Interdisciplinary Topics in Latin American Studies. Prerequisite: consent of instructor. A seminar devoted to selected topics of an interdisciplinary nature. Normally, a reading knowledge of the Spanish or Portuguese language is essential.

Individual Study and Research

501. Cooperative Program. (% to 2 courses) Prerequisites: approval of UCLA Graduate Advisor and Graduate Dean. Approval of host campus instructor, Department Chairman, and Graduate Dean. The course is recorded on the enrollment of UCLA student. No courses taken under cooperative arrangements with neighboring institutions. To be graded S/U.

596. Directed Individual Study or Research. The course section will be identified by a two-letter code using the initials of the faculty supervisor (see department for code). A total of 8 units may be taken for credit; only one course (4 units) will apply toward the minimum graduate course requirement for graduate degrees in Kinesiology. Offered on a letter-graded basis only.

597. Preparation for the Comprehensive Examination for the Master's Degree. This course is ordinarily taken only during the quarter in which the student is being examined. A grade of Satisfactory (S) or Unsatisfactory (U) will be assigned by the Graduate Council on the basis of the student’s performance.

598. Research for and Preparation of the Master's Thesis. A grade of Satisfactory (S) or Unsatisfactory (U) will be assigned by the professor supervising the master's thesis. Only one course may apply toward the minimum course requirement for the degree.

Latin American Social Sciences Courses

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.

132. Technology and Environment.


150. Comparative Sociology.


163. Women in Culture and Society.

166. Comparative Minority Relations.

173. Urban Anthropology.

173P. Cultures of Middle America.

173Q. Latin American Communities.

174P. Ethnography of South American Indians.

212P. Selected Topics in Hunter-Gatherer Societies.

214. Selected Topics in Prehistoric Civilizations of the New World.

216. Dating Techniques in Environmental Sciences and Archaeology (same as Geography M278).

218. Historical Reconstruction and Archaeology.

230P. Ethnology.

239P. Urban Ethnography.

239P. 10 Selected Topics in Field Training in Ethnography.

239Q. Analysis of Field Data.

240. Seminar in Language and Culture.

243Q. Afro-American Sociolinguistics: Black English.

247A. Ethnographic Film (same as Theatre Arts M209C).

253. Economic Anthropology.

262P. Urban Anthropology.

261. Comparative Minority Relations.

267B. Seminar in Ethnographic Film (same as Theatre Arts M209C).

272. Indians of South America.

279P. Research Design and Cultural Anthropology.

Archaeology 200. Archaeology Colloquium.

259. Field Work in Archaeology.

111. Theories of Economic Growth and Development.
*120. Introduction to Urban and Regional Economics.
*190. International Economics.
*192. International Finance.
211. Economic Development.
212. Applied Topics in Economic Development.
213. Selected Problems of Underdeveloped Areas.
*221-222. Urban and Regional Economic Analysis (I and II).
*293. International Economics: Selected Topics.

Folklore M149. Folk Literature of the Hispanic World. (same as Spanish M149).
*201A-201B. Folklore Collecting and Field Research.
M249. Hispanic Folk Literature (same as Spanish M249 and Portuguese M248).
M266B. Studies in Hispanic Folk Literature: Narrative and Drama (same as Spanish M266B).
M266C. Studies in Hispanic Folk Literature: Ballad, Poetry, and Speech (same as Spanish M266C).

181. Middle America.
182B. Brazil.
*251. Seminar: Urban Geography.
*M278. Dating Techniques in Environmental Sciences and Archaeology (same as Anthropology M216).
281. Middle America.
282. South America.
292. Advanced Regional Geography: Selected Regions.

History 8A. Latin America: Reform and Revolution.
8B. Latin American Social History.
158A-158B. History of the Chicano People.
165A-165B. Colonial Latin America.
168. Latin America in the 19th Century.
168. History of Latin American International Relations.
169. Latin American Elitelore.
170. Latin American Cultural History.
171. The Mexican Revolution Since 1910.
173. Modern Brazil.
197. Undergraduate Seminars.
200I. Advanced Historiography: Latin America.
201I. Topics in History: Latin America.
266A-266B. Seminar in Colonial Latin American History.
267A-267B. Seminar in Latin American History: 19th and 20th Centuries.
268A-268B. Seminar in Recent Latin American History.

Latin American Studies 197. Interdisciplinary Topics in Latin American Studies.
M200. Research Resources for Latin American Studies (Same as History M200).
250A-B. Enculturated in Latin America.
250C. Interdisciplinary Topics.
Philosophy *190. Third World Political Thought.
131. Latin American International Relations.
*139A-139Z. Special Studies in Latin America.

*146. Political Behavior Analysis.
*149A-149Z. Special Studies in Politics.
*167. Ideology and Development in World Politics.
*183. Administration of International Agencies and Programs.
*188A. Comparative Urban Administration.
*188B. Comparative Urban Government.
*189. Special Studies in Public Administration.
*191. Urban and Regional Planning and Development.
197B. Seminar in International Relations.
*218A. Public Administration and Democratic Government.
*224A. Politics and Economy.
*M229. Urban Government (same as Architecture M205C.)
*230. Comparative Development Administration.
*231D. International Relations Theory.
*235. Selected Topics in Comparative Government.
250A. Seminar in Regional and Area Political Studies: Latin American Studies.
*253. Seminar in International Relations.
*256A-256B. Seminar in Comparative Government.
Sociology *120. Social Change.
*123. Social Stratification.
*126. Social Demography.
131. Latin American Societies.
140. Political Sociology.
*235. Social Structure and Social Movements.
*259. Social Structure and Economic Change: Historical and Comparative Perspectives.
*263. Social Stratification.

Language Courses

Spanish
111. Elementary Spanish.
111G. Reading Course for Graduate Students (no credit).
211. Elementary Spanish.
2G. Reading Course for Graduate Students (no credit).
3. Elementary Spanish.
4. Intermediate Spanish.
5. Intermediate Spanish.
25. Advanced Spanish.
M44. Civilization of Spanish America and Brazil (same as Portuguese M44).
100. Phonology and Pronunciation.
*105. Intermediate Composition.
Portuguese
111. Elementary Portuguese.
2. Elementary Portuguese.
M44. Civilization of Spanish America and Brazil (same as Spanish M44).
100. Phonology and Pronunciation.
*101A. Advanced Reading and Conversation.
*101B. Advanced Composition and Style.

Indigenous Languages of Latin America
111B-118C. Elementary Quechua.

Linguistics Courses

Anthropology 240. Seminar in Language and Culture.

Linguistics
*100. Introduction to Linguistics.
*103. Introduction to General Phonetics.
120A. Linguistic Analysis: Phonology.
*120B. Linguistic Analysis: Grammar.
*165A. Linguistic Theory: Phonology.
*165B. Linguistic Theory: Grammar.
*210A. Field Methods I.
*210B. Field Methods II.
220. Linguistic Areas.
225. Linguistic Structures.

Spanish
*103. Syntax.
M118. History of the Spanish and Portuguese Languages (same as Portuguese M118).
M203A-203B. Development of the Spanish and Portuguese Languages (same as Portuguese M203A-203B).
*204A-204B. Transformational Grammar.
206. Linguistics.
*209. Dialectology.
*256A. Studies in Linguistics.
*256B. Studies in Dialectology.

Portuguese
*103. Syntax.
*M118. History of the Portuguese and Spanish Languages (same as Spanish M118).
*M203A-M203B. Development of the Portuguese and Spanish Languages (same as Spanish M203A-M203B).

Literature Courses

Spanish 121A-121B. Survey of Spanish American Literature.
137. The Literature of Colonial Spanish America.
139. 19th Century Spanish American Literature.
141. Mexican Literature.
142A. Spanish American Literature in the 20th Century: Poetry and Drama.
142B. Spanish American Literature in the 20th Century: Fiction and the Essay.
M149. Folk Literature of the Hispanic World (same as Folklore M149).
151. Folk Song in Spain and Spanish America.
*1160B. Hispanic Literature in Translation: Spanish America and Brazil.
M200. Bibliography (same as Portuguese M200).
237. Chronicles of the Americas.
240. The Modernist Movement.
244. Contemporary Spanish American Novel and Short Story.
280A. Studies in Contemporary Spanish American Literature: Modernist Poetry.
280B. Studies in Contemporary Spanish American Literature: Post-Modernist Poetry.
M266B. Studies in Hispanic Folk Literature: Narrative and Drama (same as Folklore M266B).
M286C. Studies in Hispanic Folk Literature: Ballad, Poetry and Speech (same as Folklore M286C).
Portuguese 121A-121B. Survey of Brazilian Literature.
121. Colonial Brazilian Literature.
122. Romanticism in Brazil.
123. Naturalism, Realism and Parnasianism in Brazil.
127. Contemporary Brazilian Literature.
C243A. Colonial Literature.
C243B-C243C. Romanticism in Brazil.
M249. Hispanic Folk Literature (same as Folklore M249 and Spanish M249).
253A. Special Studies in Brazilian Literature: Prose Fiction.
253B. Special Studies in Brazilian Literature: The Poetry.
253C. Special Studies in Brazilian Literature: The Theater.

Fine Arts Courses
Art
117A. Advanced Studies in Pre-Columbian Art: Mexico.
117B. Advanced Studies in Pre-Columbian Art: Central America.
117C. Advanced Studies in Pre-Columbian Art: The Andes.
118B. The Arts of Pre-Columbian America.
220. The Arts of Africa, Oceania and Pre-Columbian America.

Dance **117I. Dance of Mexico (½ course).
146. Dance in Latin America.
171J. Dance of Mexico (½ course).
**226A-226E. Dance Expressions in Selected Cultures.
Music
**181K. Music and Dance of Mexico (½ course).
131A-131B. Music of Hispanic America.
157. Music of Brazil.
190A-190B. Prosimian in Ethnomusicology.
**280. Seminar in Ethnomusicology.
Theater Arts
106C. History of African, Asian and Latin American Film.
**112. Film and Social Change.
**290C, Seminar in Ethnographic Film (same as Anthropology M247A).
**298A-298B. Special Studies in Theater Arts.

Professional Courses

Architecture and Urban Planning
232. Spatial Planning: Regional and International Development.
234. Seminar in Spatial Development Policy.
235A-235B. Regional Approaches to National Development.
236A-236B. Urban and Regional Economic Development.
239. Special Topics in Urban-Regional 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. Education and National Development.
*204D. Minority Education in Cross-Cultural Perspective.
*204E. International Efforts in Education.
204F. Nonformal Education in Comparative Perspective.

204G. Planning Educational Language Policy Internationally.
*207. Politics and Education.
*253A. Seminar: Current Problems in Comparative Education.
253D. Seminar: Latin American Education.
*253F. Seminar: Education in Revolutionary Societies.

Law
*270. International Law.
275. Law and Development in Latin America.
340. Individual Research.

Library and Information Science
*207. Seminar on International and Comparative Librarianship.
*223. Literature of the Social Sciences.
224. Literature of the Humanities and Fine Arts.

Management
205A. International Business Economics.
205B. Comparative Market Structure and Competition.
205C. Business Forecasting for Foreign Economics.
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.
298S. Special Topics in International and Comparative Management.

Public Health
M115. Disease Problems of Socio-Economic and Political Impact in Latin America (same as Latin American Studies M155).
*161. Nutrition and Health (½ course).
174E. Health, Disease, and Health Services in Latin America.
*214. Infectious and Tropical Disease Epidemiology.
*216A. Ecology of Exotic Diseases.
*220. Seminar in Epidemiology.
*240. Health Care Issues in International Perspective.
*260E-260G. Advanced Nutrition. (½ course each)
*262. Seminar in Nutrition (½ course).
*271. Medical Anthropology.
*272. Seminar on Current Issues in Maternal and Child Health (½ course).
*405. Demographic Materials and Methods.
*470A. International Health Agencies and Programs.
*470B. Issues in International Health Administration.
*596. Directed Individual Study or Research.

(Office, 1224 Law Building)

Benjamin Aaron, A.B., LL.B., Professor of Law
Richard L. Abel, A.B., LL.B., Ph.D., Professor of Law
Norman Abrams, A.B., J.D., Professor of Law.

Reginald H. Alleyne, Jr. B.S., LL.B., LL.M., Professor of Law.
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Kenneth W. Graham, Jr., B.A., J.D., Professor of Law.
Donald G. Hageman, B.S., LL.B., LL.M., Professor of Law.
Harold W. Horowitz, A.B., LL.B., LL.M., J.S.D., Professor of Law.
Edgar A. Jones, Jr., A.B., LL.B., Professor of Law.
Robert L. Jordan, A.B., LL.B., Professor of Law.
Kenneth L. Karst, A.B., LL.B., Professor of Law.
William A. Klein, A.B., LL.B., Professor of Law.
James E. Krier, B.S., J.D., Professor of Law.
Leon Lethwin, Ph.B., LL.B., LL.M., Professor of Law.
Wayne B. Liebera, B.A., J.D., Professor of Law.
Henry W. McGee, Jr., B.S., J.D., LL.M., Professor of Law.
William M. McGovern, Jr., A.B., LL.B., Professor of Law.
David Mellinkoff, A.B., LL.B., Professor of Law.
Herbert Morris, A.B., LL.B., D.Phil. (Oxon.), Professor of Law and Philosophy.
Melville B. Nimmer, A.B., LL.B., Professor of Law.
Susan Westerberg Prager, A.B., M.A., J.D., Associate Dean and Professor of Law.
Monroe E. Price, B.A., LL.B., Professor of Law.
George L. Priest, B.A., J.D., Professor of Law.
Joel Rabinovitz, A.B., LL.B., Professor of Law.
Arthur I. Rosett, B.A., LL.B., Professor of Law.
Gary T. Schwartz, B.A., J.D., Professor of Law.
Murray L. Schwartz, B.S., LL.B., LL.D., Professor of Law.
Stephen C. Yeazell, B.A., M.A., J.D., Professor of Law.
Richard C. Maxwell, B.S.L., LL.B., Emeritus Connell Professor of Law.
Rolf M. Perkins, A.B., J.D., Emeritus Connell Professor of Law.
Ralph S. Rohe, B.S., LL.M., Emeritus Connell Professor of Law.
Harold E. Verrall, A.B., M.A., LL.B., J.S.D., Emeritus Professor of Law.
Kenneth H. York, A.B., LL.B., Emeritus Professor of Law.

Gerald Lopez, B.A., J.D., Acting Professor of Law.
Daniel H. Lowenstein, A.B., LL.B., Acting Professor of Law.

Carol J. Menkel-Meadow, A.B., J.D., Acting Professor of Law.

Paul B. Bergman, B.A., J.D., Senior Lecturer in Law.
Charles M. Firestone, B.A., J.D., Adjunct Professor of Law.
Rowan K. Klein, B.A., J.D., Adjunct Professor of Law.
Michael Rappaport, B.S., J.D., Lecturer in Law.

The School of Law offers a J.D. degree. The School is accredited by the California Committee of Bar Examiners, 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 become applicants 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. In addition to the courses in the regular Law School curriculum, students may take two courses for credit in other disciplines in the University. Concurrent degree programs are available for qualified law students with the Graduate Schools of Management and of Architecture and Urban Planning.

The Law School program also 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 Law School which seek to analyze and expand upon the agency experience. The School also offers an extern program which gives the 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, D.C., Alaska, Hawaii and on Indian reservations.

Admission

Students beginning their professional work are admitted only in the fall. Applicants must have received the baccalaureate degree from a university or college of approved standing prior to the time at which they begin their work in the Law School. Applicants are also required to take the Law School Admission Test. The Admissions committee considers grades and test scores, and, in appropriate cases, such additional factors as racial/ethnic background; ability in languages other than English; work experience or career achievement; previous positions of leadership or other special achievements; prior community or public service; unusual life experiences; physical handicap or other disadvantage overcome; career goals; economic disadvantages; and any other characteristic which may indicate that the applicant will contribute to the educational and other benefits of a diversified student body.

Applicants interested in further information about the academic programs offered by the School of Law may obtain the Announcement of the School of Law by contacting the Admissions Office, School of Law (213) 825-2080.

Library and Information Science

(Office, 120 Powell Library Building)

Harold Borko, Ph.D., Professor of Library and Information Science.
Richard K. Gardner, Ph.D., Professor of Library and Information Science.
Robert M. Hayes, Ph.D., Professor of Library and Information Science.
Russell Shank, D.L.S., Professor of Library and Information Science.
Robert Vesper, M.A., LL.D., Professor of Library and Information Science.
Peg Ackerman, B.A., B.S.L.S., Emeritus Professor of Library and Information Science.
Andrew H. Horn, Ph.D., Emeritus Professor of Library and Information Science.
Seymour Lubetzyk, M.A., LL.D., Emeritus Professor of Library and Information Science.
Raymond F. Wood, Ph.D., Emeritus Professor of Library and Information Science.
Marcia J. Bates, Ph.D., Associate Professor in Library and Information Science.
Elaine Svenonius, Ph.D., Associate Professor of Library and Information Science.
Diana M. Thomas, Ph.D., Associate Professor of Library and Information Science.
Dorothy J. Anderson, Ph.D., Assistant Professor of Library and Information Science.
William H. Fisher, Ph.D., Assistant Professor of Library and Information Science.
Roger C. Palmer, Ph.D., Assistant Professor of Library and Information Science.
John V. Richardson, Ph.D., Assistant Professor of Library and Information Science.
Elizabeth R. Baughman, M.L.S., M.A., Senior Lecturer in Library and Information Science.
Elizabeth R. Eisenbach, M.L.S., Senior Lecturer in Library and Information Science.
Betty Rosenberg, M.A., Emeritus Senior Lecturer in Library and Information Science.

Several members of the Library Profession of the community and the University serve as part-time faculty in the School with responsibility for some of the specialized courses.
Joseph Becker, the L.B., Adjunct Professor of Library and Information Science.
Patricia Chittenden, M.L.S., Visiting Lecturer in Library and Information Science.
Deborah Costa, M.L.S., Adjunct Lecturer in Library and Information Science.
Louise Darling, M.A., Adjunct Professor of Library and Information Science.
Thomas Fry, M.L.S., Adjunct Lecturer in Library and Information Science.
Frank Houdek, J.D., M.L.S., Visiting Lecturer in Library and Information Science.
Teressa Portilla, M.L.S., Adjunct Lecturer in Library and Information Science.
Mary I. Punucker, M.L.S., Visiting Lecturer in Library and Information Science.
William J. Speed, M.A., Visiting Lecturer in Library and Information Science.
Thomas Dan Tonkery, M.S., Adjunct Lecturer in Library and Information Science.
Marie Waters, M.L.S., Adjunct Lecturer in Library and Information Science.
Gloria Werner, M.L., Adjunct Lecturer in Library and Information Science.
Binnie Wilkin, M.S., Visiting Lecturer in Library and Information Science.
Joy E. Williams, Ph.D., Adjunct Lecturer in Library and Information Science.

Representatives of Other Departments on the Faculty of the Graduate School of Library and Information Science.
Arthur M. Cohen, Ph.D., Professor of Education.
Jerome Cushman, A.B., B.S.L.S., Senior Lecturer in English.
Robert Starr Kinsman, Ph.D., Professor of English.
Michel A. Melkanoff, Ph.D., Professor of Engineering.
Richard H. Rouse, Ph.D., Professor of History.

Information and Application Materials

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. Specific inquiries may be directed to the Graduate Adviser, Mrs. Constance Nyhan, or the Assistant Graduate Adviser, Mrs. Terry Jacobsen.

The Master of Library Science Degree (M.L.S.)

Admission Requirements. Applicants must comply with Graduate Division requirements (i.e., an acceptable bachelor's degree, a 3.0 grade point average for the last two years of undergraduate and any postbaccalaureate study) and application procedures. In addition, the School requires:

(1) A statement of purpose.
(2) A curriculum vitae on the form provided in the School's Announcement.
(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. Applicants must have passed the General Aptitude Test of the Examination with a minimum combined score (Verbal and Quantitative) of 900. The Examination must have been completed within five years prior to application for admission.
(5) Three letters of recommendation.
(6) Satisfaction of the following entrance requirements:
   (a) Reading knowledge of one or two foreign languages. In the case of one foreign language, the requirement may
be met by completing five quarters or four semesters of study of the language with minimum grades of C, or by passing the Graduate School Foreign Language Test (GSFLT) with a minimum score of 500. In the case of two foreign languages, the requirement may be met by completing either three quarters or two semesters of study of each language with minimum grades of C. The School will accept the passing of a foreign language test administered by another UCLA department and satisfying its degree requirements, provided the test was taken prior to admission to the School or is taken as part of a coordinated degree program involving the School and that department.

(b) Statistics. The requirement is satisfied by the completion of a college level course with a minimum grade of C.

(c) Computer programming. The requirement is met either by completing a college level course with a minimum grade of C, or by passing a proficiency examination administered by the School.

The Dean may temporarily waive one or more of these requirements, subject to completion of all of them by the end of the third quarter of residence, but applicants seeking such a delay should realize that the School's regular course requirements are such that completion of these entrance requirements represent a serious overload for the new student.

Applicants not meeting the grade point average of 3.0 may be admitted in exceptional cases if their GRE scores, letters of recommendation, or other factors indicate unusual promise. While work experience is not a requirement for admission, consideration will be given to such experience in reviewing the total application. Admission is for Fall Quarter only.

Advising. Upon being accepted into the School, each student is assigned a faculty member for initial counseling and direction. Normally, the student retains this faculty member as an interim counselor for a year or less, until such time as a regular faculty adviser is selected, based on the student's interest and specialization. Once chosen, the faculty adviser is in charge of the student's specialization paper, and gives specific academic advice in matters pertaining to the student's specialization, independent study, and related matters.

Course Requirements. The following are the established requirements for graduation from the School's M.L.S. program:

Coursework. The School requires coursework to provide evidence both of basic professional competencies and of knowledge in a field of specialized competence. As a result, the School normally requires each student to enroll in three courses per quarter in order to complete the program in six quarters. Part-time enrollment is permitted if it is endorsed by the employer of a student working in a library or information center.

Basic Professional Competence. The requirement is met by completion of nine specified courses (400, 402, 404, 410, 411, 420, 421, 430, 441). In certain cases, prior coursework or work experience may be sufficient to justify replacing a course by a validation exam, administered by the School, but this is not encouraged and should be used only for the purpose of increasing the extent to which the student pursues a specialization.

Only in unusual cases will librarianship coursework taken elsewhere satisfy the basic competency requirements. Persons with considerable library coursework taken elsewhere are advised to consider other means for completion of their degree objectives.

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 adviser. The requirement is ordinarily met by the completion of nine additional courses in the School and/or in other departments.

During the second year, the student may apply for an internship, one of three quarters, either on-campus or off-campus at a library or information center. The internship is a regularly scheduled course, and may be counted as part of the 18 required courses. The amount of coursework required will depend upon the relevant experience and graduate study completed by the student prior to admission to the School. Reducing the number of courses to less than nine, however, requires that the student, jointly with the faculty adviser, identify exactly what courses from prior academic work are applicable to the chosen area of specialization. A petition must then be submitted to the faculty for approval.

Comprehensive Examination Plan. A written Comprehensive Examination, which is offered fall, winter, and spring quarters, is required. The Comprehensive Examination Committee is appointed by the Dean with the approval of the Executive Committee of the Faculty. The examination is designed to demonstrate the student's 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.

The student is expected to demonstrate an understanding of the interrelated nature of all of the competencies when confronted with a major issue of concern in the field.

Specialization paper. In order to be eligible to take the Comprehensive Examination, the student must complete a Specialization Paper, which is an in-depth examination of a problem in the student's chosen area of specialization. It should reflect the student's competence by showing an understanding of the place and significance of a specific problem in relationship to the entire field of specialization. It should represent new work and/or analysis in the problem area, but it does not have to represent an original approach. It ought to be well enough written and on a topic of enough interest to be considered for publication or distribution.

Time to Degree. The M.L.S. is a 2-year program, consisting normally of three 4-credit courses each quarter during six consecutive academic quarters, for a total of 18 courses. Those students who are permitted to enroll part-time will necessarily take a longer time to obtain the degree.

500 Series Course Limitations.

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Unit Value</th>
<th>Type of Grading</th>
</tr>
</thead>
<tbody>
<tr>
<td>501</td>
<td>2-8</td>
<td>S/U</td>
</tr>
<tr>
<td>596</td>
<td>4</td>
<td>S/U</td>
</tr>
</tbody>
</table>

No more than 8 quarter units may apply to the total course requirement, with not more than 4 units counting toward the minimum requirements of the Graduate Division.

In order to enroll in any S/U graded course, including 500 series courses, the student must be in good academic standing.

Disqualification and Appeal of Disqualification. Termination of graduate status may be recommended if the student fails to maintain substantial progress toward completion of the degree; or if the cumulative grade point average falls below a 3.0; or if the work in any two consecutive quarters falls below a 3.0 average; or if failure on the Comprehensive Examination on two successive tests. Such a recommendation is made by the Executive Committee of the Faculty based on the advice of the student's faculty adviser and the Dean. The Dean will notify the student in writing of the decision together with the reasons for it. Appeals of such actions may be made by formal petition to the faculty by the student.

Cooperative Degree Program. The GSLIS and other schools and departments of the University sponsor programs whereby students may obtain two degrees in less time than would be required if the degrees were pursued separately. To participate in a cooperative program, the applicant must make application to and be admitted by both GSLIS and the other UCLA school or department. Fulfilling the combined set of program requirements normally takes three years.

Cooperative program options include:


2. M.L.S./M.B.A. — a concurrent degree program offered by GSLIS and the Graduate School of Management.

The Certificate of Specialization Program

The Certificate of Specialization Program meets the need for specialized training in various areas of librarianship, information science, and bibliography, as well as research competence, especially in specialized fields.

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 status by the UCLA Graduate Division.

A student's course program may begin in any quarter of the academic year. If a student is admitted for a preliminary quarter to complete prerequisite courses, the preliminary quarter will not be counted in the minimum residence requirements.

Meeting the specified requirements for a field of specialization does not automatically assure admission to the program. Candidates are selected from qualified applicants based on relevance of education and/or experience and the suitability of the available course of instruction to the objectives of the applicant.

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 specialization 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. A research paper, bibliographical study, or literature survey appropriate for publication (in a professional or scholarly journal or as a separate paper) must be completed in the final quarter of study, in connection with enrollment in LS 596, “Directed Individual Study or Research.” To remain in graduate status, students must maintain a grade point average of 3.0 (i.e., B). No time limits are set for the completion of the requirements for the Certificate.

The Ph.D. Degree

Admission Requirements. Applicants must comply with Graduate Division requirements (i.e. an acceptable bachelor's degree, a 3.0 grade point average for the last two years of undergraduate study and any post-baccalaureate study) and application procedures. In addition, the School requires:

(1) A master's degree or equivalent in an academic or professional field of study from an institution of recognized standing, representing academic preparation equivalent to that required for a comparable degree from the University of California.

(2) Basic Professional Competence. Evidence of basic professional competence is required. This would be satisfied by an M.L.S. degree from a program accredited by the American Library Association. Alternatively, it could be satisfied by completion of nine specified courses (400, 402, 404, 410, 411, 420, 421, 430, 441) taken in the School.

(3) Satisfaction of the following entrance requirements:

(a) Reading knowledge of one or two foreign languages. In the case of one foreign language, the requirement may be met by completing five quarters or four semesters of study of the language with minimum grades of C, or by passing the GSFLT with a minimum score of 500. In the case of two foreign languages, the requirement may be met by completing either three quarters or two semesters of study of each language with minimum grades of C.

Special foreign language competence, beyond that specified for the M.L.S. degree, will be individually determined on the basis of the student's proposed area of specialization.

The School will accept the passing of a foreign language test administered by another UCLA department and satisfying its degree requirements, provided the test was taken prior to admission to the School or is taken as part of a coordinated degree program involving the School and that department.

(b) Statistics. The requirement is satisfied by the completion of a college level course with a minimum grade of C.

(c) Computer programming. The requirement is met either by completing a college level course with a minimum grade of C, or by passing a proficiency examination administered by the School.

(4) A statement of purpose which identifies the applicant's proposed area of specialization, accompanied by appropriate evidence of qualifications for pursuing a doctoral program in it. It should be as specific as possible so that it can be used to determine whether the specializations provided by the School's doctoral program are appropriate to the applicant's needs.

(5) Total score of 1200 or more on the 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 from persons qualified to evaluate the candidate's ability to succeed in advanced graduate study.

(7) Interviews with two faculty members of the School, usually jointly as a panel (or with two people designated as representatives for the School if it is not possible for the applicant to visit the School).

(8) A curriculum vitae on the form provided in the School's Announcement.

Work Experience in Libraries. While work experience in a library is not a requirement for admission, consideration will be given to such experience in evaluation of candidates.

Advising. Upon admission to the School, a temporary faculty adviser will be assigned based on the evidence in the student's statement of interest at the time of application and on the general commitments of the faculty. The student is expected to choose a regular adviser no later than the end of the first year in the School.

The adviser has the responsibility to assist the student in planning a program of study that meets the requirements of the Ph.D. program and to guide the student in the dissertation research.

Until the student is advanced to candidacy, there will be yearly formal evaluations of progress that involve the student, the Dean, the faculty adviser, and other faculty. After advancement to candidacy, the evaluation of progress is the responsibility of the formal doctoral committee.

Major Fields and Subdisciplines. General Fields of Emphasis. Each candidate will be expected to specialize in a subfield in one of three major fields:

(1) Selection, acquisitions, identification, preservation, and collection development of information materials.

(2) Storage, retrieval, interpretation, dissemination, and utilization of information content of those materials.

(3) Administration and management of libraries and information centers.

The School strictly limits the specific subfields which, at any given point in time, will be accepted for doctoral work.

Course Requirements. There are no required courses in the program, but courses or their equivalent are required for admission.

Written and Oral Qualifying Examinations. There will be four written Qualifying Examinations, in each of the following areas of study:

Librarianship, covering the aspects of the library as an institution — international comparison, administration and management, governing legislation, the social context of libraries, and information services.

Information centers, covering the special aspects of libraries, and information services, interinstitutional cooperation, special aspects of various types of libraries (public, academic, school, special), the needs of constituencies, the profession, the economics of library operation and service.

Bibliography, covering the aspects of the library as a collection of books and other forms...
of recorded information, including evaluation, selection and acquisitions of such materials, description and bibliographical control of them, storage and physical control of them.

Information Science, covering the aspects of the library, as a collection of information—reference, formal (computer) techniques for retrieval, information systems analysis and design, the economics of information distribution.

History, covering the growth of library and information science—the history of printing, bookmaking, and publishing, the history of libraries, the history of intellectual access to information. These will be scheduled during one week in a semester—reference.

Making and publishing, evaluating whether the research has been completed. The history of intellectual access to information.

Each examination is expected to require one full day for completion. If the student fails to pass on one or two of the sections of the 4-part examination, they may be repeated. Should the student fail three sections, all four must be repeated.

The Oral Qualifying Examination: Preparation and Defense of the Dissertation Proposal. The second formal requirement of the program is that the student prepare and defend an Oral Qualifying Examination an extensive dissertation proposal. The proposal must contain (a) an introduction to the problem to be studied and its general context, (b) a review of the relevant literature, (c) a description of the methodology to be used, and (d) a time schedule of work to be done for completion.

Students are encouraged to start work on their proposals while taking courses in preparation for the Written Qualifying Examination. The proposal should, in most cases, be completed at the same time or soon after the completion of the written examination, but it must be completed and accepted within two years after passing the Written Qualifying Examination.

The proposal must be reviewed and formally accepted at an Oral Qualifying Examination by a committee consisting of at least five members, two of whom are from outside the School. The student's advisor chairs the meeting. At least two weeks in advance, the student must schedule the Oral Qualifying Examination with his/her committee and provide each member of the committee with a reading copy of the proposal and have one additional copy available.

During the Oral Qualifying Examination, the committee is expected to require the candidate to evaluate the significance of the chosen topic of research, to justify the methodology to be used, to demonstrate the feasibility of completing the research and to provide criteria for evaluating whether the research has been completed.

During the Oral Qualifying Examination, the committee is expected to test the candidate's knowledge in the specific field chosen for the dissertation research by detailed questions concerning the literature and problem areas within the field. However, the coverage in the oral examination is not necessarily limited to the dissertation topic; it may cover other areas of the field as well.

The committee must decide, by majority vote after the Oral Qualifying Examination, whether the proposal as written is accepted, the proposal with modification is accepted, or the proposal is not accepted.

The committee must also decide, by majority vote, whether the Oral Qualifying Examination has been passed, but if the proposal is not accepted, the Oral Qualifying Examination may not be passed.

Dissertation Research and Final Oral Exam. The third formal requirement of the program is that the student research, write and defend a dissertation. The student should work closely with the chair of the doctoral committee in doing the dissertation research and writing the dissertation and should consult, as necessary, with members of the doctoral committee and other faculty members.

The dissertation must be reviewed and formally accepted by the examination committee.

The Final Oral Examination is open to all interested faculty members and students. They are encouraged to attend. They may participate in the examination, but they do not have a vote.

At least two weeks in advance of the Final Oral Examination, the student must schedule the examination with the doctoral examination committee and announce the meeting, distribute copies of an abstract of the dissertation to all faculty members and all resident Ph.D. students in the School, provide each member of the examination committee with a reading copy of the dissertation and have one additional copy available for loan.

The reading copies need not be "perfect copy" as required for final submission to the Graduate Division. They must, however, be completed in all substantive ways, including chapters, etc. They need not meet the stylistic standards established for a "perfect draft". (Margins may be incorrect, xerox copies are acceptable, etc.) A "perfect copy" must, of course, be prepared and submitted after the Final Oral Examination. (See Graduate Division publication, Standards and Procedures for Theses and Dissertations.)

The doctoral examination committee must decide whether the dissertation with modifications is accepted or is not accepted. There may be one negative vote if all members of the committee are certifying; none if only three are certifying.

Final Oral Examination Following Completion of the Dissertation: A Final Oral Examination will be required of all candidates.

The doctoral examination committee must decide with no more than one negative vote, whether the candidate has passed the Final Oral Examination.

<table>
<thead>
<tr>
<th>Time to Degree</th>
<th>Quarters</th>
<th>Expected</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) From graduate admission to admission to the doctoral program</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>(2) From graduate admission to Written Qualifying Examination</td>
<td>4</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>(3) Advancement to Candidacy from graduate admission to Oral Qualifying Examination</td>
<td>5</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>(4) From graduate admission to approval of dissertation proposal</td>
<td>6</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>(5) From graduate admission to the Final Oral Examination</td>
<td>12</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

Disqualification and Appeal of Disqualification. Termination of graduate status may be the cumulative grade point average fails below a 3.0, or if the work in any two consecutive quarters falls below a 3.0 average; or failure on the Written or Oral Qualifying Examinations, after two successive tests. Such a recommendation is made by the Executive Committee of the Faculty based on the advice of the student's faculty adviser and the Dean. The Dean will notify the student in writing of the decision together with the reasons for it. Appeals of such actions may be made by formal petition to the faculty by the student.

Upper Division Courses

110. Information Resources and Libraries. Prerequisite: Sophomore standing or consent of instructor. Provides an introduction to bibliographic and information resources and relevant research methodologies. Covers both general and specialized materials. Designed to facilitate knowledgeable use of libraries and efficient retrieval of information. Some sections will focus on specific subject areas (such as Science and Technology). Letter grade.

111A-111D. Ethnic Groups and their Bibliographies. Introduction to bibliographical and research tools and methods for students with interests in ethnic groups. Specific sections focus on particular groups. 111A is concerned with American Indian history and culture, 111B with Afro-American history and culture, 111C with Latino history and culture; and 111D with Asian-American history and culture; sections on other ethnic groups may be added. Offered in collaboration with the several centers for ethnic studies. Students may take this course only once for credit.

140. Computer Programming for Library Operations and Services. Lecture, one hour; laboratory, three hours. Introduction to P/LI (programming language) suitable for librarians, students of language and literature and similar disciplines. Concepts of textual manipulations, 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. No prior knowledge of computer programming or MARC required. There will be a lab fee for this course.
Graduate Courses

205. Historiography of Librarianship. Bibliography and Information Science. Prerequisite: consent of instructor. Historical development of the process of research with emphasis on the sources of materials. Comprehensive and critical review of historical and biographical literature. Identification of areas in need of research. (Formerly numbered 212.)

206. Seminar in Librarianship. History. Prerequisite: consent of instructor. Special studies in bibliographical 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. Prerequisite: consent of instructor. Library development and service patterns in European and other countries; comparisons of these with librarianship in the United States. International library organization and programs.

210. Seminar in Descriptive and Bibliographical Cataloging. Prerequisites: courses 410 (Descriptive Cataloging) and 411 (Subject Cataloging and Classification) or equivalent. Specialized studies in selected areas of descriptive and bibliographical cataloging, e.g., purposes, principles, instructional development, potentialities of automation. May be repeated once.

211. Seminar in Subject Control of Library Materials. Prerequisite: course 410 (Descriptive Cataloging) and 411 (Subject Cataloging and Classification) or their equivalents. Study of selected problems in the design and use of verbal headings and classification systems. Manual and mechanized systems. May be taken twice.


214. Seminar on Abstracting and Abstracting 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.

215. Bibliography of Science, Engineering and Technology. (Formerly numbered 217.) Prerequisites: courses 420 and 421. Scientific and technical literature with emphasis on special types of publications, research, and source, reference to libraries and book collecting, changing aspects of book production and distribution within the setting of cultural history.


217. Information Systems Analysis and Design. (Formerly numbered 243.) Theories and principles of information systems development, including determination of requirements, technical design and evaluation, and internal organization.

218. Measurement and Evaluation of Information Systems and Services. Prerequisites: Research Methods; also desirable: library automation. The course will look at information systems and services from the points of view of their cost and effectiveness in meeting desired objectives. Principles of costing will be briefly reviewed, the bulk of the course being given over to a survey of methods of measurement. Emphasis will be on the accessibility of documents, reference and information retrieval services, document delivery systems, networking and technical services including circulation, acquisitions, and document delivery systems.


220. Seminar on Special Topics in Information Science. Prerequisite: course 404 or consent of instructor. Topics will vary from quarter to quarter to allow emphasis on particular historical periods, geographical areas, or other specific aspects such as a form of publication, genre or material of production such as paper or type. May be repeated for credit with consent of instructor.

221. Seminar on Intellectual Freedom. Prerequisite: consent of instructor. Investigation of the ideas of intellectual freedom: historical and constitutional bases; civil liberties and civil rights; censorship and other restrictions on freedom of speech. Press, the arts, and access to ideas and information.

222. Research Seminar in Library and Information Science. Prerequisite: enrollment in Ph.D., program or consent of instructor. Emphasis on recent contributions to research and methodology. May be repeated for credit. Graded S/U.

223. Information Needs, Uses and Users. Lecture, three hours; discussion, one hour. Prerequisites: None. 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 needs and use.

224. Information Resources for Business. Lecture, two hours. Prerequisites: GSLIS 420 and GSLIS 421 or consent of instructor. Introduction to the information needs of the business world. Encyclopedias, directories, indexes, glossaries, and other tools of business research and information services, government publications, data bases, and other sources of business literature will be discussed.

225. Readings and Reading Interests. (Formerly numbered 215.) Interests of the common reader, excluding children, with special reference to types of literary patrons. Fiction and subject categories, popular literature, and the several branches of the several fields of literature, social sciences, art, music, literature, history, science. Influence of paperback, best sellers and current interest books on reading habits.

400. Librarianship: The Institutional Setting and Professional Environment. Overview of the history, roles and functions in society of libraries and information centers, including their current status, structure, administration, and other responsibilities, education, and research. Trends in administration, national planning, networks, standards, legislation, and technology.

401. Fundamentals of Bibliography. The development, structure and interpretation of the several branches of bibliography: historical, physical (analytical or critical, descriptive), enumerative or systematic; and the organization, control, and elements of bibliographical apparatus. New techniques and tools, theory, methods, and trends in bibliographical research in relationship to librarianship.
404. Fundamentals of Information Science. Provides an introduction to the variety of subjects that constitute the information sciences and their relationship to libraries. Introduces and demonstrates the major areas of information science, including information gathering, searching, and organizing, with an emphasis on the role of the library in the information society. Prerequisites: Basic knowledge of library science. Recommended readings include those listed in the course schedule.

405. Automation of Library Processes. Prerequisite: Basic knowledge of library science. The course will cover the principles and practices of automated library systems, with a focus on the role of technology in library operations. Readings include those listed in the course schedule.

411. Subject Cataloging and Classification. (Formerly numbered 201B). This course will cover the principles and practices of subject cataloging and classification, with a focus on the Library of Congress classification systems and the Dewey Decimal system. Readings include those listed in the course schedule.


421. Information Resources and Services II: Principles of indexing and abstracting. Basic techniques, concepts, and methods of index making, serials, and specialized materials; preparing for information and indicative abstracts, and of secondary abstracting and indexing services as library reference tools.

422. Information Resources and Services III: Computer-based information resources. Overview of the major components of computer-based bibliographic information retrieval systems, planning and implementing search strategies, and conducting online searches for specific bibliographic records.

423. Computer-Based Information Resources and Services. Lecture, four hours. Prerequisites: Courses 420, 421, 424. This course will introduce the student to the use of resource databases in the business and scientific communities. The file structures and hardware requirements for resource databases will be reviewed. Included are analyses of the information needs of scientists and business/tabor coupled with investigations into specific resource databases addressing these needs.

428. Printing for Bibliographers. Prerequisites: Course 260 (Historical Bibliography) or 261 (Analytical Bibliography) and consent of instructor. Printing processes as related to bibliography and librarian. Discussion of design, composition, and presswork with special emphasis on the 19th century handpress. To be graded S/U.

430. Selection and Acquisition of Library Materials. (Formerly numbered 202.) Background of publishing and the book trade (new and antiquarian) pertinent to library departments of public, school, academic and special libraries. Theory and practice of selecting and ordering books and other materials. Organization and administration of acquisitions departments.

431. Special Problems in the Selection of Materials and Evaluation of Collections. (Formerly numbered 205.) 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 centers; subject specialization, Special format materials: films, maps, sound recordings, etc. Copying methods; facsimile reprinting, changing character of research collections.


441. Management of Libraries. Prerequisite: consent of instructor. Principles of Management, emphasizing management techniques applicable to libraries of various types and to library systems. Special attention given to 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 Network. (Formerly numbered 244.) Problems in the formulation, funding and operation of information networks are examined. 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 (12-18 year olds). Discusses special problems in working with young people and the psychology of the teenager as it influences library programs.

447. Library Space Planning. Introduction to space planning and programming techniques and how they apply to libraries. Emphasis is on use of existing space, planning new buildings, and solving space problems. Use of blue prints, use of scales, contracts, use of consultants.

448. University and Research Libraries. (Formerly numbered 401.) 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.

453. Public Libraries. (Formerly numbered 402.) The government, organization, and administration of municipal, county, and regional public libraries; developments in the changing patterns of public library service.

454. School Libraries. (Formerly numbered 403.) Elementary and secondary school libraries as multimedia instructional materials centers. Relationships of school libraries to school programs and curricula. Emphasis on administration, planning materials, services, and requirements. Emphasis on the organization of library services.

455. Library Services and Programs for Children. Philosophy and objectives of children's services in public and school libraries. Emphasis on services to groups and techniques of program planning which incorporate storytelling, puppetry, nonprint media, etc.

456. Storytelling to Children and Adults. (½ course) Lecture, two hours. Practical storytelling to children and adults in various situations, with emphasis on selected materials. Readings and discussions of the function of folklore in literature, society, child development, and library programming. Students will be required to choose, learn and present a story in a library or community setting.

470. Special Libraries and Special Collections. (Formerly numbered 405.) Organization, administration, collections, facilities, finances, and problems of special libraries and of special collections within general libraries. Methods of handling nondescriptive materials. Current trends in documentation and mechanization.

471. Health and Life Sciences Libraries. (Formerly numbered 410.) 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 scheduled.

472. Law Librarianship. Prerequisite: consent of instructor. 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 solutions.

473. Government Information. Introduction to the nature and scope of government information promulgated by the federal government as well as by the state, municipal, international and foreign governments. Problems of acquiring, cataloging, classifying, distributing, and preserving governmental information.

474. 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.

478A-487Z. Special Studies in Library and Information Science. (½ to 1 course) Examination of special topics of professional interest. Topics and units will vary according to subject and may include conservation of materials, business information sources, problems in library management, current issues in cataloging, etc.

478A. Issues and Problems in Preservation of Library Materials. Emphasis on the preservation of the full range of materials in library collections: causes of deterioration, requirements for basic maintenance and housing, evaluations of available alternatives (microforms, storage, climate, security), and the management of conservation plans and the bases for cooperation and sharing of responsibilities. Not a laboratory course.

487B. Computer-Based Cataloging Services. Overview of the major components of computer-based cataloging systems, including bibliographic databases (MARC, OCLC, BALLOTS, etc.) vendor-provided services, and non-traditional services. Advances in computer technology are considered with respect to impact on automatic bibliographic description and data base development.

487C. Advanced Legal Bibliography. Examination of legal materials and research techniques not covered in course 228, Legal Bibliography. 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, antitrust. Special emphasis placed on legislative history sources and research techniques and computer-assisted legal research. New legal research techniques and problems in computerized information retrieval.

487D. Seminar on Current Issues in Librarianship (Formerly numbered 272.) 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.

Professional Internship Courses

480. Professional Communication. The course is designed to increase librarians' sensitivity to language in different contexts. Students will explore the range of stylistic and syntactic options open to them for presenting proposals, reports, and research results. Such study will cover all aspects of professional communications: written, oral, and visual, including computer-generated. To be graded S/U.

481. Interpersonal Communication for Librarians and Information Scientists. 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. Letter grading. Ms. Anderson

486. Training and Supervision of Teaching Assistants. Prerequisite: Appointment as a teaching assistant or Extension-Division Instructor. Orientation, preparation, and supervision of graduate students who are involved in the teaching of undergraduate or an Extension course. Syllabus revision and materials preparations. Classroom observation. Twenty hours per quarter, times to be arranged. Two units of credit. Graded S/U.

488. 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. To be graded S/U. Ms. Eisenbach

490. Professional Communication. To be graded S/U. (501. Cooperative Program. To be graded S/U. (506. Directed Individual Study or Research. Prerequisite: consent of instructor. Directed special studies in the fields of bibliography, librarianship, and information science. Variable conference time depending upon nature of study or complexity of research. May be repeated once. To be graded S/U.

497. Directed Studies for the Doctoral Qualifying Examination. (Office to 2 courses) Pre-requisites: approval of UCLA Graduate Adviser and Graduate Dean. Approval of host campus instructor, Department Chairman and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangement with neighboring institutions. To be graded S/U.

501. Cooperative Program. (½ to 2 courses) Prerequisites: approval of UCLA Graduate Adviser and Graduate Dean. Approval of host campus instructor, Department Chairman and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangement with neighboring institutions. To be graded S/U.

506. Directed Individual Study or Research. Prerequisite: consent of instructor. Directed special studies in the fields of bibliography, librarianship, and information science. Variable conference time depending upon nature of study or complexity of research. May be repeated once. To be graded S/U.

507. Directed Studies for the Doctoral Qualifying Examinations. (½ to 2 courses) To be graded S/U.

509. Doctoral Research and Writing. (½ to 2 courses) To be graded S/U by the professor supervising the dissertation.

Linguistics

(Office, 2113 Campbell Hall)

Stephen R. Anderson, Ph.D., Professor of Linguistics.
Raimo A. Anttila, Ph.D., Professor of Indo-European and General Linguistics.
William Bright, Ph.D., Professor of Linguistics and Anthropology.
Victoria A. Fromkin, Ph.D., Professor of Linguistics.
Edward L. Keenan, Ph.D., Professor of Linguistics.
Peter Ladefoged, Ph.D., Professor of Phonetics.
Paul M. Schachter, Ph.D., Professor of Linguistics.
Robert P. Stockwell, Ph.D., Professor of Linguistics (Chair of the Department).
Sandra A. Thompson, Ph.D., Professor of Linguistics.
George D. Bedell, Ph.D., Associate Professor of Linguistics.
Thomas J. Hirnebusch, Ph.D., Associate Professor of Linguistics and African Languages.
Mazisi R. Kunene, M.A., Associate Professor of African Languages and Literature.
Pamela L. Munro, Ph.D., Associate Professor of Linguistics.
Russell D. Schuh, Ph.D., Associate Professor of Linguistics and African Languages.
Bruce P. Hayes, Ph.D., Assistant Professor of Linguistics.
Patricia A. Keating, Ph.D., Assistant Professor of Linguistics.
Roger W. Andersen, Ph.D., Assistant Professor of English.
Christian A. M. Baltaxe, Ph.D., Adjunct Associate Professor of Linguistics.
J. Donald Bowen, Ph.D., Professor of English.
Russell N. Campbell, Ph.D., Professor of English.
Marianne Celce-Murcia, Ph.D., Associate Professor of English.
T. Craig Christy, Ph.D., Assistant Professor of Germanic Linguistics and Philology.
Keith S. Donnellan, Ph.D., Professor of Philosophy.
Christopher Ehret, Ph.D., Professor of History.
Patricia M. Greenfield, Ph.D., Professor of Psychology.
Évelyn R. Hatch, Ph.D., Professor of English.
Frances B. Hinofotsi, Ph.D., Assistant Professor of English.
Robert S. Kirsen, Ph.D., Associate Professor of Dutch-Flemish and Afrikaans.
Paul V. Kruskrit, Ph.D., Assistant Professor of Anthropology.
Donald G. MacKay, Ph.D., Associate Professor of Psychology.
Claudia Mitchell-Kernan, Ph.D., Associate Professor of Anthropology.
C.P. Qnero, Ph.D., Professor of Spanish and Romance Linguistics.
John F. Povey, Ph.D., Professor of English.
A. Carlos Quicoli, Ph.D., Associate Professor of Portuguese.
Emanuel A. Schlegoff, Ph.D., Professor of Sociology.
John A. Schumann, Ph.D., Associate Professor of English.
Michael Shapiro, Ph.D., Professor of Russian Linguistics and Poetics.
Allen H. Timmerlake, Ph.D., Associate Professor of Slavic Languages.
Terence H. Wilbur, Ph.D., Professor of German.
Dean S. Worth, Ph.D., Professor of Slavic Languages.
Eran Zakid, Ph.D., Associate Professor of Psychology.

The Graduate Linguistics Program

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.

The Master of Arts Degree

Admission Requirements. 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 Graduate Record Examination (verbal, quantitative, and analytical) must be submitted with the application. There is no minimum score requirement. If possible, applicants should submit a copy of some research paper or other piece of writing in linguistics or a closely related field.

While not required for admission, courses 100, 103, 110, 120A, 120B, 165A/200A, 165B/200B 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 as 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.

Advisor. The Chair appoints a Graduate Adviser for each student. All members of the faculty serve as graduate advisers. If students wish to change advisers, they should consult the Chair.

Students are expected to meet with their advisers each quarter to plan their study lists. Advisors will record their recommendations in the student's permanent file. Only their advisers may sign students' study lists each quarter.

At least one quarter before completing the M.A. thesis, the student selects a thesis committee, which is subject to the approval of the Chair and to the agreement of the committee members. The Chair of this thesis committee
becomes the student's official adviser. If a student opts for a terminal M.A. by taking a comprehensive examination (usually oral), an examination committee is appointed by the Chair.

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 Requirements. All students are required to 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 exam administered by the department; (2) a research paper based on extensive sources in the language; (3) a conversation exam showing knowledge in depth; (4) an ETS graduate language exam. One of the languages must be a language which has substantial literature on linguistics, the other may be a language which can 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 are permitted to use English to meet one of the foreign language requirements unless English was the language of instruction in their elementary and secondary education.

The departmentally-administered (#1 above) reading examination consists of a passage of approximately 500 words taken from a scholarly work in linguistics, of medium difficulty. Students are given one hour to translate the passage, with the aid of a dictionary. To pass the examination, a student must: 1) translate the entire passage; 2) make no more than one "major" error (such as missing the basic sense of some sentence); 3) make no more than three "minor" errors (such as mistranslating the aspect of some verb).

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: 165A/200A, 165B/200B, 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 had 165AB, so they must take three electives in all. The core courses in the relevant areas are normally considered prerequisite to the proseminars (250-259), which are specialized courses taken, for the most part, in the second year, or as electives in the first year if the student has sufficient background. Proseminars are repeatable for credit if the topic is different, as it nearly always is. No more than 4 units of 596A or 596B and no more than 8 units of 501 may be applied toward the required nine courses. The 250 courses (250 — phonetics, 261 — phonology, 282 — syntax, semantics, 263 — language variation, 264 — special topics) may be counted as electives for the M.A. if taken for 4 units.

The following undergraduate courses or equivalents are prerequisite to graduate courses in the corresponding areas: 100, 103, 110, 120A, 120B, 165A, 165B. Linguistics 103 must have been passed with a grade of "B" or better as prerequisite to 210A-210B. If 103 is waived on the basis of training elsewhere, the student must pass an examination in practical phonetics administered by the Department. This requirement must be completed before admission into the doctoral program.

No more than two courses (with grades of B or better) may be transferred toward the M.A. from institutions outside the University of California, although equivalent training elsewhere provides the basis for determining what courses the student should take.

Thesis or Comprehensive Examination Plan

Thesis Plan: After completing the required courses and the foreign language examination, the student 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.

The M.A. thesis has the following size limits: If on a single topic, the thesis cannot exceed 50 pages double-spaced typewritten on 8 1/2 x 11 paper, either elite or pica typeface, with standard margins 1 1/2" by 1", including all appendices and bibliography, except that footnotes, appendices, and bibliography may be single-spaced. If on two topics, the topics must be in different fields, each topic limited to 35 pages, other specifications as above. If on two topics, only one of the two papers can be carried over as the basis of a subsequent Ph.D. qualifying "publishable" paper.

The thesis committee consists of three faculty members. Students should consult with the Chair about the makeup of their committee. At least one quarter before the quarter in which the thesis is submitted, the committee must be officially nominated by completing a "Nomination of Master's Thesis Committee" form to be approved by the Department Chair, and by the Graduate Division.

If a student wishes 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 available in the Department office by 4 p.m. on the date listed in the UCLA Calendar as "last day to submit final drafts of thesis to master's committee for degrees to be conferred in current quarter."

Requirements for receiving an M.A. include the filing of a "Petition for Advancement to candidacy" form early in the quarter during which the student expects to take the degree. (The deadline is published in the UCLA Calendar.) The thesis must be typed according to regulations set by the University. Information on these regulations and procedures is available from the Graduate Division. The deadline for submitting the completed thesis is in the UCLA Calendar.

A copy of the thesis will be kept on file in the Department.

Comprehensive Plan: After completing the required courses and the foreign language examination, the student must pass a Comprehensive Examination administered by a committee of the Linguistics faculty. The committee, consisting of four members, is appointed by the Chair. This is normally an oral examination, general in scope, and will result in a terminal M.A. degree. A separate examination committee is appointed by the Chair for each student.

Time to Degree. A student who enters the program without prior training in linguistics beyond the basic courses (listed in Admission to Master's Program above) should expect to spend four to six quarters in the M.A. program. A student with one to three deficiency courses will normally spend five to seven quarters in the program, and one with more than three deficiencies, six to nine quarters. All students must complete the M.A. within 3½ years; they should aim for a maximum of two years.

500 Series Course Limitations. No more than 4 units of 596A or 596B and no more than 8 units of 501 may be applied toward the required nine courses for the M.A.

Disqualification and Appeal of Disqualification. An average of 3.00 must be maintained in all coursework. Students with grade records fractionally below 3.00 in a given term are considered to be on probation for the following term, during which term their grade record must be brought up to 3.00. Students whose grade records do not meet these minimal standards are subject to dismissal. A student failing to complete the M.A. within 3½-quarter years is also subject to dismissal.

Students who complete the M.A. but are denied admission into the Ph.D. program will not be permitted to re-enroll as a graduate student beyond the end of that academic year.

The Ph.D. Degree

Admission Requirements. General admission requirements are the same as those listed for the M.A. For information about admission to the doctoral program, see below.

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.; 2) the faculty's evaluation of the quality of the M.A. thesis and of the student's overall work and promise.

A student entering the graduate program who has already received an M.A. in Linguistics from another department or institution 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) The student may submit a master’s thesis written at another institution or department. In this case, the Chair, in consultation with the student, appoints a committee to read and evaluate the thesis and to recommend revisions if necessary before submission to the entire faculty for final evaluation. 2) The student with an M.A. in Linguistics from another institution who has not written a thesis elsewhere is not required to formally submit a thesis, but is required to submit to the evaluation committee a paper equal in depth and scope to a thesis. A committee is appointed as in 1) above. In either case, once the committee has approved the thesis or paper, it is submitted to the entire faculty who evaluate its quality and the student’s accomplishments and promise. This evaluation will normally take place at a full meeting of the faculty at the end of the quarter in which that student submits a thesis.

Advising. For general advising information, see the Advising section above.

A student must arrange with the Departmental Chair for the appointment of a guidance committee no later than the end of the first quarter of residence following admission into the Ph.D. program. This is an informal committee, consisting of three “inside” members (Linguistics faculty). Outside members may be included, if desired. The Departmental form for this purpose. The chair of the guidance committee becomes the student’s advisor and is the only person who can sign the student’s study list. (The guidance committee usually becomes the nucleus of the doctoral committee.)

Major Fields and SubDisciplines. It is possible to 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 Requirements for the M.A. degree.

Course Requirements. Candidates for the Ph.D. are required to take 32 units of graduate coursework beyond the M.A. requirements. These units must include 210A-210B unless they have been used to fulfill the M.A. requirement, and 8 units in an area distinct from that of the student’s major area of concentration. The 32 units may not include courses 597, 599, or 275. Of the 32 units, no more than 12 units may be in 596A. A maximum of four 2-unit seminars may be included in the 32 units. At some time, students are expected to present some of the results of their research at a meeting of the Linguistics Department Colloquium (Linguistics 275). This is a requirement for the degree.

Written and Oral Qualifying Examination. In order to be advanced to candidacy, a student is 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 the student’s guidance committee. A written prospectus of the dissertation must be submitted to the guidance committee within the first year of the Department file, one month prior to the oral examination. At this time, provided the language requirement has been met, an official doctoral committee must be established in consultation with the Department Chair, and approved by the Graduate Division.

The Oral Qualifying Examination is administered by the doctoral committee, based primarily on the topic of the dissertation research. The examination is not narrowly defined, but rather will include all the background necessary for the student to pursue research on the specific topic. Reexamination is possible upon recommendation by the committee. Students are expected to take the examination and be advanced to candidacy not later than six quarters after being admitted to the doctoral program.

Doctoral Committee. A doctoral committee, normally consisting of the Departmental Guidance Committee plus two outside members, must be appointed at least one month prior to the time the student expects to take the Oral Qualifying Examination, in accordance with the regulations of the Graduate Division.

Final Oral Examination Following Completion of the Dissertation. 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 student’s doctoral committee.

Time to Degree. A student must complete the Ph.D. within seven quarters after being advanced to candidacy, extended to an outside limit of nine quarters more if the student has not exhausted earlier limits. The absolute limit is 15 quarters, from entrance to the Department as a pre-M.A. student, including leaves or interruptions of any kind, is seven calendar years. However, the approved normative time-to-degree for the Ph.D. is 15 quarters (five years) and this time limit must be observed in regard to the In-Candidacy Fee Offset Grant Program. The normative time-to-degree cannot be changed, but accrued time may be adjusted to allow time for students to make up deficiencies.

Candidate in Philosophy Degree. Students are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Disqualification and Appeal of Disqualification. Any student failing to maintain a 3.00 average, or failing to be advanced to candidacy within the required time, is subject to disqualification at the discretion of the faculty of the Department.

Other Relevant Information. The Department requires that a student, after filing the dissertation, distribute to the faculty, with a copy for the Department, a Thesis Completion Statement, which should include date, committee membership, title, and abstract of the dissertation. Additional copies should be made available to students and other interested persons.

The Department issues an annually revised Information Brochure describing the program for applicants for admission.

*Graduate Courses

C200A. Linguistic Theory: Phonology. Prerequisite: course 120A. Concurrently scheduled with Linguistics C165A. The theory of generative phonology, the form of phonological rules, formal and substantive phonological universals. Recommended for students who plan to do graduate work in linguistics. Students who do not plan to do graduate work in linguistics, but are interested in the area, may take this course, with the instructor’s permission.

C200B. Linguistic Theory: Grammar. Prerequisite: course 120B or 127. Concurrently scheduled with Linguistics C165B. The form of grammars; word formation and sentence formation; formal and substantive universals in syntax; relation between syntax and semantics. Recommended for students who plan to do graduate work in linguistics. Students who do not plan to do graduate work in linguistics, but are interested in the area, may take this course, with the instructor’s permission.

C201A. Phonological Theory: Current Issues. Prerequisites: courses C165A/C200A. Survey of current issues in phonological theory. Mr. Anderson

C201B. Phonological Theory in the Twentieth Century. Prerequisite: course C165A/C200A. Survey of the development of phonological theory in the twentieth century. Ms. Anderson, Mr. Bedell

C202. Syntactic Theory: Language Change. Prerequisite: course 110. Survey of current issues in language change. Mr. Antilla, Mr. Stockwell, Mr. Schuh

C203. Theory of Phonetics. Prerequisite: course 120A. The preliminaries to speech analysis. Functional anatomy of the vocal organs; fundamental principles of auditory perception; speech production; issues in the perception of speech; the nature and design of feature systems for phonetic and phonological analysis.

Mr. Anderson, Mr. Ladefoged

C206A. Syntactic Theory: Current Issues in Formal Syntax. Prerequisite: course C165B/C200B. Survey of current issues in formal syntactic theory. Ms. Thompson, Mr. Schachter

C206B. Syntactic Theory: Current Issues in Functional Approaches to Syntax. Prerequisite: course C165B/C200B. Survey of current issues in functional and typological approaches to syntax. Ms. Thompson

C207. Semantic Theory. Prerequisite: course 180 or its equivalent may be required. Approaches to the study of meaning. Different offerings of this course will approach semantics from different theoretical perspectives (e.g. formal semantics, functional semantics, interpretive semantics). May be repeated for credit if a different theoretical approach.

For concurrently scheduled courses ("C" prefix) suitably selected, activities of a substantive nature and evaluation will be applied for graduates and undergraduates.
210A. Field Methods I. (1½ courses) Prerequisites: courses C165A/C200A, C165B/C200B. A language unknown to members of the class is to be analyzed from data elicited from a native speaker of the language. The term paper will be a descriptive sketch of the language. May be repeated for credit when a different language is under investigation.

210B. Field Methods II. (1½ courses) Prerequisite: course 210A in the preceding quarter. Because different languages will be investigated in different years, 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 when a different language is studied. Ms. Mr. Bright, Ms. Munro.

220. Linguistic Areas. (Formerly numbered 220A-220H) Prerequisites: courses 120A, 120B; recommended preparation: courses C165A/C200A and 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, The Far East, etc. May be repeated for credit, if different language area.

225. Linguistic Structures. (Formerly numbered 225A-225Y) Prerequisites: courses 120A, 120B; recommended preparation: C165A/C200A and C165B/C200B. Phonological and grammatical structure of a selected language, studied as its generic relationships to others of its family. May be repeated for credit if different language family.

CM235. Theoretical Issues in Disorders of Language Development. (Same as Psychiatry and Biobehavioral Sciences 235B.) Prerequisites: Linguistics 100 and 101, or 120A and 120B; introduction to field of language disorders of children. The course deals primarily with some clinical syndromes which are associated with delayed or deviant language acquisition and with mental retardation. Theories regarding etiology and the relationship of these disorders to other will be examined. Such questions as the relationship of cognition to linguistic ability will be considered. Concurrently scheduled with Psychiatry CM135 and Linguistics CM135. Graduate students will be expected to apply more sophisticated knowledge and produce a research paper of greater depth. Ms. Neelyman M246C. Topics in Linguistic Anthropology. (Same as Anthropology M246C) Prerequisite: consent of instructor. Problems in relations of language, culture and society. This course may be repeated for credit.

Proseminars and Seminars (numbered 250 and above) may be repeated for credit, having been approved by the Graduate Council as nonrepetitive in content.

251. Topics in Phonetics and Phonology 1. Proseminar. Prerequisites: course C165A/C200A, 201A and/or 203 may be required. Specialized topics in phonetics or phonology may be repeated for credit. Concurrent meeting with Linguistics 252A-256B.

252. Topics in Syntax and Semantics 1. Proseminar. Prerequisites: course C165A/C200; C165B/C200B; 206A, 206B, or 207 may be required. Specialized topics in syntax and semantics. May be repeated for credit. Concurrent meeting with Linguistics 252A-257B.

253. Topics in Language Variation 1. Proseminar. Prerequisites: course 110; 202 may be required. Specialized topics in language variation. May be repeated for credit. Concurrent meeting with Linguistics 252A-258B.

254. Topics in Linguistics 1. Prerequisites: courses C165A/C200A, C165B/C200B; 201A-201B, 202, 203, 206A-206B, or 207 may be required; consent of instructor. Individual proseminars will deal with such topics as child language, sociolinguistics, history of linguistic theory, psycholinguistics, languages of the world, psycholinguistics, etc. May be repeated for credit. Concurrent meeting with Linguistics 252A-258B.

254A. Topics in Phonetics and Phonology 2. Proseminar. Prerequisites: course C165A/C200A; 201A and/or 203 may be required. Specialized topics in phonetics or phonology. Graded In-Progress, with letter grade assigned on completion of 256B. May be repeated for credit. Concurrent meeting with Linguistics 252.

258A. Topics in Language Variation 2. Proseminar. Prerequisites: course C165A/C200; 206A and/or 207 may be required. Specialized topics in syntax and semantics. Graded In-Progress, with letter grade assigned on completion of 258A. May be repeated for credit. Concurrent meeting with Linguistics 252A.

258B. Topics in Syntax and Semantics 2. Proseminar. Prerequisites: course C165A/C200; 295A, 296B and/or 207 may be required. Specialized topics in syntax and semantics. Graded In-Progress, with letter grade assigned on completion of 258B. May be repeated for credit. Concurrent meeting with Linguistics 252B.

259A. Topics in Linguistics 2. Proseminar. Prerequisites: courses C165A/C200A, C165B/C200B; 201A-201B, 202, 206A-206B, or 207 may be required; consent of instructor. Individual proseminars will deal with such topics as child language, sociolinguistics, history of linguistic theory, neurolinguistics, languages of the world, etc. Graded In-Progress, with letter grade assigned on completion of 259A. May be repeated for credit. Concurrent meeting with Linguistics 254A.

259B. Topics in Linguistics 2. Proseminar. Prerequisites: courses C165A/C200A, C165B/C200B; 201A-201B, 202, 206A-206B, or 207 may be required; consent of instructor. Individual proseminars will deal with such topics as child language, sociolinguistics, history of linguistic theory, neurolinguistics, languages of the world, etc. Graded In-Progress, with letter grade assigned on completion of 259B. May be repeated for credit. Concurrent meeting with Linguistics 254B.

Seminars (below) may be taken for two units of 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. (1½ courses) Prerequisites: courses 104, 201A, 203, 205, 206B, or 207 may be required; consent of instructor. Individual seminars will deal with such topics as child language, sociolinguistics, history of linguistic theory, neurolinguistics, languages of the world, etc. May be repeated for credit.

261A-261B-261C. Seminar in Phonology. (1½ courses) Prerequisite: consent of instructor. A, B, and C may be taken independently of each other. Only Post-M.A. students may enroll for two units; all others must enroll for four. Graded S/U. May be repeated for credit.

262A-262B-262C. Seminar in Syntax and Semantics. (1½ courses) Prerequisite: consent of instructor. A, B, and C may be taken independently of each other. A, B, and C may be taken independently of each other. Only Post-M.A. students may enroll for two units; all others must enroll for four. Graded S/U. May be repeated for credit.

263A-263B-263C. Seminar in Language Variation. (1½ courses) Prerequisite: consent of instructor. A, B, and C may be taken independently of each other. Either A, B, or C, or both may be taken independently of each other. Only Post-M.A. students may enroll for two units; all others must enroll for four. Graded S/U. May be repeated for credit.

264A-264B-264C. Seminar in Special Topics in Linguistic Theory. (1½ or 1 course) Prerequisite: consent of instructor. Course 264A, 264B, and 264C may be taken independently of each other. Special topics may include child language, neurolinguistics, psycholinguistics, sociolinguistics, etc. Only Post-M.A. students may enroll for two units; all others must enroll for four. Graded S/U. May be repeated for credit.

275. Linguistics Colloquium. Prerequisite: fulfillment of the M.A. requirements. Varied linguistic topics, especially presentations of new research by students, faculty, and visiting scholars. Graded S/U.

276. Linguistics Colloquium. (non-credit course) Prerequisites: Grade in standing. Same as course 275, taken without credit by students not presenting a colloquium. Graded S/U.

411. Research Orientation. (1½ course) Prerequisites: graduate standing. Sequence of lectures by all faculty of the Department to acquaint new graduate students with the research directions and resources of the Department. Graded S/U. May not be applied toward fulfillment of M.A. or Ph.D. course requirements.

459. College Teaching of Linguistics. (½ course) Prerequisites: Graduate Standing. Approval of all new teaching assistants. Seminars, workshops, and apprenticeships. Teaching of new students using curricula developed in the Department. Graded S/U.

501. Cooperative Program. (1 to 2 courses) Prerequisite: approval of UCLA graduate advisor and graduate dean. Approval of host campus instructor, department chairman, and graduate dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. Graded S/U.

Individual Study and Research

596A. Directed Studies. (½ to 2 courses) Prerequisite: completion of all undergraduate deficiency courses. May be applied toward fulfillment of M.A. course requirements. Directed individual study or research. May be repeated for credit. Graded S/U.

596B. Directed Linguistic Analysis. (1 to 2 courses) Prerequisite: fulfillment of the M.A. requirements. Intensive work with native speakers by students individually. May be repeated for credit. Graded S/U.

597. Preparation for Master's Comprehensive and Doctoral Qualifying Examinations. (1 to 2 courses) Prerequisite: at least six graduate courses in linguistics. Can be taken only in the quarter in which the student expects to stand for his comprehensive or qualifying examinations. May not be applied toward fulfillment of M.A. course requirements. May be repeated for credit. Graded S/U.

598. Research for Master's Thesis. (1 to 2 courses) Prerequisite: consent of chairman of guidance committee. Research and preparation of the M.A. thesis. May not be applied toward fulfillment of M.A. course requirements. May be repeated for credit. Graded S/U.

599. Research for Doctoral Program. (1 to 2 courses) Prerequisite: advancement to candidacy for the Ph.D. degree. May not be applied toward fulfillment of Ph.D. course requirements. May be repeated for credit. Graded S/U.

African Languages

Graduate Courses

201A-201B. Comparative Niger-Congo. Prerequisites: Linguistics 165A, 165B, 220A; recommended preparation; three quarter courses in one Niger-Congo language selected from courses 101-132, 199. Investigation of relationships within the Niger-Congo family as a whole, or within selected branches of the family. Mr. Welmers.
Upper Division Courses

100. Introduction to Linguistics.
103. Introduction to General Phonetics.
104. Experimental Phonetics.
110. Introduction to Historical Linguistics.
114A. American Indian Linguistics.
114B. American Indian Language Structures.
120A. Linguistic Analysis: Phonology.
120B. Linguistic Analysis: Grammar.
125. Semantics.
127. Syntactic Typology and Universals.
130. Child Language Acquisition: Introduction.
131. Child Language Acquisition (for non-majors).
CM135. Theoretical issues in Disorders of Language Development (concurrently scheduled with Ling. CM235).
140. Linguistics in Relation to Language Teaching.
M146. Language in Culture (same as Anthropology M140).
M150. Introduction to Indo-European Linguistics (same as IES M150).
160. History of Linguistics through the 19th Century.
164. Modern Theories of Language.
C165A. Linguistic Theory: Phonology (concurrently scheduled with Ling. C200A).
C165B. Linguistic Theory: Grammar (concurrently scheduled with Ling. C200B).
170. Language and Society: Introduction to Sociolinguistics.
175. Linguistic Change in English.

Related Courses in Other Departments

Related Courses in Other Language Courses

Anthropology 143A. Field Methods in Linguistic Anthropology: Practical Phonetics.
Arabic (Department of Near Eastern Languages) 200. Structure of Classical Arabic.
Dutch (Department of Germanic Languages) 234. The Structure of Modern Standard Dutch.
English 121. The History of the English Language.
122. Introduction to the Structure of Present-Day English.
210. History of the English Language.
215. The Structure of Present-Day English.
218. Celtic Linguistics.
240. Studies in the History of the English Language.
241. Studies in the Structure of the English Language.

251K. Bilingual Comparative Studies. Seminar.
260K. Psycholinguistics and Language Teaching. Seminar.
270K. Language Policy in Developing Countries. Seminar.

Poetics 217. Folk Speech.
French 204A. Phonology and Morphology from Vulgar Latin to French Classicism.
204B. Syntax and Semantics from Vulgar Latin to French Classicism.

Germanic Languages 117. Language and Linguistics.
217. History of the German Language.
251. Seminar in Syntax and Phonology of German.
252. Seminar in Historical and Comparative German Linguistics.

Hebrew (Department of Near Eastern Languages) 190A-190B. Survey of Hebrew Grammar.


Iranian (Department of Near Eastern Languages) 210A-210B. The History of the Persian Language.
211A-211B. Modern Iranian Dialects.
Italian 259A. History of the Italian Language.
259B. The Structure of Modern Italian.
295C. Italian Dialectology.

Latin (Department of Classics) 240. History of the Latin Language.

Oriental Languages 175. The Structure of the Japanese Language.
223. History of the Japanese Language.

Philosophy 127A-27B. Philosophy of Language.
172. Philosophy of Language.
287. Seminar: Philosophy of Language.

Portuguese (Department of Spanish and Portuguese) 100. Phonology and Pronunciation.
103. Syntax.
M118. History of the Portuguese and Spanish Languages.
M203A-M203B. The Development of the Portuguese and Spanish Languages.
M251. Studies in Galician-Portuguese and Old Spanish.

Psychiatry 249A-249B. Language Disorders of Childhood.
257A-257B-257C. Diagnostic and Therapeutics of Language Disabilities.

Psychology 122. Language and Communication.
123. Psycholinguistics.

Russian (Department of Slavic Languages) 121. Russian Phonology.
122. Russian Morphology.
123. Historical Commentary to Modern Russian.
204. Introduction to the History of the Russian Literary Language.
241. Russian Phonology.
243A-243B. Historical Phonology and Morphology of Russian.
263. Russian Dialectology.
264. The History of the Russian Literary Language.
265. Russian Syntax.
266. Russian Lexicology.

Scandinavian Languages (Department of Germanic Languages) 210. History and Description of the Scandinavian Languages.

Semitics (Department of Near Eastern Languages) 209A-209B-209C. Comparative Study of the Ethiopian Languages.
290A-290B-290C. Comparative Morphology of the Semitic Languages.

Slavic Languages 202. Introduction to Comparative Slavic Linguistics.
251. Introduction to Baltic Linguistics.
262A-262B. West Slavic Linguistics.
263A-263B. South Slavic Linguistics.
282. Seminar in Structural Analysis.

Slovak (Department of Slavic Languages) 232. The Structure of Slovak.

Sociology 144A. Conversational Structures I.
266. Selected Problems in the Analysis of Conversation.
267. Selected Problems in Communication.

Spanish (Department of Spanish and Portuguese) 100. Phonology and Pronunciation.
204A-204B. Transformational Grammar.
206. Linguistics.
209. Dialectology.

M251. Studies in Galician-Portuguese and Old Spanish.

Turkic Languages (Department of Near Eastern Languages) 230A-230B-230C. A Historical and Comparative Survey of the Turkic Languages.

Management

(Office, 3250 Graduate School of Management)

Robert B. Andrews, Ph.D., Professor of Management.
James R. Bettman, Ph.D., Professor of Marketing.
John W. Buckley, Ph.D., Arthur Young Professor of Accounting.
Elwood S. Buffa, Ph.D., Professor of Operations Management and Management Science.
Joseph D. Carrabino, Ph.D., Professor of Management.
Fred E. Case, D.B.A., Professor of Urban Land Economics.
Samuel A. Culbert, Ph.D., Professor of Behavioral and Organizational Science.
Louis E. Davis, M.S., Professor of Organizational Sciences and Research Socio-Technical Scientist.
David K. Ettman, Ph.D., Professor of Finance.
Donald Erlenkotter, Ph.D., Professor of Planning and Decision Sciences and Chair of the Department.
Hyman R. Faine, J.D., Adjunct Professor of Arts Management.
Eric G. Flamholz, Ph.D., Professor of Accounting and Information Systems.
Walter A. Fogel, Ph.D., Professor of Industrial Relations, and Research Economists, Institute of Industrial Relations.
Arthur M. Geofrion, Ph.D., Professor of Management Science.
Glen W. Graves, Ph.D., Professor of Quantitative Methods.
James D. Hodgson, A.B., Adjunct Professor of Management.
Alfred E. Hoflander, Ph.D., Professor of Finance and Insurance.
John E. Hutchinson, Ph.D., Professor of Industrial Relations.
The program aims to develop general management perspectives and knowledge while imparting expertise in a student-selected field. Along with mastery of subject matter, the M.B.A. program stresses integrating the lessons of various academic disciplines and functional fields, translating theory into practice, questioning the past and planning for the future, and self-guided learning as a continuing basis for effective managerial work.

Admission Requirements. Although no specific undergraduate major is required for entrance, students must complete elementary algebra and differential calculus before entering the M.B.A. program. All applicants are required to take the Graduate Management Admission Test (GMAT). Any questions about the GMAT should be addressed to the Educational Testing Service, Box 966-R, Princeton, NJ 08541, phone (609) 883-8519; the local phone number in Los Angeles is (213) 254-5236.

Foreign applicants who do not hold degrees from universities or colleges where English is the primary language are required to take the Test of English as a Foreign Language (TOEFL). Applications and information about the M.B.A. program are available in the M.B.A. Office, Room 3371, Graduate School of Management, UCLA, Los Angeles, CA 90024, phone (213) 825-8874. Applicants must complete the M.B.A. Application, which includes the Application for Admission to Graduate Status. 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 the applicant's academic record; score on the GMAT; and, for applicants whose native language is not English, score on the TOEFL; potential for managerial ability evidenced by work experience and community, extracurricular, or other experience; and letters of recommendation. Selection of applicants is based on each candidate's total application; therefore, minimum required undergraduate academic averages and GMAT scores have not been established. Preference is given to applicants who have had full-time work experience.
work experience related to the field of management 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.

Advising. Members of the M.B.A. admissions office professional staff may be contacted for general advising. Their address is Room 3371, Graduate School of Management, UCLA, Los Angeles, CA 90024. Students must select their areas of concentration by the end of their first year. There are advisers for each of the established concentrations. These advisers assist students in planning appropriate programs, and students meet with their concentration advisers as often as necessary.

Major Fields or Concentrations
Accounting-Information Systems
Arts Management
Behavioral & Organizational Science
Business Economics
Computers & Information Systems
Finance
Industrial Relations
International & Comparative Management
Management Science
Management Strategy and Policy
Marketing
Production & 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 concentration, and electives. 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 require students to learn the fundamentals of disciplines which underlie the practice of management. The concentration, selected by each student from a wide variety of established alternatives, provides specialized knowledge and skills for a particular field of management work. Electives permit students to pursue subjects of personal interest.

Nucleus. The nucleus as a series of three required courses focuses on developing those interpersonal and decision-making skills essential to the practice of management. The first-year nucleus course (Mgt. 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 2-quarter Management Field Study project, in which teams of four or five students serve as management consultants to business firms or other organizations. The members of each team represent a variety of concentrations. Proceeding under faculty guidance, each team conducts a policy-level study leading to specific action recommendations. 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 10 courses on subjects basic to the practice of management. It is divided into three parts: a 5-course management analysis requirement, a 3-course functional fields requirement, and a 2-course management processes requirement.

Management analysis requirements (five courses): Mgt. 402, Data Analysis, Statistics, and Decision-Making; Mgt. 403, Managerial Accounting; and three courses from the following four: Mgt. 404, Managerial Computing; Mgt. 405, Managerial Economics: The Organization; Mgt. 406, Managerial Economics: Forecasting; Mgt. 407, Managerial Model Building.

Functional fields requirements (three of the following four) Mgt. 408, Managerial Finance; Mgt. 409, Personnel Management and Labor Relations; Mgt. 410, Production and Operations Management; Mgt. 411, Elements of Marketing.

Management processes requirements (two courses): Mgt. 412, Management of Organizations; and Mgt. 420, Management Policy.

Concentration. The concentration focuses on a field of specialization within the broad realm of management. In addition to established concentrations, in special circumstances a student may design an individualized concentration in collaboration with interested faculty members. Individualized concentrations may include courses offered elsewhere on campus. The concentration consists of a minimum of seven to eight courses, within which some choice may be permitted.

Electives. Each student must select at least three 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 the student's program of studies.

Time to Degree. The full-time M.B.A. must be completed within two calendar years of admission. Acceleration may be possible by attending Summer Sessions.

Normally, students complete the M.B.A. program in six quarters; a summer session may count as one quarter. The minimum time required to complete the M.B.A. program is five quarters. Students in the M.B.A. Program for the Fully-Employed proceed at approximately half-time and complete the program in a maximum of 12 quarters, or four years.

At least 96 units of work towards the degree must be completed in residence in the M.B.A. program at UCLA. In special cases, up to 12 units of graduate work taken elsewhere and not used toward another degree may be counted toward the 96-unit total.

500 Series Course Limitations.

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Unit Value</th>
<th>Type of Grading</th>
<th>Number of Times May Be Repeated</th>
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</thead>
<tbody>
<tr>
<td>596</td>
<td>4</td>
<td>letter</td>
<td>2</td>
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</tbody>
</table>

A maximum of two 4-unit 596 courses may be taken for credit toward the 96-unit requirement.

Disqualification and Appeal of Disqualification. M.B.A. students who at the end of their first year in the program have less than a 3.0 grade point average or have completed fewer than 48 units are subject to disqualification. Their records are reviewed by the Assistant Dean-Director of the M.B.A. program, and if disqualification seems warranted, such action is recommended to a subcommittee of the M.B.A. Policy Committee. If this committee agrees, disqualification is recommended to the Dean of the Graduate School. Appeals are made through the Dean of the Graduate School of Management.

Involvement with the Professional Management Community. One of the outstanding features of the UCLA Graduate School of Management M.B.A. program is the deep involvement of its students with the professional management community. There are a variety of student organizations which 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.

Concurrent Degree Programs

J.D./M.B.A. Program

The School of Law and the Graduate School of Management jointly offer a program which makes it possible to earn the J.D. and the M.B.A. degrees in four academic years. This program is designed to provide opportunities for students to prepare for careers where law and management overlap and where understanding of both fields is necessary. For example, a graduate's career might be in corporate law, specialized areas of management consulting, public service, international trade or industrial relations.

Admission Requirements. Applicants who wish to apply to the J.D./M.B.A. program should apply to both the School of Law and the Graduate School of Management concurrently, following the application procedures specified by each school. Admission decisions for the
Program Requirements. In the first year of the program, all first-year J.D. program courses are taken. In the second year, the first-year M.B.A. nucleus and management core requirements are taken. During the third and fourth years, students complete the management field study requirement, five M.B.A. concentration courses and one or more electives in the Graduate School of Management, and 41 elective units in the School of Law.

The total requirements for the J.D./M.B.A. program include 76 quarter units in the Graduate School of Management and 73 semester units in the School of Law. Normally 96 quarter units are required for the M.B.A. and 85 semester units for the J.D. The J.D./M.B.A. requirements are as follows:

1. The first year law curriculum (30 semester units)
2. Forty-one elective units in the School of Law
3. The M.B.A. nucleus, management core and one elective (56 quarter units)
4. Twenty concentration units in the Graduate School of Management.

After completing all the requirements for the J.D./M.B.A. program, both degrees are awarded simultaneously. If, while in the J.D./M.B.A. program, a student decides not to complete either the J.D. or the M.B.A., all of the regular requirements for the program the student wishes to complete must still be met.

M.B.A./M.P.H. Program
The M.B.A./M.P.H. program is a 3-year concurrent degree program jointly sponsored by the Graduate School of Management and the School of Public Health. The program is designed for individuals who desire a management career in health care and related fields and who wish in-depth professional preparation for such a career. Its establishment 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.

Admission Requirements. In order to apply to the M.B.A./M.P.H. program, applicants should request all M.B.A./M.P.H. application materials from the M.B.A. Admissions Office, Graduate School of Management, UCLA. All application materials should be completed and returned to the M.B.A. Admissions Office. Admission decisions for the concurrent program are made by a committee composed of representatives from the Social School of Public Health and the Graduate School of Management, and applicants must be fully qualified for admission to both schools to be admitted to the combined program. Questions concerning the M.B.A./M.S. program should be addressed to the Director of M.B.A. Student Affairs and Admissions in the Graduate School of Management or to the Dean of the Graduate School of Library and Information Science.

Program Requirements. The first year of the program includes 84 units in the Graduate School of Management and 48 units in the Graduate School of Library and Information Science. In addition, 12 M.B.A. elective units may be fulfilled by required courses taken in Library Science.

After completing the requirements for the M.B.A./M.L.S. program, both degrees are awarded simultaneously. If, while in the M.B.A./M.P.H. program, a student decides not to complete either the M.B.A. or the M.P.H., all of the regular requirements for the program the student wishes to complete must still be met.
ies through elective courses outside GSM. Possible fields include Latin American economics, political science, history, sociology, anthropology, geography, fine arts, or literature.

After the second year, students must complete any remaining requirements for the two degrees. Typically, these consist of two or three additional courses in Latin American Studies and a comprehensive interdisciplinary research paper of approximately 50 pages, prepared in consultation with a committee of three faculty members representing the student's three fields in Latin American Studies. Students can make use of Summer Sessions to complete requirements or they can continue another quarter or two during the regular academic year. Students who lack sufficient background in Latin American Studies may be required to complete certain prerequisite coursework in addition to the regular program requirements.

For the M.A. in Latin American Studies, there is also a requirement of proficiency in both Spanish and Portuguese (or an indigenous language of Latin America), through the equivalent of Spanish 25 and Portuguese 3, or Portuguese 25 and Spanish 5. The language requirement can be fulfilled through coursework, examination, or certification by an appropriate authority.

M.B.A./M.A. Urban Planning Program
The M.B.A./M.A. Urban Planning program is a 3-year concurrent degree program jointly sponsored by the Graduate School of Management and the Graduate School of Architecture and Urban Planning. The program is designed for individuals who seek careers which draw on management training and the Graduate School of Architecture and Urban Planning. All core and concentration requirements for each program must be met, but where the two programs' core courses are substantially the same, students may choose from either program's offerings. A maximum of 24 units may be counted toward requirements for both degrees.

After completing all the requirements for the M.B.A./M.A. (UP) program, both degrees are awarded simultaneously. If, while in the M.B.A.-M.A. (UP) program, a student decides not to complete either the M.B.A. or the M.A. (UP), all of the regular requirements for the program the student wishes to complete must still be met.

The 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, Graduate School of Management, UCLA, Los Angeles, California 90024.

M.S./Ph.D. Programs
Admission Requirements. All applicants are required to take the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE). Foreign applicants who do not hold a degree from an English-speaking university are required to take the Test of English as a Foreign Language (TOEFL). Three letters of recommendation are included in the application and must be submitted with the completed application. All application materials, including transcripts, should be sent directly to the Doctoral Office, Graduate School of Management, UCLA.

Program Requirements. The first year of the program consists of the first-year M.B.A. curriculum. The second and third years are divided between both programs.

The total requirements for the M.B.A./M.A. (UP) program include from 72 to 92 units in the Graduate School of Management and from 48 to 68 units in the School of Architecture and Urban Planning. All core and concentration requirements for each program must be met, but where the two programs' core courses are substantially the same, students may choose from either program's offerings. A maximum of 24 units may be counted toward requirements for both degrees.

After completing all the requirements for the M.B.A./M.A. (UP) program, both degrees are awarded simultaneously. If, while in the M.B.A.-M.A. (UP) program, a student decides not to complete either the M.B.A. or the M.A. (UP), all of the regular requirements for the program the student wishes to complete must still be met.

The Master of Science Degree
The academic master's program is a full-time program which leads to the Master of Science (MS) degree in Management. It is currently offered in only two specializations: Business Economics and Management Science. The primary objective of the M.S. program is to offer students intense study in one of these two specializations and to prepare them to conduct substantive research.

Some students will enter the program with the goal of eventual acceptance into the doctoral program; for 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.

Advising. New master's students are initially advised by the M.S. advisor in their field of concentration. Students are urged to establish a working relationship with one or two faculty members early in their studies. They are free to change advisors whenever they wish to do so during the course of their progress through the master's program. The overall advisor of the program is the Assistant Dean, M.S./Ph.D. Programs.

Students are required to submit Proposal of Study forms by the end of their second quarter. These forms list the courses a student expects to take to fulfill the requirements of the program. A quarterly review is made by the Doctoral Office of all students' progress, based upon their study forms and transcripts. Students having scholastic difficulty, or making insufficient progress, are asked to discuss their progress with the Assistant Dean. All conversations with the Assistant Dean relating to progress are documented; copies are sent to the student's advisor, and records are kept in the student's file in the Doctoral Office.

Major Fields or Concentrations. Business Economics, Management Science
Course Requirements
Business Economics. A maximum of 17 courses may be required. It is possible to waive the eight prerequisite courses on the basis of prior coursework. Nine graduate level
courses (the required and elective major field courses plus 4 units of 598) are required and cannot be waived.

A. Prerequisites (eight courses): Mgt. 405, Managerial Economics; The Organization; Mgt. 400, Mathematics for Management; Mgt. 434, Managerial Accounting and Finance; Mgt. 406, Managerial Economics: Forecasting; Mgt. 408, Business Finance; Mgt. 213A, Probability and Statistics; Mgt. 200A, Mathematical Economics; Mgt. 208B, Econometrics.

B. Major Field (eight courses — deviations may be approved by the chair of the Business-Economics Academic Unit).


Electives — illustrative courses and course sequences (three courses):
- Industrial Organization: Mgt. 202A,D; Mgt. 203A,B,C; Mgt. 231A,B,C; Econ. 271, 272; Econ. 204.
- Techniques for Analysis: Econ. 247, 248; Econ. 245A,B,C; Mgt. 240A,B.
- Economic Forecasting: Mgt. 201B,C,D; Mgt. 205B,C; Mgt. 230A,B,C.

C. Master’s Thesis (one course) — 4 units of Mgt. 598

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 level courses (methodological core, depth field, and 4 units of 598) are required and cannot be waived.


B. Managerial Core (three courses): Mgt. 403, Managerial Accounting; Mgt. 405, Managerial Economics: The Organization; Mgt. 408, Managerial Finance.


D. Depth Field: three courses which support the student’s thesis research are required.

E. Master’s Thesis (one course): 4 units of Mgt. 598.

Thesis or Comprehensive Examination Plan. A thesis is required for the Master of Science degree in Management. Students generally establish a thesis committee during their fifth quarter. Plans for the thesis should be presented to the committee for approval at the beginning of the student’s sixth quarter. No outside member is required.

Time to Degree. From graduate admission to award of the degree: Six quarters.

500 Series Course Limitations.

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Unit Type</th>
<th>Number of Times May Be Repeated</th>
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<tbody>
<tr>
<td>596</td>
<td>4-8 Letter</td>
<td>No Limit</td>
</tr>
<tr>
<td>598</td>
<td>4-8 S/U</td>
<td>No Limit</td>
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</tbody>
</table>

Four units of 596 and 4 units of 598 may be used toward the minimum graduate course requirement of nine courses.

Disqualification. Termination of a student may be recommended when a 3.0 average is not maintained or when a student is making insufficient progress. The decision to recommend termination of a student is made by the Progress Committee of the Doctoral Board in conjunction with the student’s concentration area faculty.

Appeals. A student can appeal the Progress Committee’s decision by requesting that the Dean of the School appoint a faculty committee to reassess the Progress Committee’s decision; the Dean decides whether such action is warranted or not.

The Ph.D. Degree

The doctoral program in management is a research-oriented degree program which leads to the Doctor of Philosophy (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 each student substantial opportunities to discover his or her own, unique scholarly focus and competence.

Advising. All new doctoral students are initially advised by the Doctoral Adviser for their particular academic unit. Students are urged to establish a working relationship with one or two faculty members early in their studies. They are expected to have a close working relationship with at least one faculty member by the end of their first year in the program. Students are free to change advisers whenever they wish to do so during the course of their progress through the program. The overall adviser is the Assistant Dean, M.S./Ph.D. Programs.

All first-year students are reviewed by their respective academic units during the Spring Quarter of their first year in the program. First-year grades, papers, self evaluations, and faculty evaluations are generally used in the review process. The evaluation is discussed with a student before a final, written evaluation is forwarded to the Doctoral Office. A copy of the final evaluation is kept in the student’s file in the Doctoral Office.

By the end of their first year in the program, all students are required to submit Proposed Field of Study forms, which must be approved by the Assistant Dean. These forms outline all of the coursework the student plans to take to satisfy the program requirements plus the dates when the coursework, research paper, and major field examination are expected to be completed. A quarterly review is made by the Doctoral Office of each student’s progress based upon program deadlines, the Field of Study forms, and transcripts. If a student is having scholastic difficulty, appears to be making insufficient progress, or is approaching a program deadline, his/her case is brought to the attention of the Progress Committee. The Progress Committee determines what action should be taken. A copy of all correspondence between the Committee and the student or his/her adviser is maintained in the student’s file.

The Progress Committee is composed of three members: the Assistant Dean, one faculty member selected from those appointed to serve on the Doctoral Board for the year, and one student elected by the doctoral students. The committee is formed at the beginning of each academic year and meets at least three times during the year.

Major Fields or Concentrations.

Accounting-Information Systems
Behavioral & Organizational Science
Business Economics
Computers & Information Systems
Finance
Industrial Relations
International Business & Comparative Management
Management Science
Management Strategy & Policy
Marketing
Production & Operations Management
Urban Land Economics

Course Requirements. The research preparation requirement consists of two parts: (1) a course requirement and (2) a research paper. A student is required to take five (5) research courses which are not part of the major field area. These courses must be completed before a student can take an 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 (three faculty members designated by the Assistant Dean) no later than the Spring Quarter of a student’s third year of study.

The breadth requirement consists of eight courses which are clearly outside of a student’s major field area. It is intended that students 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 can be waived by prior coursework. They must be completed before a student can take the Oral Qualifying Examination.

There is no formal major field course requirement. Each student, in consultation with a major field advisor, designs a course of study which will prepare him/her to pass the major field examination.

Written and Oral Qualifying Examination. Proficiency in the major field area is determined by a written examination, supplemented in some areas by an oral examination, designed by that academic unit's faculty. The major field examination must be taken and passed by the end of the Spring Quarter of a student's third year of study. Students are required to present the substance of their dissertation plans in a formal seminar to which all Ph.D. students and faculty are invited.

Following the formal seminar, the student prepares a dissertation proposal and participates in the nomination of a 5-member dissertation committee. When all the preliminary requirements have been fulfilled (coursework, research paper, major field examination, seminar), the student's Oral Qualifying Examination can be held; and, if passed, he/she is advanced to candidacy. The Oral Qualifying Examination must be successfully passed within 4½ years of the date of entrance into the program.

Final Oral Examination Following Completion of the Dissertation. The School requires that students take a Final Oral Examination; this requirement may be waived only under exceptional circumstances.

Time to Degree. The program is designed to take four years (12 quarters) from graduate admission to awarding of the degree; completion of the degree cannot exceed 7½ years (23 quarters). Normative time-to-degree is 4½ years (14 quarters).

Candidate in Philosophy Degree. The Candidate in Philosophy degree is available to GSM doctoral students upon their advancement to candidacy.

Disqualification. Students are terminated from the doctoral program whenever it becomes evident that they are not making satisfactory progress or that they are unlikely to be able to complete the program successfully. The most frequent occasions for termination occur when less than a 3.0 average is maintained for two consecutive quarters; when the student's major field area faculty recommends termination at the time of the first-year review, or when a student fails to meet the time requirements for the research paper, the major field examination, advancement to candidacy, or the dissertation.

The minimum standard of performance at GSM exceeds the University's minimum grade point average of 3.0. In particular, if two or more courses in which grades below "B" are received, or if incompletes are not removed within one quarter, such instances are viewed as indications of serious scholastic deficiencies which require review by the appropriate academic unit and may be the basis for dismissal from the program.

Students are given written notification of approaching deadlines; all deadlines are determined by the date of entry into the program. Termination decisions are made by the Assistant Dean for the Doctoral Program, based upon recommendations by academic unit faculty or by a Progress Committee established by the Assistant Dean.

Appeals. A student may appeal a termination decision by requesting that the Dean of the School name a Faculty Committee to review the termination. The Dean may exercise his/her discretion as to the appropriateness of establishing such a committee.

Upper Division Courses (numbered 100-199)

108. Legal Analysis for Business Managers. Significance and growth of the law; the law in its relationship to business, with special emphasis on current problems; coverage of the law of contracts, agency, sales, property, negotiable instruments, business organizations including the functions of inside and outside counsel and trade regulations.

111. Introduction to Management Science. Prerequisites: sophomore standing or equivalent. An introduction to the theory and practice of management science. The first quarter presents the recording, analyzing, and summarizing procedures used in preparing balance sheets and income statements. The second quarter includes payroll and tax accounting, partnership and corporation accounting, manufacturing and cost accounting, and supplementary statements.

113A. Computer Data Processing. Prerequisites: course 113A or equivalent. A study of the forms and sources of financing business and personal affairs. Analysis of investment policy to money markets and business fluctuations; security price-making forces; construction of personal investment programs.

133. Principles of Insurance. Basic principles of risk and insurance and their applications to business management and personal affairs. Analysis of concepts and methods of handling risks; insurance carriers, contracts, and underwriting; loss prevention and settlement; government insurance and corporate and noncorporate. The emphasis is on financial planning and development of judgment in formulating decisions on financial problems. Financial problems are also considered in their social, legal, and economic effects.

135. Principles of Economics. Basic principles of business and their applications to business management and personal affairs. Analysis of concepts and methods of handling risks; insurance carriers, contracts, and underwriting; loss prevention and settlement; government insurance and corporate and noncorporate. The emphasis is on financial planning and development of judgment in formulating decisions on financial problems. Financial problems are also considered in their social, legal, and economic effects.

145. Elements of Real Estate and Urban Land Economics. An examination of business decision making as related to logical force shaping cities and influencing real estate market functions and user uses. Emphasis is placed on decision making as it relates to appraising, building, financing, managing, marketing, and using urban property.

155. Business Statistics. Prerequisite: course 120, 4A-4B, or equivalent. Elements of probability, probability distributions, estimation and confidence intervals, tests of significance and of hypotheses, linear regression and correlation, time series analysis, and applications of probability to analysis and decision-making aspects of everyday business problems.

120. Intermediate Accounting. Prerequisites: course 120, course 115 or Economics 40 or equivalent. The nature, objectives, and procedures of cost accounting and control; job costing and process costing; accounting for manufacturing overhead; cost budgeting; cost reports; joint-product costing; distribution cost; standard costs; differential cost analysis; profit-volume relationships and break-even analysis.

121. Advanced Accounting. Prerequisite: course 122. Partnerships and joint ventures; installment sales and consignment sales, home office and branch relationships; corporate combinations; the preparation of consolidated statements; foreign branches and subsidiaries; reorganizations; estates and trusts, governmental units; actuarial science.

130. Business Finance. Prerequisites: course 120; course 115 or Economics 40 or equivalent; Economics 101A. A study of the forms and sources of financing business and personal affairs. Analysis of investment policy to money markets and business fluctuations; security price-making forces; construction of personal investment programs.
182. Leadership Principles and Practice. Knowledge and skills leading to effectiveness in interpersonal relations. Understanding oneself as a leader, and others as individuals and as members of working groups. Understanding organizational processes, including group leadership. Lectures and "sensitivity training" laboratory. Mr. Culbert, Ms. Lasko, Mr. Massarik

190. Management Theory and Policy. Prerequisite: course 130. A study of the basic concepts and theory of management. Emphasis is on an operational analysis of the manager's role in all types of organizational settings. The course deals with management issues in the areas of planning, organizing, staffing, directing, and controlling. Mr. Carrabino and the Staff

197. Special Topics in Management. Topics of special interest to undergraduate students. Specific subjects to be covered may change each quarter depending on particular interest of instructors or students. May be repeated for credit.

Graduate Courses (numbered 200-299)

Graduate courses are ordinarily open to students admitted in graduate standing. As a condition for enrollment, the student 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. Prerequisite: course 405 and Economics 143 or consent of instructor. Contemporary business economic principles of resource allocation and the price system are developed. Classical optimization and comparative static techniques are set forth and applied to the models of consumer choice and firm and general production-exchange equilibrium models. Mr. Granfield, 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 linear regression model, special problems in application, and interpretation of results are stressed. Practical applications are extensively developed. Mr. Granfield, Mr. Kimbell, Mr. Massarik

201A. Business Forecasting. Prerequisite: courses 100, 101, or 405, 406 and 115 or 402. The role of business forecasting in managerial planning. Principles and methods of forecasting. Evaluation of the reliability of existing forecasting techniques. Covers both short-term and long-term forecasting of industry, regional, and national business trends. Mr. Kimbell, Mr. Norton, Mr. R. Williams

201B. Industry Forecasting. Prerequisite: course 201A. Evaluation of various methodologies found useful in preparing industry forecasts; differences between short- and long-range forecasting techniques, etc. Mr. Andersen, Mr. Kimbell

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. Mr. Granfield, Mr. Kimbell, Mr. R. Williams

202. Economic Policy and Business Environment. Prerequisite: consent of instructor. Analysis of economic policies shaping the business policy; stabilizing policy instruments; structural policies for efficiency and progress; policy needs for the future. Treats policy formation and administration as well as design. Mr. Granfield, Mr. Nichols

202A. Economic Theories of Business Behavior: Marginal, Managerial, and Behavioral. Prerequisite: course 202A. The economic behavior of the firm and groups is considered. Theories extending from classical microeconomics, human and group decision making, alternative corporate objectives to those viewing the firm as an adaptive mechanism with limited cognitive and information processing capabilities. Mr. Nichols, Mr. Weston

202B. Principles of Industrial Organization. Prerequisite: course 202A. The course develops analysis principles necessary for understanding the economic structure and behavior of industries. Topics range from substitutability criteria for industry definition and a comparison of alternative classification schemes to the relationships among industry structure, conduct, and performance. 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, research, and development. Mr. Nichols, 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 statutory and legal decisions affecting internal and external expansion policies. Mr. Granfield, Mr. Nichols, Mr. Weston

202E. Economics of Decision. (Same as Economics M203A.) Prerequisite: rudiments of economic theory, calculus, and probability and statistics. Norms and facts of decision making in household, business, and government. Consistent behavior in terms of preferences, utility, and certainty, the model of multiply attribute value theory. Departures from consistency: descriptive theories of behavior and resulting models. Mr. Erlenkotter, Mr. Sarin

202F. Economics of Information. (Same as Economics M203B.) Prerequisite: rudiments of economic theory of the firm, calculus, and probability and statistics; course M203A, or consent of instructor. Optimal decision and information rules. Amount, cost, and value of information. Risk version, stochastic dominance, and the impact on economic decisions in a stochastic environment. Mr. Granfield, Mr. Lippman

203A. Applications of Economic Theory. Prerequisite: course 202D. Modern microeconomic theory and its applications to the study of the behavior and organization of industrial enterprises. Mr. Lippman

203B. Economic Development. (Same as Economics M203C.) Prerequisite: course 203A-203B. Rational models of teams. Relation to the theory of games. Mr. Graves

204. International Business Economics. Prerequisite: courses 405, 406, or consent of instructor. The international business environment, international economic institutions, national and regional trade policies and developments, trends in foreign markets, international monetary problems are studied, their influence on the organization and performance of international enterprises. Mr. H. H. Mason, Mr. Mitchell, Mr. Schöllhammer

205B. Comparative Market Structure and Competition. Prerequisite: course 204A or consent of instructor. A comparative study of public policies toward competition, market structures, and competitive practices in key industries in selected countries. Mr. Graves, Mr. Granfield, Mr. Osborne, Mr. R. Williams

205C. Business Forecasting for Foreign Economies. Prerequisite: course 202A or consent of instructor. Forecasting changes in business activity, population, industrial structure, productivity, Gross National Product and its components for selected countries. Mr. Osborne, Mr. R. Williams

205D. The Management of Economic Development in Latin America. Discussion, 3 hours. Prerequisite: Economics 1 or 2 or Management 405. An introduction to economic development in Latin America, with emphasis on human and institutional development, sources of development, agriculture, and land reform. Examination of various industrialization strategies, the role of foreign trade, foreign investment, and economic integration in the area's development. Analyses role of inflation and financial intermediation in capital development.

207A. Resource Administration of Nonmarket Activities. Prerequisite: courses 405 and 406 or consent of instructor. Examination of the proper economic role of nonmarket institutions, and of the allocation of societal resources between the public and private sectors via market and nonmarket mechanisms. Definition and application of economic efficiency to resource allocation. Mr. Granfield, Mr. Graves

207B. Public Services and Private Functions. Prerequisite: courses 405 and 406 or consent of instructor. Sources and uses of federal, state, and local revenues and their impacts on public and private resource allocations. Examination of the proper roles of government and the private sector in the financing and provision of public goods and services. Mr. Granfield, Mr. Osborne

208. Selected Topics in Business Economics. Prerequisite: consent of instructor. Special topics in business economics. Current development in their application and practice in business economics may be repeated for credit.

210A. Mathematical Programming. Prerequisite: Mathematics 115. A comprehensive development of the theory and computational aspects of linear programming, with applications to business and related disciplinary areas. Mr. Graves

210B. Applied Stochastic Processes. Prerequisite: Mathematics 150A or Engineering 120A. Sequential stochastic processes; decision processes in discrete and continuous time, emphasis is on problem formulation and the characterization and computation of optimal policies, often via dynamic programming; application to inventory, queuing, maintenance, reliability, and replacement problems. Mr. Lippman, Mr. Mamer

210C. Network Flows and Integer Programming. Prerequisite: course 210A. Theory and techniques of discrete and network-related mathematical programming models in Management. Applications to various allocation, coordination, operating and planning programs: The emphasis will be on fundamentals, efficient computational methods, and the keys to successful practical applications. Mr. Geoffrion

211A. Nonlinear Mathematical Programming. Prerequisite: Mathematics 32A and course 210A or the 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 experience. Mr. Geoffrion

211B. Large-Scale Mathematical Programming. Prerequisite: course 210A or the 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/or constraints. Mr. Geoffrion, Mr. Graves

212A. Management Science Models I. Prerequisite: Mathematics 31B and course 210B. A broad survey of deterministic models, how to solve them, and their application in the management sciences. Solution techniques covered include linear programming, network optimization, integer programming, non-linear programming, and dynamic programming. Applications areas covered include allocation, corporate planning, distribution, finance, operations management, production, and project management. Mr. Erlenkotter, Mr. Geoffrion
212B. Management Science Models II. Prerequisite: Mathematics 32A, course 212A, or equivalent. A broad survey of non-linear, time-staged, and probabilistic models for managerial decision-making. Application areas include finance, marketing, production, facilities design, and communication systems.

Mr. Erlenkotter, Mr. Mamer

212C. Management Science Models III. Prerequisites: courses 212A, and 212B. In-depth review of actual management science applications. Emphasis is placed on the professional skills needed for successful practical applications.

213A. Intermediate Probability and Statistics. Prerequisite: course 402 or the equivalent. An introduction to probability theory and hypothesis testing as applied to management. SAS programs will be used in this course and its sequel.

Mr. Jones, Mr. Mamer

213B. Statistical Methods in Management. Prerequisite: course 213A or consent of instructor. An introduction to parameter and interval estimation, simple analysis, and regression analysis.

Mr. Cooper, Mr. Jones, 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. Linearization 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 is 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 analysis. Relationship between econometric and time-series models, Granger causality, multiple time-series analysis, and computer applications for modeling and forecasting.

Mr. Hanssens

215E. Statistical Design of Surveys. Prerequisite: course 213B or equivalent. Mathematical theory and practices of statistical survey design and analysis.

Mr. MacQueen

216A. Simulation of Operational Systems. Prerequisite: courses 113B, 402, or equivalent background in batch computing (A PL is not suitable) and statistics. Computer simulation methodology including design, validation, operating procedures, and analysis of results of simulation experiments. Applications of simulation to management problems.

Mr. Nelson

218B. Advanced Computer Simulation. Prerequisite: course 216A. Advanced use of computer simulation techniques. Major term projects will be undertaken, either singly or in groups, with the object of developing in students the ability to accomplish all phases of the design and execution of computer simulation.

Mr. Nelson

217A. Statistical Decision Theory. Prerequisite: course 213A or consent of instructor. Relationships among statistical decision theory, game theory, and classical statistical inference, with emphasis on sequential analysis and dynamic decision processes; axiomatic foundations, Bayes' and minimax solutions, applications to selected models of dynamic decision problems in business.

Mr. MacQueen

217B. Game Theory. Prerequisite: course 213A or equivalent. Nature of models for rational behavior in presence of conflicts of interests, zero-sum and non-zero-sum games, two-person and many-person games, state of the art, philosophical and computational limitations, relations with adjacent and group decision-making.

Mr. MacQueen

218A. Selected Topics in Management Science. (1/4 to 1 course) Prerequisite: consent of instructor. Newly developing topics and viewpoints. Topics include reliability and optimal maintenance theory, large-scale distribution/inventory systems, and Markovian decision processes under uncertainty. May be repeated for credit.

218C. Selected Topics in Business Statistics. (1/4 to 1 course) Prerequisite: consent of instructor. Special topics in statistical methods. Current developments in statistical theory and practice. Analysis of recent literature. Topics and instructors will be announced when they become known. May be repeated for credit.

218D. Current Problems in Management Science. (1/4 to 1 course) Current research on a variety of topics in the general area of management science, presented by invited university and outside speakers. May be repeated for credit.

218YXZ. Current Issues in Management Science. (1/4 to 1 course) Current issues and research on a variety of topics in the general area of management science. May be repeated for credit.

220A. Intermediate Financial Accounting I. Prerequisite: course 212A or consent of instructor. The first of a two-course sequence that deals with the concepts and principles of financial accounting with an emphasis on the pronouncements of the Financial Accounting Standards Board, the Securities and Exchange Commission, and other authorities.

Mr. Buckley, Mr. Manegold, Mr. Wagner

220B. Intermediate Financial Accounting II. Prerequisite: course 220A or consent of instructor. The second of a two-course sequence that deals with the concepts and principles of financial accounting with an emphasis on the pronouncements of the Financial Accounting Standards Board, the Securities and Exchange Commission, and other authorities.

Mr. Buckley, Mr. Manegold, Mr. Wagner

220C. Advanced Financial Accounting. Prerequisite: course 220B or consent of instructor. In addition to providing a continuation of 220B, this course gives special attention to a range of topics which include accounting for partnerships, mergers, combinations, and parent-subsidiary relationships. Legal, tax, and insurance considerations; reorganizations; reorganizations; bank; and bankruptcy.

Ms. Kelly

221. Current Issues in Accounting Information Systems. Prerequisite: consent of instructor. Using a colloquium format, this 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 position paper on each topic presented.

222. Cost Accounting. Prerequisite: course 403. The nature, objectives, and procedure of cost accounting and control; job costing and process costing; joint product costing, standard costings; theories of cost allocation and absorption; uses of cost accounting data for management decision making.

Ms. Kelly, Mr. McDonough

223. Verification of Financial Statements. Problems of examination, verification, and presentation of financial statements; independent public accountant; legal and professional responsibilities of public accountants; professional ethics. Operational and management auditing.

Mr. Kircher

224A. Computer Systems. Prerequisite: course 225A and either 113B or 113C or consent of instructor. The specification and configuration of computer-based systems for management applications. Methods for costing system hardware and software and for assessing computer performance. Trade-off analyses of comparative computer configurations. Case materials and/ or actual examples are used.

Mr. Lientz

224B. Management of Computer-Based Information Systems. Prerequisite: course 224A or consent of instructor. An in-depth overview 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 computer systems, are stressed.

Mr. McLean

224C. Systems Analysis for Computer-Based Information Systems. Prerequisites: courses 224A or equivalent. Emphasis will be placed on the design and specification of computer-based management information systems. Includes studies of existing systems, economic and organizational analyses of alternatives, and tools for determining user requirements. Case studies and actual examination of systems will be used.

Mr. Chen, Mr. Lientz, Mr. Sprowis

225B. Information Systems for Planning and Control. Prerequisite: course 113B or 113C or consent of instructor. The design, configuration, and implementation of computer-based information systems. Includes studies of existing systems, economic and organizational analyses of alternatives, and tools for determining user requirements. Case studies and actual examination of systems will be used.

Mr. Chen, Mr. Sprowis

224E. Computer Simulation for Management. Prerequisite: Engineering 20 or course 113B or 113C or consent of instructor. Introduction to computer simulation and to general purpose simulation languages (e.g., GPSS, SIMSCRIPT, DYNAMO). Emphasis is upon the managerial use of simulation and the development of computer-based models for problem solving and policy analysis. Programming assignments are based on simulation programs for a field study project may be required.

Mr. Chen, Mr. Sprowis


Mr. Lientz

224G. Special Topics in Computing. Prerequisite: consent of instructor. An examination in depth of issues or problems concerned with the theory and practice of computing and the management use of EDP systems. Course content varies. The theme of the course may deal with a number of topics. May be repeated for credit.

225A. Introduction to Information Systems. Prerequisite: course 404 or consent of instructor. Basic concepts and uses of information systems in organizations. Fundamental design considerations. The role of data processing. Examples of information systems in profit and non-profit organizations.

Mr. McLean, Mr. Sprowis, Mr. Swanson

225B. Information Systems for Planning and Control. Prerequisite: course 403 or consent of instructor. Design of systems to produce information for planning and control. Survey of approaches and techniques employed at the strategic, managerial, and operational levels. Special consideration of accounting and budgeting methods. Impact of planning and control information on human behavior.

Mr. Flaholz, Mr. McDonough
225C. Measurement in Information Systems. Prerequisite: familiarity with basic statistics, probability theory, set theory, and accounting, or consent of instructor. A study of the role of measurement in accounting and information systems, with emphasis on point of mathematical, economic, behavioral, and organizational consideration. Mr. Swanson

225D. Special Topics in Information Systems. Prerequisite: open primarily to Ph.D. candidates or with consent of instructor. An examination in depth of writings or issues of current concern in information systems. Emphasis on recent contributions to theory, research, and methodology. Special interest to advanced doctoral candidates, the academic staff, or distinguished visiting faculty. May be repeated for credit.

225X-225Y-225Z. Current Research in Information Systems. (1/4 course, 1/4 course, 1/2 course) Discussion, two hours. Prerequisite: enrollment in Ph.D. program. A year-long sequence associated with the Computers and Information Systems Colloquium Series. Regularly scheduled presentations of current research and state-of-the-art developments in the information systems field. Study and discussion of the research presented. May be repeated for credit. Graded S/U only.

226. International Accounting. Prerequisite: Graduate Standing. Comparative analysis of accounting concepts and practices in other countries; study of contacts between various systems; problems of accounting for international corporations including transfers of funds and income measurement; and accounting influences on economic development. Mr. Bucky, Mr. Brodner

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 material and research methods for ascertaining current rulings and trends in laws and regulations.


228A. Accounting Theory. Prerequisite: course 220B. A survey of accounting literature, with emphasis 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 extending demands for accountability.

228B. 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 as they relate to accounting.

229A. Accounting Theory. Prerequisite: course 220A. A survey of accounting literature, with emphasis 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 extending demands for accountability.

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 as they relate to accounting.

229C. Special Topics in Accounting. Prerequisites: open primarily to Ph.D. candidates or with consent of instructor. An examination in depth of writings or issues of current concern in accounting. Emphasis on recent contributions to theory, research, and methodology. Special interest to advanced doctoral candidates, the academic staff, or distinguished visiting faculty. May be repeated for credit.

229X-229Y-229Z. Accounting and Information Systems Workshop. (1/4 course, 1/4 course, 1/2 course) Discussion, two hours. Prerequisite: Doctoral Standing. The course is designed to develop an ability to critique the qualitative 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 throughout the discussion of papers in the sessions to the workshop, as well as during the colloquium. May be repeated for credit. Graded S/U only.

230. Theory of Finance. (Formerly numbered 231B.) Prerequisite: course 406. Concerned with decision making under uncertainty, the theory of asset prices, and the efficiency of capital markets. Develops the most relevant financial models and an understanding of their implications to fundamental issues in corporate financial management such as capital budgeting, capital structure, and dividend policy.

Mr. Copeland, Mr. Geske, Mr. Mayers

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 debates. Mr. Eiteman, Mr. Fenton

231B. Nonprofit Sector Financial Policy. Prerequisite: course 408. Identifying and solving financial problems for all types of nonprofit organizations through use of cases. Stresses possible application of financial theory for profit-oriented firms. Particular attention to unique problems of resource allocation when market valuation cannot be used as a criterion.

Mr. Eiteman


Mr. Eiteman

231D. Applications of Quantitative Methods in Finance. Prerequisite: course 230 and completion of five-level seminars. Applications of multiplet regression, mathematical programming, and stochastic processes to more complex problems of financial decision making. Comparison of solutions from alternative quantitative methods.

Mr. Mayers

232A. Security Analysis. Prerequisite: course 230. Primarily a course in stock market investing, but approach is applicable to all investment assets. Includes analysis of economic and institutional factors and portfolio analysis based on financial statements of the organization.

Mr. Eiteman, Mr. Roll, Mr. Shelton

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. Geske, Mr. Masulis

233A. Money and Capital Markets. (Formerly numbered 230A.) Prerequisite: course 230. Application of information theory and analysis to the price determination process in the markets for bonds, mortgages, stocks, and other financial instruments. Study of funds flow from credit markets. Analysis of costs of capital in individual industries.

Mr. Andersen, Mr. Roll

233B. Financial Institutions. (Formerly numbered 230B.) Prerequisites: courses 230 and 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 major problems facing senior managers of these financial institutions.

Mr. Andersen, Mr. Roll, Mr. Shelton

233C. Speculative Markets. Prerequisite: course 230. Study of the theory and evidence of 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. Masulis, Mr. Roll

234A. Multinational Finance. (Formerly numbered 233A.) Prerequisites: courses 205A and 408; in addition, course 230 is recommended for Finance majors. Financial problems in the management of multinational businesses. Included are the international financial environment, problems surrounding the decision to commit long-term capital to an international venture, and financial techniques for the daily operation of a multinational firm.

Mr. Eiteman, Mr. Weston

234B. Advanced Studies in International Finance. Prerequisites: courses 230 and 234A. Study of current and important issues of international financial management. Major focus on the interrelation of advances in theoretical understanding and implications for the business firm in its international financial management decisions.

Mr. Eiteman, Mr. Weston

235A. Problems in Insurance Management. Prerequisite: course 135 or consent of instructor. Advanced consideration of the problems of insurance management. Treats the actuarial, underwriting, investment, marketing, and regulatory problems relating to insurance activities.

Mr. Hofflander

235B. Risk and Risk Bearing. Prerequisite: course 135 or consent of instructor. Advanced consideration of the distribution of risk. The analysis of alternative ways of meeting risk and uncertainty, the scope and limits of insurance, and the economics of insurance.

Mr. Hofflander

236. Special Topics in Finance. Prerequisites: course 230 and consent of instructor. Course intended for master's students. Selected topics in finance theory, empirical studies, and financial policy. May be repeated for credit under different Finance faculty members.

238A. Theory of Exchanges under Uncertainty. Prerequisites: course 230 and consent of instructor. Foundations of the theory of exchange are developed as an introduction to theoretical literature on the pricing of capital assets. Course is primarily intended for second-year Ph.D. students, but well-prepared master's students may find the course useful in their career preparation.

Mr. Geske, Mr. Roll

238B. Theory of Investment under Uncertainty. Prerequisites: courses 230 and 238A or consent of instructor. Foundations of the theory of exchange are developed as an introduction to theoretical literature on the pricing of capital assets. Course is primarily intended for second-year Ph.D. students, but well-prepared master's students may find the course useful in their career preparation.

Mr. Geske, Mr. Roll

239A. Empirical Research in Finance. Prerequisites: course 230, training in econometrics, and consent of instructor. In-depth study of empirical research in field of finance with emphasis on market efficiency, capital asset pricing, and option pricing. Course is primarily intended for doctoral students, but well-prepared master's students may find the course useful in their career preparation.

Mr. Geske, Mr. Roll

239D. Doctoral Seminar in Finance. Prerequisites: course 230 and courses in the 239 series. Course intended for doctoral students. Advanced topics in finance theory and empirical research. May be repeated for credit under different Finance faculty members.

239X-239Y-239Z. Finance Workshop. (1/4 course, 1/4 course, 1/4 course, 1/2 course) Discussion one and one-half hours. 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 finance. Active participation and intellectual interchange are encouraged through discussion of the papers in session. Discussion is well organized and well as during the colloquium. May be repeated for credit. Graded S/U only.

240A. Aggregate Planning and Work Force Scheduling. Prerequisite: course 410. Managerial methods for short-term capacity planning and scheduling in aggregate terms. Model building and management practices in manufacturing and service operations. Model formulation that allocates use of regular and overtime labor, inventories where appropriate, backordering shortages, and outside capacity.

Mr. Nelson

240B. Scheduling and Control of Operations. Prerequisite: course 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 evaluation of scheduling and control procedures. Classification of production and service systems. 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 capabil-
ities, characteristics, and configuration of service and manufacturing systems as part of overall strategy for
attaining organizational goals; planning of capacity, location, processes/technologies, facilities, organiza-
tional structures, and jobs. Mr. Andrews, Mr. Erlengkott

241. Technological Bases of Jobs and Organizations. Prerequisite: consent of instructor. Technologi-
cal determinants of operating systems and jobs; product-
duction processes and problems; behavioral models underlying operating system design, technology, and
social system design; operating system variability, control, and measurement. Mr. Davis

242A. Planning for Facilities Systems. Prerequi-
tive: course 212A or equivalent. Planning of location, expansion, and replacement for interdependent sys-
tems of facilities. Examination of spatial and dynamic economic considerations. Applications in selected indus-
tries and public systems. Mr. Erlenkotter

243A. Project Management. Prerequisite: course 407 or equivalent. Management of development proj-
ects. Decision-making environment, economic analysis, network analysis, scheduling, and control of de-
velopment projects. Sequential and aggregate develop-
ment. Mr. Lippman

243B. Inventory Theory. Prerequisite: course 210B or consent of instructor. General discussion of inven-
tory models with emphasis upon characterizing the
form of optimal policies and efficient computational methods. Both deterministic and stochastic and dis-
crete and continuous time models are considered. Mr. Mr. Andrews

244. Policy Issues in the Management of Oper-
atons. Prerequisite: second-year status. Case anal-
yses centering on the operation phases of enter-
prises. Cases selected are at the policy level and are drawn from service, nonmanufacturing, and manu-
facturing industries. Mr. Andrews

245A. Special Topics in Operations Management. Studies of advanced subjects of current interest in
operational management. Emphasis is on recent de-
velopments and the application of specialized knowledge to operational management problems. Topics include change and other environmental factors affecting operations, human resource planning, and organizational change management tasks and roles; and acquiring and allocating resources. Mr. Fogel, Mr. Massarik

245B-245C. Survey of Operations Management. Prerequisite: Enrollment in the master's or the doctor-
al degree program. Survey of the research literature in opera-
tions management. Seminar reports dealing with special topics.

246A. Policy Analysis in the Public/Not-For-Profit Sector. Prerequisite: completion of the management
analysis requirement for the MBA Program. Application of policy analysis to public affairs. Specific topics include the impact of public/private policy decisions, the relationship between public and private sector policy decisions, and the role of public policy in the shaping of public affairs. Mr. Andrews, Mr. Zemeta

248B. Budgeting and Resource Allocations in the
Public/Not-For-Profit Sector. Prerequisites: courses 248A and 248C. Emphasizes factors and prin-
ciples underlying budgetary processes and resource allocation decision-making. The process is exam-
ined from both the public and non-profit perspectives. Mr. Andrews, Mr. Zemeta

249C. Policy Implementation in the Public/Not-
For-Profit Sector. Prerequisites: courses 246A, 248B, or consent of instructor. Emphasizes the imple-
mentation of strategies, techniques for implementing policies within
the organizational context. Relations public interest
needs for accountability and responsibility to the or-
ganization and management of assets for security and
advancement. Includes consideration of public sector entrepreneurship, public personnel management, public sector consulting. Mr. Zemeta

247A. Inter-Organizational Strategies in the Pub-
lic/Not-For-Profit Sector. Prerequisite: consent of in-
structor: Consideration of public/not-for-profit organi-
izations as members of a network from point of view of
strategies for managing entire network and manage-
ting implications for an individual, local organization. System structure, transactions, levels of collabo-
ration, competition, and dependence. Mr. Boje

248. Special Topics in Public/Not-for-Profit. Prer-
erequisite: consent of instructor. Studies of advanced
subjects of current interest in public/not-for-profit management. Emphasis is on recent developments and the application of specialized knowledge to public/not-for-profit problems. Topics change each offering and, in the absence of significant duplication, the course may be repeated. Mr. Andrews

250A. Human Resource Management. Prerequi-
tive: consent of instructor. First part of a two-course sequence focusing upon the processes and problems of managing human resources. Topics include skill management, human resource planning, and organization tasks and roles; and acquiring and allocating resources. Mr. Fogel, Mr. Massarik

250B. Human Resource Management. Prerequi-
tive: course 250A. Topics include development and training; human resources accounting; behavioral foundations of participative management; motivation, productivity, and satisfaction; designing reward systems; and evaluation of organization effectiveness. Emphasis is upon the evaluation, predicting, and influencing human behavior in organizations. Mr. Massarik

250C. Systems of Employee-Management Partici-
pation. Prerequisite: consent of instructor. Course de-
veloped to provide students with the knowledge 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 consulta-
tion, workers' councils, profit sharing will be covered. Mr. Adizes

251. The Management of Labor Relations. Consid-
eration, at an advanced level, of the collective bar-
gaining process, the labor-management agreement, the implementation of the agreement, and the role of public policy on the management of industrial relations. Case studies, field trips, and visiting lecturers will be part of the seminar curriculum. Mr. Hutchinson

252. Law and Governmental Policy in Industrial
Relations. Prerequisite: course 409. Governmental policies on employer-employee relations; historical background; constitutional and common law princi-
ples; the administration of labor, Public Policy, Antitrust, Anti-Injunction, Fair Labor Standards, Workmen's Compensation, and other acts; trends and proposed legislation on labor-management affairs. Mr. Bogel, Mr. Mitchell

253A. Negotiation and Conflict in Organizations. Prerequisite: Graduate Standing. The occurrence
and management of differences throughout the orga-
nization. Furnishes a multidisciplinary understanding of conflict, as manifested in a wide variety of forms, including labor-management conflict, conflict in organizational arenas. The course is designed to provide students with the opportunity to improve their conflict resolution and management skills. Mr. Weitz

253B. Conflict Resolution in Labor-Management
Relations. Prerequisite: Graduate Standing. Analysis
of conflict in the labor-management relationship. Theoretical and empirical findings are examined. Prin-
ciples and philosophies that underlie resolution of labor-management impasses are considered with emphasis on grievance procedures, arbitration, med-
diation, and factfinding. Mr. Prasow

254. Analysis of Labor Markets. Prerequisite: con-
sent of instructor. Problems of verifying hypotheses concerning labor market behavior and the application of data to managerial problems. Problems of opera-
tionally defining labor market concepts. Critical evaluation of available labor market data. Case studies applying these data to managerial problems. Mr. Fogel, Mr. Mitchell

255. Comparative Industrial Relations. Prerequi-
tive: course 409 or an elementary knowledge of labor economics. At national and international level, his-
torical and contemporary comparative analysis of indus-
try relations systems within their political, social, and economic environments. Included are: the insti-
tutions, philosophies, and ideologies of labor, man-
agement, and government, and the interaction of their relationship patterns and modern techniques of determination of "web of rules" governing the rights and obligations of the parties; and the resolu-
tion of conflicts. Mr. Hutchinson

257. Labor-Management Relations in Public and
Non-Profit Sectors. Prerequisite: Graduate Stand-
ing. Analysis of labor-management relations in gov-
ernment, including public education, and in nonprofit institutions (i.e., artistic, cultural, recreational, and health care). Emphasis is on negotiations and group relations, rather than the personal administration. Mr. Prasow, and the Staff

258. Selected Topics in Industrial Relations. (½ to
1 course) Prerequisite: open primarily to Ph.D. candi-
dates but also to others with consent of instructor. An examination of selected issues in the area of labor-management relations. Emphasis is on recent contributions to theory, research, and methodology of special interest to advanced doctoral candi-
dates, the academic staff, or distinguished visiting faculty, to be recommended for credit.

259A. Manpower Planning and Evaluation. Pre-
requisite: course 254 recommended. The develop-
ment of programs and practices to meet manpower
requirements of individual labor force groups, business firms, and communities. Examination of techniques for the evaluation of such programs. Mr. Fogel, Mr. Mitchell

259B. Utilization of Minority Manpower. Prerequi-
tive: course 254 recommended. Examination of the experi-
ence of minority groups within organizations and their role in the labor force. Examination of problems of adapting American marketing concepts to the needs of minority groups. Mr. Mitchell

260A. Advanced Marketing Management. Prere-
quisite: course 411 or consent of instructor. A decision-
oriented course concerned with the solution of prod-
uct, price, promotion, and distribution channel prob-
lems. Extensive use will be made of case method. Ms. Scott, Weitz

260B. Marketing Strategy and Planning. Prerequi-
tive: course 260A or consent of instructor. A frame-
work for strategic marketing planning is developed. The cornerstone is the analysis of the environment and the structures within which the firm operates. The concepts of SWOT analysis, windows of opportunity, and emerging and declining segments are introduced. The framework is applied primarily to the development of marketing strategies in virtu-
ally all organizations, including public and nonprofit institutions. Mr. Mitchell

261A. Management in the Distribution Channel. Prerequir-
tive: course 260A or consent of instructor. An examina-
tion of the distribution channels, including the power of distribution channels and the tradecrafts between alternative channel systems. Mr. Scott

261B. International Marketing Management. Prere-
quisite: course 260A or consent of instructor. Op-
opportunities, distinctive characteristics, and emerging trends in foreign markets are analyzed. Includes an exploration of international marketing concepts: geographic planning and control; impact of cultural, social, economic, and political differences; and problems of adapting American marketing concepts and methods. Mr. Hansers, Mr. Weitz
262. Price Policies. Prerequisite: course 260A or consent of instructor. Consideration of such concepts as product classification, demand, competition, and costs, as they apply to price making. The theory of price leadership, price discrimination, price war fare, and leader pricing are also studied in relation to the price-making process. In addition, some attention is given to the price policies of individual firms in which the concepts apply. Mr. Nicholas and the Staff

263A. Consumer Behavior. Prerequisite: course 411 or consent of instructor. A study of the nature and determinants of consumer behavior. Attention will be focused on the influence of socio-psychological factors such as personality, small groups, demographic variables, social class, and culture on the formation of consumers' attitudes, consumption and purchasing behavior. Mr. Bettman, Mr. Kassarjian, Mr. Lutz

263B. Theory of Marketing Stimulation. 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, sociology, anthropology, and marketing research. Mr. Kassarjian, Mr. Lutz

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 preferences, perception, marketing organization, market and competitive patterns, effectiveness of advertising and other promotional devices, influence of rewards and organizational systems on sales efficiency, and effectiveness of competitors' strategies. Mr. Bettman, Mr. Kassarjian, Mr. Lutz

264C. Seminar in Marketing Research. Prerequisite: consent of instructor. A seminar providing for the study of recent developments in market and nonmetric multidimensional scaling. Mr. Cooper

265A. Marketing and the Law. Prerequisite: course 260A or consent of instructor. A detailed study of the legislative structure in marketing and the legal principles which influence the operation of institutions engaged in marketing activities, together with an analysis of the judicial decisions which have interpreted these laws. Mr. Bettman, Mr. Kassarjian, Mr. Hunsens

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. Mr. Bettman, Mr. Kassarjian, Mr. Hunsens

266A. Product Management. Prerequisite: course 260A. This course develops a framework for identifying and appraising alternative growth strategies of the firm. Product addition, modification, and deletion decisions are examined, and the process by which these decisions can be made in an optimal manner are discussed. Mr. Bettman, Mr. Kassarjian, Mr. Hunsens

268B. Advertising Policy. Prerequisites: courses 260A, 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 definition of advertising objectives, strategy, appropriation policy, media selection, evaluating advertising results, and the organization of the advertising function. Mr. Lutz

268C. Sales Force Management. Prerequisite: course 411 or consent of instructor. This course develops a logical framework for the solution of problems in sales force management. It covers the role of sales promotion, the selling interaction, and the selling process in planning, organizing, evaluating, and controlling the sales force. Mr. Weitz

267. Macromethodological issues in Research on People. Prerequisite: consent of instructor. This course provides a systematic approach to the special issues concerning research on people, criteria for evaluating methodological development, and specific sociological, psychological, sociological, and anthropological differences in methodology. Mr. Cooper

268. Selected Topics in Marketing. (1/4 to 1/2 course) Prerequisite: course 260A or consent of instructor. A study of selected areas of marketing knowledge and thought. Specific subjects discussed to be changed each quarter depending on the particular interests of the instructor and students. Individual or group presentations may be required. Mr. Lutz

269A. Theory in Marketing. Prerequisite: consent of instructor. This 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, students will be required to write a paper on the general topic of theory development and testing are addressed. The general goal of the course is to prepare the student for conducting theoretically-grounded research in marketing. Mr. Lutz, Ms. Scott, Mr. Weitz

269B. Research in Marketing Management. Prerequisite: consent of instructor. Intended for doctoral students. Study of research issues associated with marketing management decisions. Recent research in the areas of strategic marketing, marketing segmentation, service management, distribution, 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. Bettman, Mr. Weitz

269C. Quantitative Research in Marketing. Prerequisite: consent of instructor. The seminar is designed for doctoral students in management and related fields. Students are assumed to have a good background in marketing principles and to be familiar with probability, statistics, mathematical programming, and econometrics. The purpose of the course is to review a range of quantitative models as applied in marketing research. Mr. Currim, Mr. Lutz, Mr. Jones

269D. Behavioral Research in Marketing. Prerequisite: consent of instructor. Empirical research in consumer behavior is surveyed and critically evaluated from a theoretical and programmatic framework. Course is intended for doctoral students who will be conducting research in consumer behavior or related areas. Mr. Bettman, Mr. Lutz, Ms. Scott

269E. Special Research Topics in Marketing. Prerequisite: consent of instructor. Intended for doctoral students. Advanced selected topics in marketing with emphasis on thorough examination of one or two topics in current research and theory. May be repeated for credit.

269F. 269Y. Workshop in Marketing. (1/4 to 1/2 course) Prerequisite: consent of instructor. Students are expected to possess a graduate degree in business administration and to have completed prerequisite coursework. This course requires students to present results of their research or present the results of their work in progress to their peers. Evaluation will be based on the quality of the research presentation and the ability of the student to communicate effectively. Mr. Weitz

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. Mr. Case, Mr. Mittelbach

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 art institution, legal policy and the law, and the effect on the arts, and unsolved problems and issues in areas of interaction. Mr. Adizes

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 value systems of arts organizations. Mr. Adizes

274. Current Issues in Arts Management. Prerequisite: consent of instructor. The seminar of the final quarter is viewed as the major culminating event of 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. Mr. Adizes

275A. Urban Issues and Problems. Prerequisite: course 175 or consent of instructor. Study of urban problems and issues including demand for and supply of private and public goods, environmental pollution, transportation, recreational facilities, poverty, housing the poor, city size and efficiency, urban sprawl, taxation, new towns, real estate and building industries. Mr. Adizes

276B. Comparative and International Urban Land Studies. Analysis of private and public decision making shaping urban development and redevelopment in selected countries. Emphasis on the economic, social, and institutional factors which determine urban growth, structure, and patterns of land use, and the allocation of land uses over urban space. Students may use APL programs to investigate and critically evaluate methods of valuation and allocation. Mr. Case, Mr. Mittelbach

276C. Urban Dynamics: Degeneration and Regeneration. Prerequisite: consent of instructor. Seminar which examines theoretical and empirical problems and solutions concerning urban blight, rehabilitation, redevelopment, new towns, inner-city revitalization, and inter-governmental relations in the American city, with particular emphasis on the role of public decision making in the private sector. Mr. Case, Mr. Mittelbach

277. Housing Economics. Prerequisite: consent of instructor. Consideration of determinants of private and public demand for housing. Housing programs and relationships between construction and economic trends are examined. Mr. Case, Mr. Granfield, Mr. Mittelbach

277A. Comparative and International Urban Land Studies. Analysis of private and public decision making shaping urban development and redevelopment in selected countries. Emphasis on the economic, social, and institutional factors which determine urban growth, structure, and patterns of land use, and the allocation of land uses over urban space. Students may use APL programs to investigate and critically evaluate methods of valuation and allocation. Mr. Case, Mr. Mittelbach

277B. Housing Policy. Prerequisite: consent of instructor. U.S. and foreign housing programs. Housing low-income groups, new town legislation, improving environment, urban renewal and development and related topics. Criteria for assessing public policy, policy implementation, policy and stages of national economic development, the role of private enterprise. Mr. Case, Mr. Granfield, Mr. Mittelbach

278A. Urban Real Estate Pricing and Investment. Prerequisite: consent of instructor. Theoretical and pragmatic analyses are used to determine the differences between real property and other investments. Real estate investment opportunities are evaluated for their effectiveness in balancing income and growth with capital gains, and in achieving investment objectives and public land use goals. Mr. Case, Mr. Mittelbach
2788. Sources, Uses, and Flows of Real Estate Capital. Identification and analysis of sources and uses of real estate credit and equity funds. Policies and programs of lenders are related to real estate construction and market trends, and governmental economic and housing policies and programs.

Mr. Case, Mr. Mittelbach

279A. Special Studies in Urban Land Economics. Open to master's or doctoral candidates working on a thesis or dissertation related research. May be repeated for credit.

279B. Selected Topics in Urban Land Economics. Open to all graduate students who wish to pursue a particular topic in housing, real estate, or urban land economics in depth on an individual or cooperative basis. May be repeated for credit.

278X-278Y-278Z. Urban Research and Development Methods. Prerequisite: graduate standing or consent of instructor. Exploration of urban and its problems; prospects and prescriptions for the delivery of a quality life. The exploration will be both macroscopic and microscopic as related to problems of a selected urban area.

280A. Important Studies in Human Systems. Prerequisite: enrollment in Ph.D. program or consent of instructor. Surveys seminal studies of human systems. Summarizes major explanatory ideas and current status of the field. Reviews such topics as personality, motivation, group and intergroup behavior, systems theory, and organizational design and development.

Mr. McKelvey

280B. Survey of Research Philosophies and Method. Prerequisite: enrollment in Ph.D. program or consent of instructor. Offers a broad introduction to objectivist and subjectivist philosophies of science, and the psychology and sociology of science. Critiques current research frameworks: field studies, analytical and descriptive methods; interview, participant observation, questionnaire and unobtrusive methods of data collection. Mr. Cooper, Mr. Massarik

280C. Personal and Professional Development. Prerequisite: enrollment in Ph.D. program 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 interveners. Mr. Culbert, Ms. Lasko

280D. Research Design for Human Studies Students. Prerequisite: course 280A, 280C, or consent of instructor. Acquaints students with temporal and logical sequence in designing experiments; field studies, analytical and descriptive methods; interview, participant observation, questionnaire and unobtrusive methods of data collection. Mr. Cooper, Mr. Massarik

280E. Tutorial in Human Systems Research. Prerequisite: course 280D or consent of instructor. Provides an opportunity for students to observe and receive constructive comment on the design, data analysis, and writing of their doctoral research papers.

Mr. McKelvey

281A. People in Organizations. Prerequisite: Graduate Standing. Introduces different philosophical 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 behavior. Special attention given to knowledge about satisfaction motivation and productivity in organizations.

Mr. Cooper, Mr. Massarik

281C. Situational Factors in Management. Prerequisite: enrollment in Ph.D. program or consent of instructor. Situational factors of human behavior in a selected urban area. Examines the development of a diagnostic technique of utilizing the case study method to analyze and compare human behavior in different organizational settings. Mr. Carter, Mr. Cooper, Mr. Massarik

281A. Task Group Processes. Prerequisite: courses 281A, 281B, or consent of instructor. Focuses on the structure, processes, and interrelations of work groups in socio-technical systems. Emphasizes an 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 Socio-Technical Systems. Prerequisite: course 281A or consent of instructor. Focuses on the complexity and uncertainty of human behavior. Analyzes internal and external elements along socio-cultural, political, and economic dimensions, their interrelationships, and their relations to technology. Diagnoses organizational responses to various environments.

Mr. Davis

283B. Organization Design. Prerequisite: enrollment in Ph.D. program or consent of instructor. Survey of organizational design theories and methods, including bureaucratic, participative, and cognitive models. Develops specific methods ranging from the micro-design of jobs to the macro-design of organizational structures. Special emphasis on socio-technical and differentiation/integration models.

Mr. Davis

284B. Organization Development. Prerequisite: course 281B or consent of instructor. Analyzes effects of managerial practices and individual behavior on organizational effectiveness. Presents theories of management change and the action-research methods of organization development practitioners. Merges theory with practice through seminar discussions, exercises, and case analyses.

Mr. Davis

285A. Leadership, Motivation, and Power. Prerequisite: course 281B or consent of instructor. Studies theoretical and practical approaches to influencing and motivating people. Explores the role of effectiveness, power and power distribution, and power relations within the management of people in organizations. Mr. Culbert, Mr. Massarik

285B. Managerial Interpersonal Communication. Prerequisite: course 281B or consent of instructor. Focuses on organizational, interpersonal, and personality factors affecting managerial communication. Analyzes the nature of communication in one-to-one, group, and indirect communication settings. Offers opportunities to develop understanding of one's own communication styles and skills.

Mr. Massarik

287. Sensitivity Training Groups and Team Training. Prerequisite: consent of instructor through prior application in Department. Develops cognitive and experiential understanding of the dynamics of sensitivity training groups and their facilitation. Analyzes relevant theory, research literature, and group development. Emphasis on group discussion techniques for effective communication.

Mr. Lasko

288A. Special Studies in Managing Organization Behavior. Prerequisite: open primarily to MBA students, or other graduates who have the faculty 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 MBA students and the faculty. May be repeated for credit.

Mr. Lasko, Mr. Massarik

288B. Selected Topics in Behavioral Science. Prerequisite: enrollment in Ph.D. program or consent of instructor. Focuses on philosophies and theories of human behavior fundamental to the study of individual, group, organizational, and cultural behavior. Explores in depth selected theoretical positions, extending and consolidating behavioral science knowledge and applications. May be repeated for credit.

288C. Current Issues in Socio-Technical Systems and Organization Design. Prerequisite: enrollment in Ph.D. program or consent of instructor. Focuses on the analysis and design of organizations as socio-technical systems engaged with various technologies and environments, emphasizing design approaches emanating primarily from Europe and the United States. Explores in depth the selected job and organizational design approaches. May be repeated for credit.

288D. Current Issues in Human Systems Change and Development through Consulting. Prerequisite: enrollment in Ph.D. program or consent of instructor. Focuses on the depth of treatment of organizations as units of analysis. Emphasizes recent theoretical and empirical development, methodological issues in organizational research, and concepts of organization structure, process, and effectiveness. May be repeated for credit.

288E. Selected Topics in Organization Theory. Prerequisite: enrollment in Ph.D. program or consent of instructor. In-depth treatment of organizations as units of analysis. Emphasizes recent theoretical and empirical development, methodological issues in organizational research, and concepts of organization structure, process, and effectiveness. May be repeated for credit.

288F. Selected Topics in Organizational Behavior. Prerequisite: enrollment in Ph.D. program or consent of instructor. Explores psychological and social psychological aspects of decision behavior and performance in organizations. Covers theoretical models, emotional findings, and applications of such topics as attitudes and values, cognitive and perceptual processes, decision making, and job satisfaction. May be repeated for credit.

288G. Current Issues in Human Systems Studies. Prerequisite: enrollment in Ph.D. program or consent of instructor. In-depth study of theory and research pertinent to human systems, including theories as cross-cultural, organization change, action, and multivariate research, depending on student and faculty interest. May be repeated for credit.

288X-288Y-288Z. Behavioral and Organizational Sciences Workshop. (1/4 course, 1/4 course, 1/4 course): open to graduate or such students as consent of instructor. A research group focusing on problem areas as cross-cultural, organization change, action, and multivariate research, depending on student and faculty interest. May be repeated for credit.

290. Organization Theory. Prerequisite: course 423 or consent of instructor. Analysis of the theory and practice of the managerial function of organization. Focuses on selected issues of case analysis and seminar discussion. Individual projects and reports.

Mr. McKelvey, Mr. Sedgwick

291. Planning and Control. Prerequisite: course 423 or consent of instructor. Analysis of the theory and practice of the managerial function of planning and control. The implementation of objectives through policy formulation, decision making, and control. Individual projects and reports.

Mr. Carson, Mr. Steiner

292A. Research and Development Policy. Examination of research and development as a process and as an element of a goal oriented organization. Factors affecting innovation and invention: transfer of technology; organizational and behavioral considerations; coupling of scientific discipline, technology, and organizational goals: assessing of forecasting technological futures.

Mr. Mason, Mr. Schollhammer
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 management science tools to develop empirical tests. These models may be used to discover implications for the systems changes recommended in the socio-technical field studies.

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 procedures for governmental 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.

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 and economic problems in management. Social responsibilities of the business manager.

294A. Strategy Formulation and Implementation. Prerequisite: consent of instructor. Case course dealing with the development and decision-making processes in management. Emphasis on the identification and analysis of critical factors affecting the development of strategy.

294B. Environmental Impacts on Management. Prerequisite: consent of instructor. Examination of ways in which business, government, labor, and consumers' organizational goals have changed in response to external environmental pressures. Methods are studied for developing and evaluating alternative managerial solutions which permit organizations to adjust in improving current and future environmental conditions.

295. Entrepreneurship and Venture Initiation. Prerequisite: consent of instructor. An exploration in entrepreneurship particularly concerned with the formulation and implementation of new business ideas significant and crucial aspects of exploring new business opportunities and starting a business.

296A. International Business Law. Prerequisite: courses 205A and 296A. Legal environments in which international business operates. Legal rules on business relationships and organizations; antiquity, taxation, transfer of capital and technology regulations; patent, trademark, and copyright safeguards; and the resolution of international business disputes; protection of foreign investments; international business and government relations.

297A. Competitive and International Management Research. 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 and 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 will be applied to a series of complex cases and simulations of international business operation.

297C. International Business Law. Prerequisites: courses 205A and 296A. Legal environments in which international business operates. Legal rules on business relationships and organizations; antiquity, taxation, transfer of capital and technology regulations; patent, trademark, and copyright safeguards; and the resolution of international business disputes; protection 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/dissolution of joint ventures, extent of foreign ownership/management control, terms/conditions for technology transfer/development, and incentive planning.

298A. Special Topics in Management Theory. Prerequisite: open primarily to Ph.D. candidates or with 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 doctoral candidates, the academic staff, or distinguished visiting faculty. May be repeated for credit.

298B. Special Topics in International and Comparative Management. Prerequisite: open primarily to Ph.D. candidates or with consent of instructor. An examination in depth of problems or issues of current concern in international and comparative management. Emphasis on recent contributions to theory, research, and methodology. Of special interest to advanced doctoral candidates, the academic staff, or distinguished visiting faculty. May be repeated for credit.

298C. Special Topics in Socio-Technical Systems. Prerequisite: open primarily to Ph.D. candidates or with consent of instructor. An examination in depth of problems or issues of current concern in socio-technical systems. Emphasis is on model types and formulations. Of special interest to advanced doctoral candidates, the academic staff, or distinguished visiting faculty. May be repeated for credit.

298D. Special Topics in Management. Prerequisite: open primarily to Ph.D. candidates or with consent of instructor. An examination in depth of problems or issues of current concern in management. Emphasis on recent contributions to theory, research, and methodology. Of special interest to advanced doctoral candidates, the academic staff, or distinguished visiting faculty. May be repeated for credit.


299. Managerial Economics: Forecasting. Prerequisite: Graduate Standing. Sales, costs, and profit forecasting. General business forecasting and cyclical mechanisms.

299. Managerial Model Building. Prerequisite: courses 400, 402, or equivalent. A survey of the uses of formal modeling approaches in managerial decision making. Emphasis is placed on the development and use of models applicable to all types of organizational problems. Theoretical and practical aspects of modeling are discussed and demonstrated. The course is aimed at principles generally applicable to all types of organizations. Emphasis is placed on the financial planning and control, sources of funds, developing objectives and standards which lead to effective allocation and use of the organization's resources.

400. Mathematics for Management. Prerequisite: Graduate Standing. Fundamental mathematics for business, including topics from matrix algebra, probability, and calculus, with applications to model building and decision making in business firms. S/U only.

401. Managerial Economics. Prerequisite: Graduate Standing. Introduction to the measurement and determination of economic activity in the aggregate and to the role of prices in the decision making of the organization. National Income Accounting, Basic Economic Policy, Markets and Prices, Competition and Monopoly, Applications.

402. Data Analysis, Statistics, and Decision Making. Prerequisite: Graduate Standing. An introduction to statistics for graduate students who have had no previous course in which emphasis is upon application to business problems.

403. Managerial Accounting. Prerequisite: Graduate Standing. A study of management systems and procedures in financial and managerial accounting, with an emphasis on income measurement, marginal analysis, standard and direct costing.

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-type (P/L) and interactive (API) languages.

405. Managerial Economics: The Organization. Analysis of decision making in the firm, competitive policies and market structure, revenue and cost behavior.

406. Managerial Economics: Forecasting. Prerequisite: Graduate Standing. Sales, costs, and profit forecasting. General business forecasting and cyclical mechanisms.

407. Managerial Model Building. Prerequisite: courses 400, 402, or equivalent. A survey of the uses of formal modeling approaches in managerial decision making. Emphasis is placed on the development and use of models applicable to all types of organizational problems. Theoretical and practical aspects of modeling are discussed and demonstrated. The course is aimed at principles generally applicable to all types of organizations. Emphasis is placed on the 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 111 or 407 or equivalent. Principles and decision analyses related to the effective utilization of the factors of production in manufacturing and nonmanufacturing activities for both intermittent and continuous systems. The study of production organizations, analytical models and methods, facility 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. Emphasis is placed on the management of marketing activities and strategies, and the viewpoint of society in the analysis of cost, impact.

412. Management of Organizations. Prerequisite: graduate status. Integrative approach to theory and practice of management in complex organizations, emphasizing managerial roles in designing organizational structures, creating/maintaining planning, control, and incentive systems, different patterns of human interaction such as structures and systems tend to produce.

420. Management Policy. Prerequisite: course 412. Evaluation and formulation of organization's overall policies and strategies. Economic, heuristic, and social process approaches to policy formulation, environmental analysis, and organizational appraisal. Senior management's role in managing the policy process.

423. Advanced Management Theory. Advanced study of management theory in formally organized enterprise through significant readings; discussing advanced approaches and techniques developed from applying theory; using theory to develop and test hypotheses; and finding of quantitative and behavioral sciences; lectures on sophisticated application of management theory in practice. Mr. McKelvey, Mr. Rai.

430. Introduction to Managerial Statistics. (½ course) Prerequisite: Graduate Standing. An introduction to probability and statistical methods. Basic concepts of statistical analysis and probability theory, the use of sampling for decision making, interpretation of tests of hypotheses, and decision in managerial terms of more advanced statistical methods.

431A. Introduction to Model Building. (½ course) Prerequisite: Graduate Standing. An introduction to formal model building. Use of mathematical models as system descriptors. This course introduces the "classes" of models: Formulation of problems in terms of mathematical models. Interpretation of solutions provided by the computer.

433. Computing Laboratory. (½ course) Prerequisite: Graduate Standing. Use of the computer as an aid in solving management-related problems; interactive, time-shared processing utilizing remote terminals; and the APL computer language.

434. Managerial Accounting and Finance. Prerequisite: Graduate Standing. An introduction to the fundamentals of accounting and finance with emphasis on the preparation of basic financial statements and the techniques of financial analysis.


438. Policy and Organizational Environment. Prerequisite: course 431. Environmental settings of organizations; interactions among roles and functions of various functions of society with special emphasis on business; issues facing managers and management-related specialists; and formulation of organizational strategies and policies.

440. Managerial Problem Solving: Individual. Prerequisite: Graduate Standing. Study and practice of individual decision making and problem solving including the impacts of personality, motivation, interpersonal and communication skills, and skills in decision-making techniques. The relationships among the individual, managerial roles, and complex organizations as they influence the managerial process are studied.

441. Managerial Problem Solving: Complex Systems. Prerequisite: course 440. Study of organizational and interorganizational problem solving including identification, formulation, data collection, forecasting, assumption testing, solution methods, implementation, evaluation, control, and dealing with conflict. The result toward the solution of problems in which problem solving is experienced at various levels of complexity.

444A-444B. Management Field Study. Must be taken in two consecutive quarters in second year. Supervised field study of an organization including establishment of client contacts, study of consultation relationship, identification of problem, design of study, collection and analysis of data, development and reporting of implementable recommendations. This course requires students to complete the full two-quarter sequence at the end of which a grade is given for both quarters of work.

450. Field Work in Behavioral Science Management Development. (1 or 2 courses) Prerequisite: course 287 and consent of instructor. Supervised practical work in all phases of laboratory education for management development, such as sensitivity training laboratories, creativity and personal growth laboratories, organizational development laboratories, etc. Mr. Culbert, Ms. Lasko, Mr. Massarik.

451. Field Work in Organizational Development. (½ to 3 courses) Prerequisites: courses 450, 284B, or consent of instructor. Supervised practical field work in organizational development consisting of individual, group, intergroup, total organization, and interorganizational settings.

452. Field Work in Technical Assistance for Minority Business Enterprises. (½ to 1 course) Prerequisite: completion of first year of master's program or consent of instructor. Supervised field experience in business consulting and other forms of technical assistance for business firms and management in ethnic communities; seminars and other shared learning experiences. In transmitting business administration technology to the urban ghetto.

453. Field Work in Arts Management. (1 to 3 courses) Prerequisite: consent of instructor. Supervised field experience and practical work in all phases of an arts organization (pictorial, performing, or commercial), concentrating on its managerial problems and its relationship to the community and society in general.

454. Field Work in Organizations. Prerequisites: completion of two quarters of the MBA Program and consent of the supervising faculty and the Director of the MBA Program. Supervised, non-paid practical experience or fieldwork in an organization as an intern or fellow. Executive MBA Program.

Executive M.B.A. Program

457. Management Information Systems. Lecture, four hours. Prerequisite: Executive MBA Program. This 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. Mr. Copeland, Mr. Cornell.

458. Managerial Accounting. Lecture, four hours. Prerequisite: Executive MBA Program. This course focuses on policy-oriented problems in anti-trust, tax securities and environmental regulation. Concepts of microeconomic theory would be illustrated. Topics would include traditional anti-trust regulations, recent trends in government anti-trust, securities regulation, environmental regulations, and a business firm's optimal response to regulation. Mr. Granfield, Mr. Osborne.

463. Data Analysis and Management Decisions Under Uncertainty. Lecture, four hours. Prerequisite: Executive MBA Program. This course will cover the statistical model-building, with emphasis on the management of the statistical tools of the standard model as a basis for decision making in finance that focus on the fundamental approaches to decision making under uncertainty. Mr. Hassans, Mr. Buffa.

464. Managerial Accounting. Lecture, four hours. Prerequisite: Executive MBA Program. This course focuses on policy-oriented problems in anti-trust, tax securities and environmental regulation. Concepts of microeconomic theory would be illustrated. Topics would include traditional anti-trust regulations, recent trends in government anti-trust, securities regulation, environmental regulations, and a business firm's optimal response to regulation. Mr. Copeland, Mr. Cornell.

465. Quantitative Methods for Managers. Lecture, four hours. Prerequisite: Executive MBA Program. A survey of modeling approaches to management planning and decisions. Emphasis is on the ability to recognize and apply basic tools that will be used in a practical setting, to work effectively with model-building specialists, and to make good use of models once they have been developed. Mr. Geofrion.

468A-468B. Financial Policy for Managers. (1 or 2 courses) Prerequisite: Executive MBA Program. Modern financial management deals with decision-making under uncertainty for corporate financial management, for portfolio investment decisions, for financial institutions, and for international trade. This two-quarter course focuses on learning sound theoretical tools and on applying them in casework. Mr. Copeland, Mr. Cornell.

469. Managerial Problem Solving. Lecture, four hours. Prerequisite: Executive MBA Program. This course is concerned with macroeconomic theory and its application to business forecasting. It covers: major economic indicators and their historical description; the tools that business economists use to analyze the impacts of monetary and fiscal policy; macroeconomic techniques applicable to business decisions. Mr. Kimball.

470. Management of Human Resources. Lecture, four hours. Prerequisite: Executive MBA Program. This course provides an introduction to the major areas of human resource management—personnel management, labor economics, labor law, and labor relations. Mr. Sosan, Mr. McDougan.

474. Economic Analysis for Managers. Lecture, four hours. Prerequisite: Executive MBA Program. This course focuses on policy-oriented problems in anti-trust, tax securities and environmental regulation. Concepts of microeconomic theory would be illustrated. Topics would include traditional anti-trust regulations, recent trends in government anti-trust, securities regulation, environmental regulations, and a business firm's optimal response to regulation. Mr. Granfield, Mr. Osborne.

479. Executive MBA Program.

479A. Introduction to Action Research and Key Analyzes. (½ course) Lecture, two hours. Prerequisite: Executive MBA Program. This course will cover the use of interview research methods including futures analysis, problem identification and problem solving, experimental design, management, and interview techniques in organizational settings. Mr. Mason.
470-470C-470D-470E. Action Research and Policy Analysis Project. (4½ course) Lecture, four hours. Prerequisite: Executive MBA Program. Four quarters of supervised study of an organization in relation to complex environmental changes. Development of management practice and policy scenarios. Prerequisite: Multipersonal involvement in courses taken under cooperative arrangements with neighboring institutions. To be graded S/U.

595A-595H. Research in Management. (1 or 2 courses) Prerequisite: consent of Director of Master's Program or Director of Doctoral Program by special petition. Directly directed individual study or research.

597. Preparation for Qualifying Examinations. (1 or 2 courses) Prerequisite: consent of Director of Master's Program or Director of Doctoral Program by special petition. Prerequisite: comprehensive examination for the master's degree or the qualifying examination for the Ph.D. degree.

598. Thesis Research in Management. (1 or 2 courses) Prerequisite: consent of Director of Master's Program by special petition. Research for and preparation of the master's thesis.

599. Dissertation Research in Management. (1 or 2 courses) Prerequisite: consent of Director of Doctoral Program by special petition. Research for and preparation of the doctoral dissertation.

Mathematics

(Office, 6356 Mathematical Sciences Building)

Richard F. Arene, Ph.D., Professor of Mathematics.
Donald G. Babbitt, Ph.D., Professor of Mathematics.
Kirby A. Baker, Ph.D., Professor of Mathematics.
A.V. Balatsynich, Ph.D., Professor of Mathematics and Engineering Science.
Robert J. Blattner, Ph.D., Professor of Mathematics (Chair of the Department).
Robert F. Brown, Ph.D., Professor of Mathematics.
Hedrick Ruise, Ph.D., Professor of Mathematics and Earth and Space Science.
David G. Cantor, Ph.D., Professor of Mathematics and Engineering and Applied Science.
C. O. C. Ching, Ph.D., Professor of Mathematics.
S.Y. Cheng, Ph.D., Professor of Mathematics.
Alonzo Church, Ph.D., Professor of Mathematics and Philosophy in Residence.
Earl A. Coddington, Ph.D., Professor of Mathematics.
Julian D. Cole, Ph.D., Professor of Mathematics and Engineering and Applied Science.
Philip C. Curtis, Jr., Ph.D., Professor of Mathematics.
Henry A. Dye, Ph.D., Professor of Mathematics.
Robert Edwards, Ph.D., Professor of Mathematics.
Edward Effros, Ph.D., Professor of Mathematics.
Bjorn Engquist, Ph.D., Professor of Mathematics.
Hector Fattorini, Ph.D., Professor of Mathematics and Engineering and Applied Science.
Thomas S. Ferguson, Ph.D., Professor of Mathematics.
Theodore Gamelin, Ph.D., Professor of Mathematics.
John Garnett, Ph.D., Professor of Mathematics.
David G. Givens, Ph.D., Professor of Mathematics.
Basil Gordon, Ph.D., Professor of Mathematics.
John W. Green, Ph.D., Professor of Mathematics.
Robert E. Greene, Ph.D., Professor of Mathematics and (Office, Administration).
Nathaniel Grossman, Ph.D., Professor of Mathematics.
Alfred W. Hales, Ph.D., Professor of Mathematics.
Allen E. Hatcher, Ph.D., Professor of Mathematics.
Alfred Horn, Ph.D., Professor of Mathematics.
S. T. Hu, Ph.D., D.Sc., Professor of Mathematics.
Robert J. Jennrich, Ph.D., Professor of Mathematics and Biomathematics and Public Health.
Paul B. Johnson, Ph.D., Professor of Mathematics.
Paul S. Johnson, Ph.D., Professor of Mathematics.
Thomas M. Liggett, Ph.D., Professor of Mathematics.
D. Anthony Martin, Professor of Mathematics.
Ronald Mioch, Ph.D., Professor of Mathematics.
John J. Milson, Ph.D., Professor of Mathematics.

Yiannis N. Moschovakis, Ph.D., Professor of Mathematics.
Barrett O'Neill, Ph.D., Professor of Mathematics.
Stanley J. Osher, Ph.D., Professor of Mathematics.
Lowell J. Paige, Ph.D., Professor of Mathematics.
Sidney A. S. Penrose, Ph.D., Professor of Mathematics.
James V. Ralston, Jr., Ph.D., Professor of Mathematics.
Raymond M. Redheffer, Ph.D., Professor of Mathematics.
Bruce L. Rothschild, Ph.D., Professor of Mathematics (Vice Chair, Undergraduate).
Leo Sario, Ph.D., Professor of Mathematics.
Murray Schacher, Ph.D., Professor of Mathematics.
Lloyd S. Sh Replies, Ph.D., Professor of Mathematics and Economics.
Robert Steinberg, Ph.D., Professor of Mathematics.
Ernst G. Straus, Ph.D., Professor of Mathematics.
Masamichi Takesaki, Ph.D., Professor of Mathematics.
E. F. Beckenbach, Ph.D., Emeritus Professor of Mathematics.
M. R. Hestenes, Ph.D., Emeritus Professor of Mathematics.
Paul G. Hoel, Ph.D., Emeritus Professor of Mathematics.
William T. Puckett, Ph.D., Emeritus Professor of Mathematics.
Robert H. Sorgenfrey, Ph.D., Emeritus Professor of Mathematics.
Angus E. Taylor, Ph.D., Emeritus Professor of Mathematics.
Frederick A. Valentine, Ph.D., Emeritus Professor of Mathematics.
S. Y. Alice Chang, Ph.D., Associate Professor of Mathematics.
Panayoti D. Diamandis, Ph.D., Associate Professor of Mathematics.
Rodolfo DeSapio, Ph.D., Associate Professor of Mathematics.
Richard T. Durrett, Ph.D., Associate Professor of Mathematics.
Richard S. Elman, Ph.D., Associate Professor of Mathematics.
David Gilmor, Ph.D., Associate Professor of Mathematics.
Mark Green, Ph.D., Associate Professor of Mathematics.
Charles G. Lange, Ph.D., Associate Professor of Mathematics.
Kenneth P. Bube, Ph.D., Assistant Professor of Mathematics.
Daniel Michaelson, Ph.D., Assistant Professor of Mathematics.
H. David Yingst, Ph.D., Assistant Professor of Mathematics.

David Cohen, M.A., Lecturer in Mathematics.
Herbert Enderton, Ph.D., Lecturer in Mathematics.
John McGhee, M.A., Lecturer in Mathematics.

Admission Requirements. 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, students 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, this grade point average must be at least 3.5.

Individual Study and Research Courses (numbered 500-599)

Individual study or research courses may be used, within limitations and conditions prescribed by the School, to satisfy minimum higher degree requirements.
Examination (Tests and they must submit at least two letters of recommendation from mathematicians who know their recent work.

A booklet Graduate Studies in Mathematics At UCLA with detailed information about the Department of Mathematics may be obtained by writing to the Graduate Adviser, Department of Mathematics, UCLA, Los Angeles, CA 90024.

Admission of Graduate Programs. Responsibility for all graduate mathematics programs rests with the departmental Vice Chair for Graduate Studies and a Graduate Studies Committee which makes policy, administers the Qualifying Examinations and hears appeals from students. On a day-to-day basis, the various programs are managed by the Vice Chair and the graduate administrative assistant from the Mathematics Graduate Office located in MS 6375.

Advising. The Vice Chair for Graduate Studies is the chief Graduate Adviser and heads a committee of faculty advisers whose fields of expertise span most of the major areas of mathematics.

All entering graduate students are required to meet with a graduate adviser who will help them plan a reasonable course of study. The Graduate Vice Chair is responsible for monitoring the students' progress toward their degree objectives and approves all study lists, each quarter. Normally, a continuing student will be asked to meet with the Vice Chair (or some other adviser) at least once each year and a record of this interview will be placed in the student's file.

There are ample opportunities for students to meet with an adviser of their choice, throughout the academic year.

The Master of Arts Degree

Students may earn the M.A. degree under the Comprehensive Examination Plan, either in the basic (pure mathematics) program or under an interdisciplinary program in applied mathematics.

Foreign Language Requirement. There is no foreign language requirement for master's students.

Course Requirements. Eleven quarter 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 approval 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.

The Comprehensive Examination. For the basic (pure mathematics) M.A., the Comprehensive Examination consists of two written 4-hour tests, one in algebra and one in analysis. For students in the applied mathematics program, the Comprehensive Examination consists of a 4-hour written test in analysis and a similar test chosen from numerical analysis, methods of applied mathematics or probability/statistics. These tests are all prepared by a comprehensive examination committee appointed by the Graduate Vice Chair and they are offered twice each year, early in the Fall Quarter and towards the end of the Spring Quarter. Students may take one or both of their examinations at one sitting and they may retake their tests any number of times until they pass them.

Time to Degree. A well-prepared student should be able to complete the requirements for the M.A. degree in six quarters of full-time study.

500 Series Course Limitations. Students may enroll in Mathematics 596 (Directed Individual Study or Research) any number of times and they may count up to two courses in 596 towards their 11-course requirement for the M.A., provided they receive a B or better in these courses (not the grade S).

Disqualification and Appeal of Disqualification. Master's students who do not complete all the requirements for the M.A. degree within seven quarters of full-time study are liable to dismissal from the program. The Graduate Vice Chair decides in each particular case whether dismissal is warranted, but the student may appeal to the Graduate Studies Committee which has the ultimate say in these matters.

The Master of Arts in Teaching Degree

The M.A.T. program serves the needs of 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 quarter courses are required, as follows.

The core courses. All candidates must take Mathematics 201ABC (Topics in Algebra and Analysis) and 202AB (Mathematical Models and Applications). Normally, all students also take one quarter of Mathematics 596 (Directed Study) while fulfilling the essay requirement described below.

Credential requirements. Candidates who plan to teach in secondary schools and who do not already have valid credentials for such teaching should enroll in the Single-Subject Credential program in the School of Education. Of the courses required by this program, students may receive M.A.T. degree credit only for the following courses: Education 100 (Cultural Foundations of Education), 112 (Psychological Foundations of Education), 312 (Basic Principles of Curriculum and Instruction) and 330AB (Supervised Teaching). Actual receipt of the credential is not a degree requirement. Each student affected should check with the Graduate School of Education for a full and up-to-date description of credential requirements, and should submit a 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 will be sufficient for the candidate to have the M.A.T. degree, as described below (additional courses).

In exceptional cases, an M.A.T. program may be individually designed for students who are candidates for a credential other than the two already mentioned.

Additional courses. Besides the six core courses described above, all candidates must take a seventh upper division or graduate course in Mathematics. Particularly recommended are Mathematics 106, 110BC, 111AB, 130A, 131B, 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 Vice Chair, such students may present for degree credit one course of a predominantly mathematical nature taken in another department.

Candidates may not receive degree credit for Mathematics 370 or for any Mathematics course numbered 100-109 except 106 (History of Mathematics). In addition, by Departmental and University rules, candidates may not receive degree credit for more than two quarters of Mathematics 596 or for more than two quarters of any 300 series courses.

Essay requirement. Each candidate must prepare a master's essay. This is an expository account of some subject in mathematics of interest to the student and related to his or her prospective teaching. In practice, the student ordinarily writes 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 a student working for a secondary credential must take the supervised teaching course. M.A.T. students are eligible for teaching assistantships.

The Comprehensive Examination. In the M.A.T. program, students take one examination in mathematical subject matter and one in content and philosophy of secondary school mathematics. Ordinarily, these are administered in conjunction with courses 201ABC and 202AB. Reexamination after failure is allowed.

Time to Degree. A well-prepared student should be able to complete the requirements for the M.A.T. degree in six quarters of full-time study.
The 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 students 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. Students are required to pass two written departmental language examinations in French, German or Russian, except that with the approval 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 their elementary and secondary education was not English, may substitute English for one of the foreign languages, but then their other language must be one of French, German or Russian (even if they are in the applied program).

These examinations are offered twice each year, in the Fall and Spring, and they require the student to translate material in some basic field of mathematics without the use of a dictionary. They may be retaken any number of times until passed. At least one of the language examinations must be passed before the student can take the first Oral Qualifying Examination and the complete language requirement must be satisfied before the student takes the Final Oral Examination.

Course Requirements. In the pure mathematics program, students must pass satisfactorily (with a grade of A or B) at least 12 mathematics courses numbered from 205 to 285 but excluding the basic courses 210, 245 and 246. At most, three of these courses may be numbered 285.

In the applied mathematics program, students must pass satisfactorily (with a grade of A or B) at least 18 approved graduate courses including at least 12 mathematics courses numbered from 205 to 285. At most, three of these may be numbered 285.

Students in the pure program are also required to satisfy a seminar participation requirement by lecturing at least twice in each of two seminars directed by a faculty member, within one year after passing the Written Qualifying Examinations.

Written and Oral Qualifying Examinations. In the pure mathematics program, a student is required to take four Written Qualifying Examinations in the following fields: algebra, real analysis, complex analysis, and one field selected from geometry-topology, statistics-probability, logic, or numerical analysis. The examinations are given twice each year, in the Fall and Spring Quarters. A student 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 for graduate study.

In the applied mathematics program, a student must pass four Qualifying Examinations. The first three Qualifying Examinations are a written examination in applied real and complex analysis, and two written examinations chosen from the three areas, applied differential equations, numerical analysis, and probability-statistics. Two of these three examinations are to be completed by the end of six registered quarters after being admitted to graduate study. The third examination is to be completed by the end of nine registered quarters. These examinations are given twice a year, in the Fall and Spring Quarters. The fourth Qualifying Examination, either written or oral, is in the student's specialized "outside" field, testing the student's competence at a research level. The student must present for the approval of the Applied Mathematics Committee, a program describing his or her intended preparation in the specialized outside field. Candidates for the Ph.D. in the applied mathematics program may substitute for the first two Qualifying Examinations the two Qualifying Examinations in real analysis and in complex analysis given regularly in the pure mathematics Ph.D. program.

After passing the four Qualifying Examinations, the student is eligible to set up the doctoral committee which administers the Oral Qualifying Examination for advancement to candidacy. The main purpose of this examination is to test the candidate's depth of knowledge in his or her chosen specialty, although a discussion of the candidate's plans for the dissertation is not ruled out. Reexamination after failure on the first Oral Qualifying Examination is determined on an individual basis. A more detailed description of the written examinations for both programs can be found in the booklet Graduate Studies In Mathematics at UCLA.

Final Oral Examination Following Completion of the Dissertation. The Final Oral Examination may be waived by the candidate's doctoral committee, with the approval of the Graduate Vice Chair.

Time to Degree. A well-prepared student should be able to pass the Written Qualifying Examinations for the Ph.D. degree within seven quarters of full-time work. Completion of all degree requirements (including the dissertation) normally takes 15 quarters.

Candidate in Philosophy Degree. A student is eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D. degree.

Disqualification. Failure to pass all the Written Qualifying Examinations within nine quarters of attendance or failure to pass two such examinations within six quarters makes a student liable to dismissal from the Ph.D. program.

Appeals. The student is informed by the Graduate Vice Chair and is asked to submit a written appeal and to solicit letters of support from members of the faculty. This appeal is considered by the Graduate Studies Committee which decides by vote whether the student will be allowed to remain in the program. The decision of the Graduate Studies Committee is final.

Graduate Courses
Teacher Preparation
201A-201B. Topics in Algebra and Analysis. Prerequisite: B.A. degree with mathematics major or equivalent. A course for students in the mathematics-education program. Students may not receive credit toward the M.A. degree in Mathematics for this course. Important ideas of algebra, geometry and calculus leading effectively from elementary to modern mathematics. Approaches to the number system, particularly geometric interpretations of algebra and analysis, integration, differentiation, series and analytic functions.

202A-202B. Mathematical Models and Applications. Prerequisite: B.A. degree with mathematics major or equivalent. A course designed for students in the mathematics-education program. Students may not receive credit toward the M.A. degree in Mathematics for this course. Development of mathematical theories describing various empirical situations. Basic characterizing postulates are discussed and a logical structure of theories developed. Modern topics such as operations research, linear programming, game theory, learning models, models in social and life sciences.

Number Theory
205A-205B-205C. Number Theory. Prerequisites: courses 246A and 210A or consent of instructor. Topics from analytic algebraic and geometric number theory, including distribution of primes and factorization in algebraic number fields. Also 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-110C or consent of instructor. Students may not receive credit toward the Master's degree for both 210B and 110B and/or 210C and 110C. Group theory including the theories of Sylow and Jordan-Holdt-Schreier; rings and ideals; factorization theory in integral domains, modules, principal ideal rings, Galois theory of fields, multilinear algebra, structure of algebras.

211. Structure of Rings. Prerequisite: course 210A or consent of instructor. The radical, irreducible modules and primitive rings, rings and algebras with minimum conditions.

212. Homological Algebra. Prerequisite: course 210A or consent of instructor. Modules over a ring, homomorphisms and tensor products of modules, functions and derived functors, homological dimension of rings and modules.

213A-213B. Theory of Groups. Prerequisite: course 210A or consent of instructor. Topics chosen from representation theory, transfer theory, infinite Abelian groups, free products and presentations of groups, soluble and nilpotent groups, classical groups, algebraic groups.
**Logic and Foundations**

220A-220B. Mathematical Logic and Set Theory. Prerequisites: courses 112A-112B 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 in ZFC and von Neumann-Gödel axioms: cardinal and ordinal numbers; continuum hypothesis; constructible sets; independence results and forcing.

222A. Lattice Theory. Prerequisites: course 210A and some knowledge of topology, or consent of instructor. partially ordered sets, lattices, distributivity, modularity, completeness, ideal theory, representation theory. Interaction with algebra, combinatorics, topology, and logic.

223A. Model Theory. Prerequisites: courses 220A-220B or equivalent. Topics will be chosen from ultraproducts, preservation theorems, interpolation theorems, saturated models, omitting types, categoricity, two cardinal theorems, enriched languages, soft model theory, and applied model theory.

223B. Set Theory. Prerequisites: courses 220A-220B-220C. Topics will be chosen from constructibility theory, Cohen extensions, large cardinals, and combinatorial set theory.

226C. Recursion Theory. Prerequisites: courses 220A-220B-220C. Topics will be chosen from ultraproducts, preservation theorems, interpolation theorems, saturated models, omitting types, categoricity, two cardinal theorems, enriched languages, soft model theory, and applied model theory.


250C. Advanced Topics in Ordinary Differential Equations. Prerequisites: course 250A-250B. Selected topics, such as spectral theory or ordinary differential operators, near-boundary value problems, celestial mechanics, approximation of solutions, and Volterra equations.

251B-251C. Topics in Partial Differential Equations. Prerequisite: consent of instructor. An in-depth introduction to 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. Topics chosen from ultraproducts, harmonic measure, Riemann surfaces, extremal length, variational methods, quasiconformal mappings; topics vary from year to year.
Applied Mathematics

260. Introduction to Applied Mathematics. Prerequisite: course 142 or consent of instructor. This course represents a continuation of course 142. It is concerned with the construction, analysis, and interpretation of mathematical models of problems which arise outside of mathematics.

M263. Hydrodynamic Instabilities and Turbulence. (Same as Earth and Space Sciences M211.) An introduction to the theories of hydrodynamic instability and the non-statistical description of turbulence; stability bounds by the linear method; theory of instability; finite amplitude theories of post-instability flows; bounds on properties of turbulent flows by variational techniques.

264. Applied Complex Analysis. Prerequisite: course 246A or consent of instructor. Topics chosen from contour integration conformal mapping, differential equations in the complex plane, special functions, asymptotic series, Fourier and Laplace transforms, singular integrals.

265A-265B. Real Analysis for Applications. Prerequisite: course 131A-131B or consent of instructor. This course is not open for credit to students with credit in 245A-245B-245C. Lebesgue measure and integration on the real line, general linear functions, Fourier and integral transforms, singular integrals, fundamental theorems of measure and integration, bounded convergence, L1 and L2 spaces, finite series, Fourier series, general measure and integration, Fubini and Radon-Nikodym theorems, representation of functions, Fourier integrals.


266B-266C. Applied Partial Differential Equations. Prerequisites: course 266A or consent of instructor. Classification of equations, classical potential theory, Dirichlet and Neumann problems, Green's functions, spectral theory of Laplace's equation in bounded domains, first order equations, wave equations, Cauchy problem, energy conservation, heat equation, fundamental solution, equations of fluid mechanics and hydrodynamics.

267A-267B. Applied Algebra. Prerequisite: course 110A or equivalent. Students may not receive credit toward the master's degree for courses 257A and 210A. Linear algebra, eigenvalues and quadratic forms; linear inequalities, linear programming, and combinatorial analysis; group theory, with emphasis on representations. Application to physical problems.

268A-268C. Topics in Applied Functional Analysis. Prerequisite: course 255A. Topics include spectral theory with applications to ordinary differential operators, eigenfunction expansions for differential equations, generalized functions and partial differential equations.


270A. Tensor Analysis. Prerequisite: course 131A or consent of instructor. Tensor algebra and calculus. Energy, mass, and momentum coordinates and linear transformations, applications.

Probability and Statistics

275A-275B. Probability Theory. Prerequisite: course 245A or 265A. Connection between probability theory and real analysis. Weak and strong laws of large numbers, central limit theorem, conditioning, ergodic theory, martingale theory.

275C. Stochastic Processes. Prerequisites: courses 275A-275B. Selected topics such as Brownian motion and potential theory Markov processes, infinite particle systems, Gaussian processes. Characteristic functions from year to year and the course may be repeated for credit.

275A-275B. Mathematical Statistics. Prerequisites: courses 150A-150B-150C or 152A-152B and courses 131A-131B. 276A: Bayes, admissible and minimax decision rules; sufficiency and complete; uniformly most powerful tests; 276B: Fisher information; Cramer-Rao inequality; asymptotic properties of tests and estimators; maximum likelihood estimators; likelihood ratio and chi-square tests of hypothesis.

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 rule problems, optimality of the sequential probability ratio test, Wald's fundamental identity.

278. Nonparametric and Robust Statistics. Prerequisite: course 276A. Nonparametric tests and robust procedures are developed for hypothesis testing, estimation in one and two sample problems, linear and nonlinear regression, multiparameter classification, density estimation.

279A-M279B-M279C. Linear Statistical Models. (Same as Public Health M204A-M204B-M204C.) Prerequisites: Mathematics 150C or 152B and Public Health 100H, 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.
Individual Study and Research

S95. Directed Individual Study or Research. (1/2 to 1 course) Supervised individual reading and study on a project approved by a faculty member, which may be preparation for the master's essay. May be repeated for credit, but only two such courses may be applied toward the master's degree unless departmental approval is obtained.

S96. Research in Mathematics. (1/2 to 2 courses) Study and research for the Ph.D. dissertation. May be repeated for credit.

Medical History

See Department of Anatomy.

The School of Medicine

The accelerated emergence of Los Angeles as one of the nation's major metropolitan centers led the Regents of the University of California on October 19, 1945, to authorize the University's second medical school, the first in Southern California, at UCLA.

The School of Medicine operates on a quarter system with a 4-year curriculum. The freshman year consists of three quarters of courses in basic medical sciences, social medicine and behavioral sciences, followed by a summer quarter of vacation. The sophomore year, also three quarters, includes further study in basic medical sciences, clinical fundamentals, and pathophysiology of disease. The junior and senior years are a continuum of education of 94 weeks total; 50 weeks of required clinical clerkships, 28 weeks of electives which stress the scientific basis of disease of specific organ systems, and 16 weeks of vacation; advanced clinical clerkships in primary medicine. Schedule choices are submitted by students and a computer system is employed to arrange programs as equitably as possible.

Special programs of study for individual students may be arranged within the framework of the medical school curriculum. Normally, these programs are available only after the student has completed the first year and with approval of the Dean's Office and the chair of the department responsible for the additional coursework. Every effort is made to maintain flexibility within the medical school curriculum, although extensive changes in the course of study can be arranged for only a limited number of students.

Admission Requirements

The School of Medicine on the Los Angeles campus admits 144 freshman students each fall. Applications, cards and medical school catalogs for the class entering September 1982 are available from the Office of Student Affairs, UCLA School of Medicine, Los Angeles, CA 90024 from June 1 to October 15, 1981. Applications are available from the American Medical College Application Service (AMCAS). The $30 fee charged by AMCAS for application to any three participating medical schools covers UCLA's initial screening of applications. If an applicant is granted an interview, a non-refundable fee of $20 is required. Ordinarily a baccalaureate degree is required for admission. However, in certain instances, outstanding students who have completed three full academic years at an accredited college or university are accepted. College years should be devoted to obtaining as broad an education as possible. The major objectives should be the following: (1) competence in English, written and spoken; (2) capacity for quantitative thinking represented by mastery of mathematics; (3) such training in physical and biological science as will facilitate comprehension of medical science and the scientific method; and (4) insight into human behavior, thought and aspiration from study in the social sciences and humanities.

These objectives will ordinarily require completion of the following studies:

Required Courses

English. One year of college English to include the study of English composition.

Physics. One year of college physics (with lab).

Chemistry. Two years of college chemistry to include the study of inorganic chemistry, quantitative analysis and organic chemistry.

Biology. Two years of college biology to include the study of cellular, molecular, developmental and genetic biology. This will include at least one year of upper division courses.

Mathematics. One year of college mathematics to include the study of college algebra. In addition, the study of introductory calculus is also highly recommended.

Courses (e.g., human anatomy) which overlap in subject matter with those in the School of Medicine are not advised. However, advanced or specialized courses in biological science (e.g., cellular physiology) are desirable.

The premedical requirements must be completed before beginning the first year of medical studies, although these requirements need not be completed at the time the application for admission is filed. Accepted candidates must pass a physical examination before registering. Candidates will be selected on the basis of the following considerations:

1. Undergraduate and, where applicable, graduate academic achievement.
2. Score on the Medical College Admission Test, which is administered for the Association of American Medical Colleges by the Psychological Corporation.
3. Interview by a member or members of the Admissions Committee.
4. Evaluation of the applicant's accomplishments and character in letters of recommendation.

The Committee on Admissions selects candidates who present the best evidence of broad training and strong achievements in college, a capacity for mature interpersonal relations, and the traits of personality and character conducive to success in medicine. Preference is not given to students who major in natural sciences, since study in the social sciences and humanities is considered equally valuable.

Advanced Training. Transfer students are accepted into the junior year only. Transfer applications may be submitted November 1 — February 1 to the Office of Student Affairs, Room 13-144 of the Center for Health Sciences.

Graduate Work

Graduate work leading to the M.S. and/or Ph.D. degree is offered, either separately or in conjunction with the M.D. program in the following fields: Anatomy, Biological Chemistry, Biomathematics, Medical Physics (Department of Radiological Sciences), Microbiology and Immunology, Neuroscience, Pathology, Pharmacology, and Physiology. Students enrolled in the Graduate Division who have completed courses in the School of Medicine must apply to the first year class in order to be considered by the Admissions Committee. The requirements for academic degrees offered through the Graduate Division by departments in the School of Medicine are described under the departmental heading listed in this section. For details concerning the medical curriculum, please consult the UCLA Announcement of the School of Medicine.

Microbiology

(Office, 5304 Life Sciences Building)

R. John Collier, Ph.D., Professor of Microbiology.
Frederick A. Eisbierg, Ph.D., Professor of Microbiology (Chair of the Department).
C. Fred Fox, Ph.D., Professor of Molecular Biology in Microbiology.
June Lascelles, Ph.D., Professor of Microbiology.
Rafael J. Martinez, Ph.D., Professor of Microbiology.
Donald P. Nierlich, Ph.D., Professor of Microbiology.
M.J. Pickett, Ph.D., Professor of Microbiology.
Sydney C. Rittenberg, Ph.D., Professor of Microbiology.
William R. Romig, Ph.D., Professor of Bacteriology.
Eli E. Sercarz, Ph.D., Professor of Microbiology.
Gary L. Wilcox, Ph.D., Professor of Microbiology.
Owen N. Witte, M.D., Assistant Professor of Microbiology.
Jann Gregory J. Silliker, Sc.D., Emeritus Professor of Bacteriology.
Gregory J. Jann, Ph.D., Emeritus Professor of Bacteriology.
David R. Krieg, Ph.D., Emeritus Professor of Bacteriology.
Anthony J. Salle, Ph.D., Emeritus Professor of Bacteriology.
Beatrice Weighnieski, Ph.D., Associate Professor of Microbiology.
Arnold J. Berk, M.D., Assistant Professor of Microbiology.
Robert P. Gunnsal, Ph.D., Assistant Professor of Microbiology.

The School of Medicine is located on the University of California campus in Los Angeles, California.
M.A. and Ph.D. Programs

General Information

Advising. Frederick A. Eiserling, Graduate Adviser, Department of Microbiology, 5304 Life Science, 825-3578.

The goal of the advanced degree program is to prepare students for creative research careers in microbiology, including bacteriology, virology, immunology, and cell biology.

Each student is initially placed under the tutelage of a committee of three faculty members appointed by the Graduate Adviser, who are responsible for evaluating progress during the first year and for designing individual study programs for each quarter. The Graduate Student Association of the Department also appoints a member to the guidance committee. Informal records are kept of these committee meetings. The committee serves in this advisory capacity until the student has chosen a professor as research adviser. The Graduate Adviser is an ex officio member of the advisory committee. Changes in the membership of the committee may be made with the mutual agreement of the student, Graduate Adviser and committee members.

Preparedness for proceeding beyond the first year is determined by a year-end evaluation of the student's overall performance in 1) coursework, 2) teaching assistantships, 3) individual research projects, 4) seminars, 5) written examination. The written examination shall consist of a short proposal (five pages) on a current topic drawn from a seminar presentation given by the student or drawn from one of the faculty seminars and approved by the Graduate Adviser. The faculty will yearly, at the opening of the Fall Quarter, review students' progress in the above requirements. Progress into the second year requires faculty approval.

Major Fields or Subdisciplines. Areas of faculty expertise:

A.J. Berk — Gene Expression in Eucaryotic Cells; Processing of mRNA, Animal Viruses
R.J. Collier — Biochemistry of Bacterial Toxins
F.A. Eiserling — Microbial Ultrastructure Cyanobacteria; Bacteriophage Morphogenesis
C.F. Fox — Structure and Function of Biological Membranes
R. P. Gunsalus — Molecular Biology of Microbial Growth
J. Lascelles-Microbial Biochemistry and Physiology
R.J. Martinez — Biochemistry of Host-Parasite Relations

D.P. Nierlich — Nucleic Acid Synthesis and Regulation of Growth
M.J. Pickett — Medical Microbiology
S.C. Rittenberg-Microbial Physiology: Bdellovibrio; Chemolithotrophy
W.R. Romig — Microbial Genetics; Bacteriophage
E.E. Sercarz — Molecular and Cellular Immunology
J.G. Stevens — Animal Virology; Experimental Pathology
G.L. Wilcox — Genetic Regulatory Mechanisms
B.J. Wisnieski — Membrane Biology
O.N. Witte — Oncorna Viruses/Immunology

Disqualification. The only clear case for a recommendation for termination of graduate study is repeated academic failure during the first four quarters in course requirements, examinations and maintenance of required progress toward the degree.

Appeals. The decision to terminate students is rare, and appeal to the Department Chair is available.

The Master of Arts Degree

Admission Requirements. Requirements for admission are the same as for the Ph.D. degree. Information is available from the Graduate Adviser's office.

The Department accepts relatively few students whose objective is a master's degree per se, and applicants should contact a potential faculty sponsor at the time of application.

The Ph.D. Degree

Admission Requirements. For admission, the student must have completed an undergraduate major in science, with superior scholastic achievement. Applicants should have preparation in calculus, physics, biology, genetics, organic and biological chemistry and microbiology. Physical chemistry is strongly recommended. A student may be admitted with background deficiencies to be remedied prior to or concurrent with graduate studies. Applicants should submit directly to the Department, scores of the GRE Aptitude examination. Evidence (via letters of recommendation, interviews or direct knowledge) of the applicant's research potential and motivation is also required.

Completion of a master's degree is not normally required. A written examination is required for advancement to candidacy, as described below under Written and Oral Qualifying Examinations.

Course Requirements

1. Formal lecture/lab courses

   a. Biochemistry: Two are required: the 6-unit lecture course, Chemistry/Biological Chemistry M253, 'Proteins and Nucleic Acids.' This course is taught only in the Fall Quarter, and it is advisable to complete it during the first year.

   b. Genetics and Regulation: One 200 level, 4-unit course is required. Courses which may be used to satisfy this requirement are Microbiology 203-Advanced Microbial Genetics, or Biology 221-General Analysis.

   c, d, e. A total of 8 additional units of 200 level coursework must be selected from at least two of the three subject areas is required. At least two areas are required. Acceptable courses in the three subject areas are:

   f. General Microbiology and Cell Biology

      Microbiology 230A — Structural Molecular Biology
      Microbiology M226 — Chromosome Structure and Regulation
      Biology 227 — Chromosome Structure and Replication
      Biology 229 — Structural Macromolecules
      Biology 238 — Structure, Functions, and Biogenesis of Mitochondrion
      Microbiology M239 — Survey of Oncology

   g. Host-Parasite Interactions and Virology

      Microbiology & Immunology 201 — Microbiology and Immunology
      Microbiology & Immunology 208 — Animal Virology
      Microbiology & Immunology 210 — Medical Mycology
      Pathology 242 A,B,C — Molecular Mechanisms in Disease

   h. Immunology

      Microbiology M185 — Immunology
      Microbiology M258A, B, C — Advanced Immunology
      Microbiology & Immunology M212 — Laboratory Procedures in Immunological Research
      Microbiology & Immunology 261 — Tumor Immunology
      Microbiology & Immunology 284 — Molecular Immunology

   Other courses may be accepted with written permission of the departmental Graduate Adviser and the student's advisory committee.

   Students are expected to complete two courses in physical chemistry, namely Chemistry 110A (Thermodynamics) and 156 (Physical Biochemistry). This requirement can be waived on the basis of work done before entering UCLA. If a student must take both courses as a graduate student, it is permissible to apply one of them (4 units) towards satisfaction of the unit requirement under 2 below.

2. Student participation seminar courses:

   Each quarter literature review groups or other
seminar courses in which students read and report on current scientific research literature are organized. These 2-unit courses meet weekly for an hour or longer. Students must enroll in five such courses (including two offerings in the 204 series) during their first two years of residence (10 units).

3. Laboratories (introduction to research): During the first 15 months of residence, a student enrolls for one quarter each through three laboratories within the Department (outside laboratories are permissible with the consent of the advisory committee). This is to acquaint the student with research ongoing within the Department and to permit the student to perform research projects in the various laboratories. The student will normally enroll in Microbiology 596 for four units of credit for each laboratory. A short written report of work completed must be filed in the departmental office before a grade will be submitted to the Registrar.

Teaching Requirement. 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 in some or other formal teaching capacity for three quarters. Prior experience at another institution is acceptable when approved by the departmental Graduate Adviser.

First Year Proposal

By June 30 of the first year of study the student will submit an original research proposal of approximately five pages. The topic may be based on a subject presented in a departmental professional seminar or material from one of the seminar courses. The suggestions and evaluations of the faculty committee concerning the proposal will be returned to the student and used by faculty as part of the basis for evaluation for continuation into the second year.

Written and Oral Qualifying Examination. This 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 approval of the departmental Graduate Adviser and the student's mentor.)

The examination is administered by the doctoral committee which will normally serve as the thesis committee as well. The examination tests for depth of knowledge as would be expected from the graduate studies undertaken. As a major part of the examination, the student prepares and defends a written research proposal. The student is expected to read in detail in the area of the proposition and then suggest a defined experimental approach and an interpretation of results that may be obtained. A well-written account of the proposal not to exceed 15 to 20 pages with bibliography must be given to the committee at least two weeks before the examination. Before presentation to the doctoral committee, the student is encouraged to present the proposition before a student seminar group. Members of the doctoral committee should ordinarily not be present at this seminar.

An oral examination will cover both the student's proposition and general scientific background. It is not restricted to the topics of the proposition. The committee may arrange alternate ways to assess the candidate's preparation and qualifications.

Final Oral Examinations Following Completion of the Dissertation. A dissertation on a subject chosen by the student in consultation with the major professor is required of every candidate for the degree. The research must make an independent, worthwhile contribution to scientific knowledge acceptable for publication in a major scientific journal.

This required examination is a defense of the completed dissertation, presented as a professional seminar and open to the public and administered by the doctoral committee. The student must attempt to relate the findings to the field as a whole, and adequately summarize and project future experimental possibilities. The presentation will be followed by a closed discussion with the doctoral committee.

Time to Degree. Laboratory rotations, approval of progress by the student's advisory committee, and choice of faculty adviser should be completed by the end of the fourth quarter.

Coursework should be completed by the end of the sixth quarter. The written proposition and oral examination should be completed by the end of the sixth quarter.

The dissertation and the Final Oral Examination should be completed during the fourth and no later than the fifth year of study (15 quarters).

*Advanced Courses

203. Advanced Microbial Genetics. (4 course) Lecture and discussion, three hours. Prerequisites: course 101; M132; Chemistry 152 or equivalent; undergraduate students may enroll with consent of instructor. Discussion of genetic and biochemical principles and techniques used in the construction of bacterial strains. Topics discussed will include transduction, conjugation, transformation, restriction endonucleases, and DNA cloning. Mr. Wilcox (Sp) C204A. Molecular Biology of Bacterial Growth. (4 course) Lecture, three hours; discussion, one hour. Prerequisites: Biology 6, Chemistry 24, Microbiology 1011. Intended primarily for graduate students, this course includes an additional discussion of the research literature and methodology. Prerequisites: course C104A. First five weeks in Spring Quarter. Grade or S/U. Mr. Wilcox (M) C204B. Biochemical Genetics of Eucaryotic Cells. Lecture, three hours; discussion, one hour. Prerequisites: Some background in microbiology, biochemistry and genetics and consent of instructor. Prerequisites: course C104B. Lecture, five weeks in Fall Quarter. Grade or S/U. Mr. Nierlich C204C. The Mammalian Cell as a Microorganism. (4 course) Lecture, three hours. Prerequisites: Chemistry 152 and consent of instructor. The cultured mammalian cell as an experimental system for the study of normal regulatory processes and disease mechanisms. Course content includes 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 disease mechanisms and cancer. Five weeks in Fall quarter. Graduate student offerings includes an additional discussion of the research literature and methodology in addition to sessions meeting with course C104C. Mr. Fox C204D. Protein Metabolism (2 course) Lecture, three hours; discussion, one hour. Prerequisites: Chemistry 152 and consent of instructor. Intended primarily for graduate students, this course includes further discussion of the literature and experimental symposia feature leading researchers with course C104D. Five weeks in Spring Quarter. Grade S/U. Mr. Collier C204E. RNA Tumor Viruses. (4 course) (Same as Micro 104E) Lecture, three hours; discussion, one hour. Prerequisites: course 101; M132; Chemistry 152 or equivalent; consent of instructor. Intended primarily for graduate students, this course includes an additional discussion of the research literature and methodology. May be concurrently scheduled with course C104E. Five weeks in Spring Quarter. Grade S/U. Mr. Witte M212. Laboratory Procedures in Immunological Research. (4 course) (Same as Immunology M212.) Prerequisites: course M185 or equivalent and consent of instructor. A series of 12 intensive laboratory workshops designed to acquaint the student with the advanced methodologies utilized for immunological research. Workshops will be offered at regular intervals and will have a duration of 2—3 days. Successful completion of four workshops constitutes the requirements for one course. Enrollment will be limited to 25. May be repeated for credit if different projects are undertaken. Grade S/U. Students must enroll through Microbiology and Immunology.

214. Methods in Membrane Biology. Lecture and 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 techniques of membrane biochemistry and biophysics. Offered alternate years, beginning Winter Quarter 1978. Mr. Winslow (W) 221U-221Z. Seminars and Symposia on Molecular Biology. Two-hour seminars and symposia on current topics in molecular biology. Lecture, two hours; discussion, three hours. Prerequisite: consent of instructor. Seminars 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 registering for one of these seminars will receive an abstract booklet for the symposium and will use the abstracts as the starting point for weekly presentations on the topics to be treated at the symposium. The student will in this way prepare for participation in the symposium. Topics are announced each year on September 1 by the Department of Microbiology and the Molecular Biology Institute. Mr. Fox and the Staff (W)

225. Biochemical Methods in Microbial and Cell Biology. (2 courses) Lecture and discussion, three hours; laboratory, twelve hours. Prerequisite: consent of instructor. Emphasis will be on techniques for purifying macromolecules, including protein disruption, column chromatography, gel electrophoresis, ultracentrifugation, various optical methods, and use of radioisotopes. Mr. Collier, Mr. Wilcox (W)

M226. Chromosome Structure and Regulation, (Same as Biological Chemistry M226, Biology M226, Chemistry M226, and Microbiology and Immunology M226.) Lecture, three hours. Prerequisite: consent of instructor. Lectures and panel discussions will be on fundamental and structural organization of eucaryotic chromosomes. S/U grades are used for this course. Mr. Martinson, Mr. Tobin, Mr. Wall
Microbiology and Immunology

(Department Office, 43-239 Center for Health Sciences; Graduate Student Affairs Office, 43-312 Center for Health Sciences)

John L. Fahey, M.D., Professor of Microbiology and Immunology/Immunology and Oncology, and Professor of Medicine.

William H. Hildemann, Ph.D., Professor of Microbiology and Immunology/Immunology and Bacteriology.

Dexter H. Howard, Ph.D., Professor of Microbiology and Immunology/Mycology, (Vice Chair of the Department).

David T. Imagawa, Ph.D., Professor of Pediatrics and Microbiology and Immunology/Virology.

James N. Miller, Ph.D., Professor of Microbiology and Immunology/Immunology and Bacteriology.

Deb P. Nayak, D.V.Sc., Ph.D., Professor of Microbiology and Immunology/Immunology/Parasitology.

A.F. Rasmussen, Jr., M.D., Ph.D., Professor of Microbiology and Immunology/Virology.

Jack G. Stevens, D.V.M., Ph.D., Professor of Microbiology and Immunology/Immunology/Molecular Biology.

Mohammad T. Voge, Ph.D., Professor of Microbiology and Immunology/Parasitology.

Randolph Wall, Ph.D., Professor of Microbiology and Immunology/Molecular Biology.

Felix O. Wettstein, Ph.D., Professor of Microbiology and Immunology/Molecular Biology.

Telford H. Work, M.D., M.P.H., D.T.M.H., Professor of Microbiology and Immunology, Professor of Infectious and Tropical Diseases, and Professor of Preventive Social Medicine.

Ruth A. Boak, M.D., Ph.D., Emeritus Professor of Microbiology and Immunology/Bacteriology, Emeritus Professor of Public Health, and Emeritus Professor of Pediatrics.

David McCracken, M.D., Ph.D., Emeritus Professor of Microbiology and Immunology.

Margaret S. Sellers, Ph.D., Emeritus Professor of Microbiology and Immunology/Virology.

Henry E. Weir, Ph.D., Emeritus Professor of Microbiology and Immunology/Immunology and Microbiology.

Stephen H. M. Stites, Ph.D., Emeritus Professor of Microbiology and Immunology/Molecular Genetics.

Benjamin Bonavida, Ph.D., Associate Professor of Microbiology and Immunology/Immunology.

George Feagin, M.D., Associate Professor of Microbiology and Immunology/Virology.

Sidney H. Golub, Ph.D., Associate Professor of Microbiology and Immunology/Immunology in Residence, and Associate Professor of Surgery/Oncoematology.

Ronald H. Stevens, Ph.D., Associate Professor of Microbiology and Immunology/Molecular Biology.

Jacob Zighelboim, M.D., Associate Professor of Microbiology and Immunology/Immunology, and Associate Professor of Medicine.

John Bramhall, Ph.D., Assistant Professor of Microbiology and Immunology/Molecular Biology.

Ron Asagupta, Ph.D., Assistant Professor of Microbiology and Immunology/Virology.

Michael Lovett, M.D., Ph.D., Assistant Professor of Microbiology and Immunology/Molecular Biology, and Assistant Professor of Medicine.

Severin Froma, Ph.D., Assistant Clinical Professor of Microbiology and Immunology.

Margery L. Cook, Ph.D., Associate Research Virologist.
Nina Debrose, Ph.D., Associate Research Mycologist.
Yoko S. Mullien, M.D., Ph.D., Assistant Research Immunologist.
Pranab Chanda, Ph.D., Assistant Research Virologist.
Allen Davis, Ph.D., Assistant Research Virologist.
Maurice L. White, Ph.D., Lecturer in Microbiology and Immunology.

The Ph.D. Degree

Admission Requirements. Requirements in addition to the University minimum requirements:

1. Bachelor's degree with a major in either the biological or physical sciences.
2. At least B+ in each of the following subjects: chemistry, physics, and mathematics; at least B average in biology (in upper division and prior graduate study).
3. Three favorable letters of recommendation.
4. Graduate Record Examination is required (Verbal, Quantitative and Advanced Tests).
5. Acceptable Statement of Purpose.
6. An interview with members of the Department Graduate Student Committee when indicated. The Department only accepts candidates for the Ph.D. program.

For departmental brochures and/or application forms please write to: Graduate Student Affairs Office, Department of Microbiology and Immunology, UCLA School of Medicine, Los Angeles, CA 90024.

Advising. Graduate Adviser: Dexter H. Howard, Ph.D., Professor of Microbiology and Immunology (Mycology), Department of Microbiology and Immunology, UCLA School of Medicine, Los Angeles, CA 90024.

The Graduate Student Committee and the Graduate Adviser are responsible for advising students until they have selected a preceptor. Thereafter, the thesis preceptor serves as adviser.

The Graduate Adviser meets with each student at least before every registration date; however, the students may also seek his or her guidance when they need it.

The Graduate Committee evaluates students at the end of the first year by a Departmental Written Qualifying Examination and by a review of their coursework. Students are informed in writing of their progress at this time. During the second year, the student selects a preceptor and responsibility for their evaluation shifts to the preceptor. The Graduate Adviser is available to help students with University requirements and to counsel with the student's preceptor. The student in consultation with his/her preceptor usually selects a doctoral committee during the second or third years of study.

Major Fields or Subdisciplines. Students are expected to be competent in both Microbiology and Immunology (see sections on Course Requirements, Written and Oral Qualifying Examinations). However, the students do their thesis work in one or another of the following subdisciplines.

A. Cell Biology (several areas of specialization available)
B. Immunology (several areas of specialization available)
C. Medical Bacteriology
D. Mycology
E. Parasitology
F. Virology (Animal Virology, Viral Oncology)

Course Requirements.

A. Microbiology and Immunology 202 survey course or equivalent (to be completed during the first year of study). Prior to the beginning of the Fall Quarter, a series of examinations will be given in the major subdivision of the M & I 202 course, viz., Bacteriology, Immunology, Virology, and Mycology/Parasitology. Students passing the examinations (80% or above) may elect not to take those subject areas. Those portions of the course which they do not pass or elect not to be examined in may then be taken as separate courses.

B. Directed Individual Study or Research 596 — participation in the laboratory rotation program (to be completed during the first year of study).

C. Three courses (12 units) in Biochemistry (prerequisites: Mathematics through Calculus and General Physical Chemistry). These courses will ordinarily be chosen from the following list but other substitutes may be selected with the approval of the Graduate Adviser.

Microbiology 204A — Molecular Biology of Bacterial Growth (1/2 course)
Microbiology 204B — Biochemical Genetics of Eukaryotic Cells (1/2 course)
Microbiology 204C — The Mammalian Cell as a Microorganism
Microbiology 204D — Protein Metabolism (1/2 course)
Microbiology 204E — Biological Membranes (1/2 course)
Chemistry 253 — Macromolecular Structure (one and 1/2 courses)
Chemistry 255 — Enzymes, Metabolism and Regulation (one and 1/2 courses)
Chemistry 257 — Physical Chemistry of Biological Macromolecules (1/2 course)
Chemistry 257 — Macromolecular Metabolism and Subcellular Organization (1/2 course)
Biological Chemistry 269 — Developmental Biochemistry (1/2 course)

Teaching Experience. Teaching assignment in one laboratory section for Microbiology and Immunology 201 (medical course), Microbiology and Immunology 203 (dental course), Microbiology and Immunology M212 (Immunology Workshop), or another laboratory course presented by the Department.

Written and Oral Qualifying Examinations.

A. Written Qualifying Examinations. The departmental Written Qualifying Examination is to be taken at the end of the first year of graduate study. The examination consists of two parts: 1) Molecular and Cell Biology (mandatory), and 2) four of the following six areas of Microbiology: Bacteriology, Genetics (and Immunogenetics), Immunology, Mycology, Parasitology and Virology. Up to two of the required areas in part two may be fulfilled by coursework, as defined by a list available from the Graduate Adviser. The coursework may be completed any time up to the end of the second year. A score of 75% is required to pass each part of the written examination. Parts failed may be retaken once.

B. Oral Qualifying Examination. The Oral Qualifying Examination is to be taken within three years of enrolling in the Department and is administered by the student's doctoral committee. The oral examination includes:

1. Preparation and defense of research proposal.
2. Explanation of research plans and results to date.
3. A demonstration of general knowledge of microbiology and immunology. Advancement to candidacy is awarded upon satisfactory completion of the Oral Qualifying Examination.

Doctoral Committee. Conditions are those of Graduate Council.

Final Oral Examination Following Completion of the Dissertation. The Final Oral Examination is optional with the doctoral committee. A special seminar based on the completed thesis work is to be given by the student as the final requirement.

Time to Degree.

From graduate admission to the Written Qualifying Examination — three to four quarters.

From graduate admission to the Oral Qualifying Examination — nine quarters.

From graduate admission to the award of the degree — 15 quarters (maximum).

Disqualification. The need to terminate a student may arise for three cardinal reasons:

A. Continued inability to maintain a grade point average of 3.0.
B. Failure of a section of the departmental Written Qualifying Examination more than once.
C. Failure of the Oral Qualifying Examination for a second time.

The decision to terminate a student for any of these reasons is made by the departmental Graduate Committee.

Appeals. Since reasons A and C are essentially University requirements, no specific departmental machinery is available for appeal of
Graduate Courses

Immunology

M206. Secretary and Gastrointestinal Immunity. (Same as Oral Biology M206.) Lecture, two hours. The anatomy and physiology of the oral cavity, the intestines, and the related lymphatic and blood vascular systems will be reviewed in reference to the immune system. The secretary and systemic immune systems will be discussed in detail with particular emphasis on properties of SlgA. The ability to process enteric antigens, to respond, and to regulate enteric immunity will be discussed in terms of recent experimental findings. The role that enteric immunity and immunologic principles and techniques, Selected dental caries and inflammatory bowel diseases will be presented. The class will meet for 2 hours one day per week. Students will participate in discussions following each lecture and will present seminars based on a review of the relevant scientific literature. 20 hours. To be offered Spring Quarter. Mr. Riviere

M212. Laboratory Procedures in Immunologic Research. (½ course) (Same as Microbiology M212.) Prerequisites: course M105 or equivalent and consent of instructor. A series of 12 intensive laboratory workshops designed to acquaint the student with the advanced methodologies utilized for immunological research. Workshops will be offered at regular intervals and will have a duration of 2-3 days. Successful completion of four workshops constitutes the requirements for one course. Enrollment will be limited to 25. May be repeated for credit if different projects are undertaken. Graded S/U. Students must enroll through Microbiology and Immunology. Mr. Stevens

254. Immunogenetics. (½ course) Review of current literature in the field of immunogenetics, with emphasis on fundamental studies involving genetic and immunologic principles and techniques. Selected topics will be discussed and results interpreted; conclusions and experimental methods will be evaluated. Mr. Hildemann (Sp)

M257. Seminar in Host-Parasite Relationships. (Same as Microbiology M257.) Lecture, two hours. Prerequisite: consent of instructor. (Same as Microbiology) In the course recent advances in our knowledge of host-parasite interactions and means of controlling the parasites are discussed. Mr. Miller, Mr. Pickett (Sp)

M258A. Advanced Immunology. (½ course) (Same as Biology M258B and Microbiology M258B.) Prerequisites: the equivalent of course M185 or 202 and M258A or consent of instructor. A continuation of M258 which will consider the details of antibody structure, their function and the mechanisms by which they produce broad immunological significance. To be offered in the Winter Quarter of each academic year. Grade or S/U. Mr. Zigheblom (F)

M258B. Advanced Immunology. (½ course) (Same as Biology M258B and Microbiology M258B.) Prerequisites: the equivalent of course M185 or 202 and M258A or consent of instructor. A continuation of M258 which will consider the details of antibody structure, their function and the mechanisms by which they produce broad immunological significance. To be offered in the Winter Quarter of each academic year. Grade or S/U. Mr. Zigheblom (F)

M258C. Immunology Forum. (½ course) (Same as Microbiology M258C.) Prerequisites: the equivalent of course M185 or 202 and M258A or consent of instructor. Structure of the immunoglobulin molecule and of antigenic determinants and of the components of the complement system will be considered in detail. The format will include lectures and also readings in the primary literature with student seminars. To be offered in the Winter Quarter of each academic year. Grade or S/U. Mr. Stevens (W)

M260. Immunology Review. (½ course) (Same as Microbiology M260.) Prerequisites: course M185. A broad range of current topics in immunology will be presented and discussed at an advanced frontier level. This is a continuing UCLA-wide, general graduate level seminar that will be conducted for credit. Students and graduate students from diverse departments. Mr. Cooper

261. Tumor Immunology. (½ course) Prerequisite: course M256 or equivalent. Experimental basis for investigation of tumor rejection, mechanisms of cell-mediated immunity and related humoral immunity; evidence for tumor-associated antigens in man; evaluation of attempts at immunotherapy of tumors. Letter grade or S/U grading. Mr. Golub (Sp)

262. Seminar in Immunology of Cancer. (½ course) Prerequisite: consent of instructor. Review of current literature in the fields of immunology, biology and biochemistry of cancer with emphasis on fundamental studies involving cell-mediated immunity, humoral mechanism, antigenic specificity, and new techniques. Reports on scientific meetings will be discussed and evaluated. Graded S/U. Mr. Bonavida

M283. Cellular Immunology Seminar. (½ course) (Same as Microbiology M283.) Prerequisite: consent of instructor. Critical discussions of the current literature in T and B cell immunity with emphasis on molecular mechanisms. Mr. Sercarz

276. Viral Immunology. (½ course) Prerequisites: course 202 or equivalent and consent of instructor. This course will focus on selected areas of immunovirology: principles of host-virus interactions, specific immunity to viruses, immunological effector mechanisms in the maintenance of viral latency, influence of virus infections on different immune functions and the immune response to viral induced tumors.

Microbiology

201. Microbiology and Immunology. (2½ courses) Lectures and laboratory. 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. For medical students only.

202A. Fundamental of Immunology. (½ course) (Formerly numbered 202.) Prerequisite: consent of instructor. Examination of immune response to tumors; immunology and immunohemochromosomal and molecular aspects of humoral and cell-mediated immune functions. For graduate students only. To be offered every Fall Quarter (class begins in the first week of September)

202B. Medical Bacteriology. (½ course) (Formerly numbered 202.) Prerequisite: consent of instructor. Characteristics of bacteria rickettsiae, and chlamydiae associated with diseases of humans; host-parasite interactions and immunity; identification of enteric bac- terial and mycobacterial infections; principles of prevention and treatment; introduction to microbial genetics as it pertains to pathogenicity. For graduate students only.

202C. Medical Virology. (½ course) (Formerly numbered 202.) Prerequisite: consent of instructor. Biologic properties of animal viruses; replication; methods of detection; interactions with host cells and multicellular hosts, introduction to tumor viruses. For graduate students only.

202D. Medical Mycology and Parasitology. (½ course) (Formerly numbered 202.) Prerequisite: consent of instructor. Morphology, pathology and pathogenicity of animal parasites, human and animal. 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. For graduate students only.

210. Medical Mycology. (½ course) Prerequisites: Microbiology 101, 103 and 185: recommended Microbiology 110. Consent of instructor may be obtained in special cases. A study of the morphology, physiology, and epidemiology of fungi causing human and animal diseases. Mr. Howard (Sp)

210L. Medical Mycology. (½ course) Prerequisites: Microbiology 101, 103 and 185: recommended Microbiology 110. Consent of instructor may be obtained in special cases. A study of the morphology, physiology, and epidemiology of fungi causing human and animal diseases. Mr. Howard (Sp)

214. Bacterial Pathogenesis. (½ course) Prerequisite: course 202B and/or consent of instructor. A study of the genetic and biochemical properties of bacteria and factors of the host which are relevant to the pathogenesis of bacterial diseases.

M215. Interdepartmental Course in Tropical Medicine. (Same as Microbiology M215 and Pediatrics M215.) Prerequisites: basic courses in microbiology and parasitology or infectious diseases in the Schools of Medicine or Public Health. The course draws upon expertise in the Departments of Pathology, Pediatrics, Microbiology and Immunology to present current knowledge about diseases prevalent in tropical areas of the world. Lectures, demonstrations and audiovisual materials will be used, and field trips to local areas, when possible, will be offered. Mr. Nayak, Mr. Hildemann

215. Seminar in Tropical Virology. (½ course) (Same as Microbiology M215 and Pediatrics M215.) Prerequisites: basic courses in microbiology and parasitology or infectious diseases in the Schools of Medicine or Public Health. The course draws upon expertise in the Departments of Pathology, Pediatrics, Microbiology and Immunology to present current knowledge about diseases prevalent in tropical areas of the world. Lectures, demonstrations and audiovisual materials will be used, and field trips to local areas, when possible, will be offered. Mr. Nayak, Mr. Hildemann

251. Seminar in Microbiology and Immunology. (½ course) Consideration of the history of infectious diseases, their host-parasite relationships, etiology, epidemiology, pathogenesis, immunology, diagnosis, and therapy of bacterial and viral infections. Graded S/U. Mr. Howard (W)

255. Seminar in Medical Mycology. (½ course) Review of current and recent literature in the field of medical mycology, with emphasis on the host- parasite relationship between human and animal parasites. Students will be expected to prepare reviews of selected subjects and to discuss contributions of various workers from the standpoint of experimental methods, results, their interpretation and evaluation. Must be taken in conjunction with 210 by graduate students. Graded S/U. Mr. Howard (Sp)

M257. Seminar in Host-Parasite Relationships. (½ course) (Same as Microbiology M257.) This course discusses recent advances in our understanding of host- parasite interactions and the means of controlling the parasites. Mr. Miller, Mr. Pickett (Sp)

Cell Biology and Virology

208. Animal Virology. Prerequisites: courses in general biochemistry and in general microbiology, including virology. Consent of instructor may be obtained in special cases. Recommended for advanced graduate students with a major in public health, biology or microbiology and for graduate students with an interest in any field of biology or chemistry. Study of the replication of animal viruses including viral structure, virus cell interaction, virus replication and viral oncopogenesis. Special emphasis is placed in understanding the molecular mechanism involved in the control and regulation of replication, transcription and translation of viral genome and its complex interaction with host.

Mr. Nayak (Sp)
M256. Seminar in Viral Oncology. (Same as Biological Chemistry M226, Biology M226, Chemistry M226, and Microbiology M226.) Prerequisite: consent of instructor. Lectures and panel discussions on the structural and functional organization of eukaryotic chromosomes. Graded S/U.

250. Topics in New Biology. Lectures and student seminar presentations. A review of selected current topics in molecular and cell biology. Topics will be selected from recent experimental results on the organization, expression and regulation of genes in eukaryotic cells. Graded S/U. Mr. Wall (W).

252. Seminar in Viral Pathogenesis. (1/2 course). Prerequisites: Bacteriology 102, Microbiology & Immunology 201 or equivalent, or consent of instructor. A consideration of basic phenomena involved in pathogenesis of viral diseases, using carefully selected examples. Emphasis will be given to those systems which have been meaningfully dissected by quantitative immunological and molecular biological methods.

M255. Seminar in Viral Oncology. (1/2 course) (Same as Pathology M255.) An advanced research seminar designed to consider the current developments in the field. Selection of current subjects and publications dealing with tumor viruses, oncopogenesis, development, and cellular regulation.

Mr. Baluda

284. Molecular Microbiology and Cell Biology. (1/2 course) Discussion, two hours. Prerequisites: course 202, 250, or consent of instructor. Discussion of selected current topics related to microbiology and cell biology with special emphasis on an understanding of the basic phenomena at the molecular level. Graded S/U.

Mr. Wettstein (F)

283. Co-Seminar in Animal Virology. (1/2 course) Prerequisites: course 208 or must be concurrently enrolled in course 208 and consent of instructor. Critical review and analysis of the selected papers in the field. Topics will include structure and biology of animal viruses and virus-host interaction at the cellular and molecular level. Graded S/U. Mr. Nayak (Sp).

271. Research Seminar in Virology. (1/2 course) Prerequisites: consent of instructor. Selected topics in virology including viral structures, host-virus interaction, and regulation of viral and host gene expression will be presented and discussed in depth.

Mr. Nayak (Sp)

M223. Major Concepts in Oncology. (Same as Microbiology M223, Dentistry/Oral Biology M223, and Pathology M223.) Prerequisite: Graduate Standing or consent of instructor. Course 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; immunology; principles of cancer surgery, radiation therapy and chemotherapy. Letter grade or S/U grading.

M236. Seminar in Current Topics in Molecular Biology. (1/2 course) (Same as Biological Chemistry M226, Biology M226, Chemistry M226, Microbiology M226, and Molecular Biology M226.) Prerequisites: approval by the instructor and by the Graduate Adviser of the Interdepartmental Molecular Biology Ph.D. Committee. Each student enrolled conducts or participates in discussions on assigned topics. May be repeated for credit.

Individual Study and Research

598. Directed Individual Study or Research. (1/2 to 1 course) Laboratory by arrangement. Consent of Graduate Adviser.

597. Preparation for the Qualifying Examination for the Ph.D. in Microbiology and Immunology. (1/2 to 1 course) Consent of Graduate Adviser.

596. Research for and Preparation of the Doctoral Dissertation in Microbiology and Immunology. (1/2 to 2 courses) Prerequisite: Bacteriology and/or Biology. Research or original problem in the field of Microbiology and Immunology, to be selected by the graduate student with the advice of the instruc-

Molecular Biology

(Molecular Biology Institute Bldg. Room 168)

D.E. Atkinson, Ph.D., Professor of Chemistry.
Marriott A. Baluda, Ph.D., Professor of Viral Oncology.
Paul D. Biester, Ph.D., Professor of Chemistry.
William R. Clark, Ph.D., Professor of Immunology.
R. John Collier, Ph.D., Professor of Microbiology.
Richard E. Dickson, Ph.D., Professor of Chemistry.
David S. Eisenberg, Ph.D., Professor of Molecular Biology in Chemistry.
F.A. Elserling, Ph.D., Professor of Microbiology.
John Fessler, Ph.D., Professor of Molecular Biology in Chemistry.
C. Fred Fox, Ph.D., Professor of Molecular Biology in Microbiology.
Dohn G. Glitz, Ph.D., Professor of Biological Chemistry.
Isaac M. Harary, Ph.D., Professor of Biological Chemistry.
Harvey Herschman, Ph.D., Professor of Biological Chemistry.
James A. Lake, Ph.D., Professor of Molecular Biology in Biology.
George Laties, Ph.D., Professor of Plant Physiology.
Donald P. Niemich, Ph.D., Professor of Microbiology.
George Popjak, Ph.D., Professor of Psychiatry and Microbiology.
Dan S. Ray, Ph.D., Professor of Molecular Biology in Microbiology.
W.R. Romig, Ph.D., Professor of Microbiology.
William F. Salsor, Ph.D., Professor of Molecular Biology in Biology.
Verne N. Schumaker, Ph.D., Professor of Molecular Biology in Chemistry.
David S. Sigman, Ph.D., Professor of Biocatalysis.
Larry Simpson, Ph.D., Professor of Cell Biology.
Roberts A. Smith, Ph.D., Professor of Chemistry.
Claire Szego, Ph.D., Professor of Biology.
Paul R. Wall, Ph.D., Professor of Molecular Biology in Biology.
Joan S. Valentine, Ph.D., Professor of Chemistry.
Randolph Wall, Ph.D., Professor of Microbiology and Immunology.
Felix Wettstein, Ph.D., Professor of Molecular Biology in Microbiology and Immunology.
Charles A. West, Ph.D., Professor of Chemistry.
Gary Wilcox, Ph.D., Professor of Microbiology.
Irene Zabin, Ph.D., Professor of Biological Chemistry.
Clifford Brunk, Ph.D., Associate Professor of Biology.
George C. Fareed, M.D., Associate Professor of Molecular Biology in Microbiology and Immunology.
Michael Grunstein, Ph.D., Associate Professor of Molecular Biology.
John M. Jordan, Ph.D., Associate Professor of Molecular Biology in Chemistry.
Haruo S. Kasamasu, Ph.D., Associate Professor of Molecular Biology in Chemistry.
Kathryn L. Calame, Ph.D., Professor of Biological Chemistry.
Steven G. Clarke, Ph.D., Assistant Professor of Chemistry.
Kathleen Dixon, Ph.D., Professor of Biological Chemistry.
Jay Gralla, Ph.D., Assistant Professor of Molecular Biology in Chemistry.
Robert P. Gunatil, Ph.D., Professor of Microbiology.
Judith Langel, Ph.D., Assistant Professor of Molecular Biology in Biology.
Michael Lovett, Ph.D., Assistant Professor of Medicine.
Harold G. Martinson, Ph.D., Assistant Professor of Chemistry.
Kevin McIntee, Ph.D., Professor of Biological Chemistry.
Allan J. Tobin, Ph.D., Assistant Professor of Biology.
Owen Witte, Ph.D., Assistant Professor of Microbiology.

The Ph.D. Degree

The Ph.D. degree program 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; biogenesis, catalysis and control; molecular basis of chromosome replication and gene expression and of cancer and its control.

Admission Requirements. In general, recommended undergraduate training for the Ph.D. degree program includes a major in a biological or physical science. Coursework should include mathematics through calculus, one year each of general and of organic chemistry, one year each of physics and 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 the M298 laboratory work 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 Examination (GRE) scores. There are no special application forms, but copies of materials sent to Graduate Admissions Office should also be sent directly to MBI. Address for information: Graduate Office, Molecular Biology Institute, UCLA, Los Angeles, CA 90024.

Advising. Graduate Adviser: Dr. John H. Fessler.

Upon entering, a provisional advisory committee of three faculty members is appointed. After completing three one-quarter rotations, the student may choose a permanent Ph.D. adviser. In the initial year, there is a quarterly review by the Advising Committee. The Ph.D. committee makes an overall assessment on the basis of annual reports from the adviser.
Course Requirements. The usual program is two regular courses per quarter or the equivalent of 8 quarter units of upper division or graduate work. Six quarters of M298, Seminar in Current Topics in Molecular Biology, are required.

Teaching Experience. Teaching experience is encouraged although it is not a requirement for the degree.

Written and Oral Qualifying Examinations. Examinations will be given in the M298 course, and four must be passed. An Oral Qualifying Examination on original research proposed by the candidate independently of the Ph.D. advisor, and on a topic distinct and separate from the student's thesis research, will be held usually during the student's second year in the program. A "Midstream Seminar" is normally presented during the third year and must be presented at least six months prior to the Final Oral Examination.

Doctoral Committee. This committee consists of a minimum of five faculty members from the University, and must conform to the regulations governing the nomination of doctoral committees. It must include three faculty who are "MBI core faculty" (i.e., have served as research advisors for an MBI student for at least two years, but who may or may not be Members, Associates or Affiliates of the MBI).

Final Oral Examination Following Completion of the Dissertation. The Final Oral Examination is required of all students for the degree.

Time to Degree. An oral examination for advancement to candidacy should be taken, before the end of the sixth quarter. The average total time to complete the degree is 15 quarters. An oral "midstream" report should be given sometime between being advanced to candidacy and six months before defense of thesis.

Disqualification. Termination of graduate status may be recommended by the Chair of the Interdepartmental Ph.D. Committee, after consultation with the student and his/her advisor (or his/her Student Guidance Committee). Disqualification may be recommended if a student fails to maintain an overall grade point average of 3.0, does not participate in required elements of the Ph.D. program (including laboratory rotations and seminars), or fails to maintain normal progress toward the degree as outlined under Time to Degree and Final Oral Examination.

Appeals. A recommendation for dismissal may be appealed to the entire Interdepartmental Ph.D. Committee; opinions of other interested faculty members will be considered, if requested by the student.

Graduate Courses

M298, Molecular Biology, Seminar in Current Topics in Molecular Biology. Same as Microbiology M298, Biological Chemistry M296, Biology M298, Chemistry M296, and Microbiology and Immunology (Cell Biology and Virology Section) M298.

Courses Related to Molecular Biology

The following courses offered by the departments listed are particularly appropriate to the research areas mentioned above. With the approval of the Guidance Committee or Research Supervisor, other related courses may be included in a student’s program.

For specific information regarding the Ph.D. Degree Program in Molecular Biology, please refer to the Graduate Adviser in that program. For details and descriptions of the graduate courses offered in departments related to Molecular Biology, please refer to the list below.

Biological Chemistry M253, 255, 257, 259, M261, 266, 266, M267, M269, M298.


Chemistry M230, M235, M255, 257, 259, M261, 266, M266, M269, M298.


Microbiology and Immunology

Cell Biology and Virology Section 208, 250, 256, 265, M298.

Immunology Section 254, M258A-M258B, 261, 262, 264.

Physiology 202, 202.

Music

(Department Office, 2539 Schoenberg Annex; Student Services Office, 2539 Schoenberg Annex)

Alden B. Ashforth, Ph.D., Professor of Music.
Elaine R. Barkin, Ph.D., Professor of Music.
Murray C. Bradshaw, Ph.D., Professor of Music.
Peter C. Crossley-Holland, M.A., Professor of Music.
Frederick A. D'Accone, Ph.D., Professor of Music.
Paul E. Des Marais, M.A., Professor of Music.
Maurice Gerow, Ph.D., Professor of Music.
Marie Louise Goliner, Ph.D., Professor of Music.
Frederick F. Hammond, Ph.D., Professor of Music.
Thomas F. Harmon, Ph.D., Professor of Music and University Organist.
Richard A. Hudson, Ph.D., Professor of Music.
William R. Hutchison, Ph.D., Professor of Music.
Nizar A. Jairazbhoy, Ph.D., Professor of Music.
Henri Lazarof, M.F.A., Professor of Music.
David Morton, Ph.D., Professor of Music.
J.H.K. Nketia, B.A., Professor of Music.
James W. Porter, M.A., Professor of Music.
Gilbert Reaney, M.A., Professor of Music.
Abraham A. Schwadron, Mus. A.D., Professor of Music (Chair of the Department).
Robert M. Stevenson, Ph.D., Professor of Music.
Ray E. Travis, M.A., Professor of Music.
Robert L. Tusler, Ph.D., Professor of Music.
D.K. Wilgus, Ph.D., Professor of English and Anglo-American Folk Song.
Edwin H. Hanley, Ph.D., Professor of Music.
Mantle L. Hood, Ph.D., Emeritus Professor of Music.
Boris A. Kremenliev, Ph.D., Emeritus Professor of Music.
W. Thomas Marocco, Ph.D., Emeritus Professor of Music.
Robert U. Nelson, Ph.D., Emeritus Professor of Music.
H. Jan Popper, Ph.D., Emeritus Professor of Music.
Clarence E. Sawhill, Mus. D., Emeritus Professor of Music.
Malcolm S. Cole, Ph.D., Associate Professor of Music.
Charlotte A. Heth, Ph.D., Associate Professor of Music.
Paul V. Reale, Ph.D., Associate Professor of Music.
Robert S. Winter, Ph.D., Associate Professor of Music.
Jacqueline C. DeJonge, Ph.D., Assistant Professor of Music.
David E. Draper, Ph.D., Assistant Professor of Music.
Max L. Harrell, Ph.D., Assistant Professor of Music.
Kathleen R. Murray, Ph.D., Assistant Professor of Music.
A. Jhidr Racy, Ph.D., Assistant Professor of Music.
James E. Westbrook, D.M.A., Assistant Professor of Music.

Gerald E. Anderson, M.S., Visiting Lecturer in Music.
Eliot Asarnow, Ph.D., Visiting Lecturer in Music.
Mario Carta, Adjunct Assistant Professor of Music.
Jeffrey Goodman, M.A., Visiting Lecturer in Music.
Robyn Graham, B.S.M., Visiting Lecturer in Music.
John A. Guarnieri, Visiting Lecturer in Music.
Johana Harris, Lecturer in Music.
Sybil D. Hast, M.A., Visiting Lecturer in Music.
Nina Hinson, M.M., Visiting Lecturer in Music.
Maureen D. Hooper, Ed.D., Senior Lecturer in Music.
John T. Johnson, B.M., Visiting Lecturer in Music.
Bess Karp, M.A., Lecturer in Music.
Yuko Kami, Visiting Lecturer in Music.
Leon Knopoff, Ph.D., Professor of Geophysics and Physics.
Samuel Kramarsinic, Senior Lecturer in Music.
Sidney M. Lazar, M.A., Visiting Lecturer in Music.
Denny Lee, Visiting Lecturer in Music.
James R. Low, B.M., Visiting Lecturer in Music.
Tuan Y. Luu, Lecturer in Music.
Shirley L. Marcus, B.M., Visiting Lecturer in Music.
Lou Anne Nelli, M.A., Visiting Lecturer in Music.
Theodore Norman, Visiting Lecturer in Music.
Michael R. O'Donovan, Visiting Lecturer in Music.
Nils Olver, M.M., Visiting Lecturer in Music.
Barbara R. Patton, B.A., Senior Lecturer in Music.
Warren Pinckney, M.F.A., Acting Assistant Professor of Music.
David Raksin, B.M., Visiting Lecturer in Music.
Sven H. Reher, M.A., Visiting Lecturer in Music.
Mark Richman, M.M., Visiting Lecturer in Music.
Lola Rosow, Ph.D., Visiting Lecturer in Music.
Donald J. Staples, B.A., Visiting Lecturer in Music.
Sheridon W. Stokes, Lecturer in Music.
Suee Togi, Visiting Lecturer in Music.
Alexander Treger, Visiting Lecturer in Music.
Aube Tzerko, Visiting Lecturer in Music.

General Information Applicable to all Degrees

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 Arts in Performance Practices in all classical solo instruments, voice, opera, and conducting.

Major Fields.

MUSIC / 227
Teaching Credentials. Students may earn credentials for teaching music and other subjects in California elementary and secondary schools in conjunction with the 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.

Further information on programs of study, entrance requirements—including examinations, auditions, etc.—may be obtained from the Student Services Office, 2539 Schoenberg Annex.

Admission Timetable
Application for admission/fellowship due December 30
Supplementary application materials are due January 30
Examinations will be administered about February 1
Notice of acceptance or denial will be sent by March 15
Late applications will be accepted until February 15
Supplementary application materials are due April 1
Examinations will be administered early April
Notice of acceptance or denial will be sent by May 30

Failure by the applicant to meet any deadline may result in a delay in action on an application for admission as well as that for a fellowship or assistantship.

Admission Requirements. Applicants for the M.A. and M.F.A. must have completed a Bachelor of Arts degree with a major in music (or the equivalent degree) as described in the Undergraduate Catalog. Transcripts must show at least 52 quarter units of work outside music, including one college year (or its high school equivalent) of 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 the equivalent degree) as described in this catalog. The degree normally will have been taken in the same field of concentration as the proposed doctorate. If a student wishes 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 (a) take the entrance examination (see below); (b) submit a letter describing their background of study and stating their reasons for wishing to pursue graduate studies in music; (c) request three former instructors to write letters of recommendation on their behalf (form letters are included in the application for admission); and (d) submit written examples of their work. For all branches of Musicology and Music Education, a paper on an appropriate subject in the applicant's area should be submitted; for Composition, musical scores; for M.F.A. applicants, a repertory list and sample programs or concerts. M.F.A. applicants will also be required to demonstrate by audition their general musical proficiency in their area of specialization. Ph.D. applicants should submit the M.A. thesis or composition, if possible. No application can be considered until the examination has been taken and all of the above materials have been received.

Teaching Experience: Applicants for the Ph.D. in music education will be required to have two years teaching experience at the elementary or secondary levels to be considered for admission.

Entrance Examination: The entrance examination will be administered at Schoenberg Hall on the UCLA campus only twice a year (see above timetable). Applicants outside the Southern California area who find it impossible to take the examination on campus may make arrangements with the Department of Music to take the examination in absentia or close to one of the dates listed above. Further information will automatically be sent after the application has been received. The entrance examination is approximately five hours in length and consists of five parts: (1) written exercises in harmony and counterpoint, (2) harmonic and formal analysis, (3) identification of musical terms, (4) an essay on each of two historical subjects, one before and one after 1750, and (5) melodic and harmonic dictation, sight-reading, piano sight-reading, and also performance in the applicant's principal performance medium. In addition to the above, M.F.A. applicants must do an audition; music education applicants (both M.A. and Ph.D.) must take a comprehensive examination in that field. The applicants entrance examination and file are evaluated by the appropriate area council and the Graduate Committee of the Music Department to determine fitness for graduate study.

Advising. Each student must plan a program under the guidance of the Graduate Adviser in the field of concentration. Students are required to contact their advisers at the beginning of each quarter and obtain the necessary signature on the Study List Card. The Graduate Adviser for each area of specialization is assigned by the Chair on a yearly basis. Students may contact the Student Services Office at the beginning of Fall Quarter for the name of their adviser.

An ongoing evaluation of the student's progress toward the degree is made by the Graduate Adviser each quarter in consultation with the student. Any problems are reviewed by the area council of the student's specialization. Students file their signed study List Cards with the Student Services Office for enrollment in classes. In order to receive a tentative study list from the Registrar's Office the cards must be filed by the third day of classes. Students are responsible for their Official Study Lists (mailed by the Registrar's Office at the end of the second week of classes) and should check them for accuracy.

Deadlines for leaves of absence, adding/dropping of courses, submission of Candidacy forms, submission of thesis/dissertation drafts to committees, and filing of theses/dissertations with the Graduate Division are listed in the Schedule of Classes each quarter.

Language Examination Administration. Language requirements specific to each degree are listed in the respective sections below. French, German, Russian, and Spanish examinations are administered through the Educational Testing Service and require a score of 500 to pass. Students may sign up and register for the test at the University Extension Cashier's Office, 10955 LeConte at the corner of Gayley (University Extension Building). The schedule of test dates is posted on the Graduate Bulletin Board in the music building (first floor, across from SH 1420) and in the Student Services Office. Arrangements for language tests, other than the above, are made through the Language Examiner of the Graduate Division (1225 Murphy Hall).

Committee Appointments. The language requirement and a majority of the coursework must be completed before a request for any committee or topic approval may be submitted. Forms are obtained from the Student Services Office and returned to that office for processing. All student committees are appointed by the Graduate Committee of the Music Department. In all cases, except the Guidance Committee for the Ph.D., the student may select the chair, who will guide the thesis or dissertation, and suggest the other members of the committee, according to the guidelines given in each degree section, subject to the approval of the Graduate Committee.

500 Series Course Summary

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<thead>
<tr>
<th>Course</th>
<th>Unit Value</th>
<th>Type Grading</th>
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<tbody>
<tr>
<td>596A</td>
<td>2 or 4</td>
<td>letter</td>
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<tr>
<td>596B</td>
<td>2 or 4</td>
<td>letter</td>
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<tr>
<td>596C</td>
<td>2 or 4</td>
<td>letter</td>
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<tr>
<td>597</td>
<td>2 or 4</td>
<td>S/U</td>
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<tr>
<td>598</td>
<td>4-6-8</td>
<td>S/U</td>
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<tr>
<td>599</td>
<td>4-6-8</td>
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Limitations on the number of units applicable to the master's degree are listed under "Course Requirements" in the M.A. and M.F.A. sections below. There is no limitation for the Ph.D.

Disqualification. The specific conditions which may lead to termination are: (1) terminal master's degree (recommendation from the
Master of Arts Degree

For Major Fields and Admission Requirements see "General Information Applicable to all Degrees" above.

Foreign Language Requirement. A 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. Students lacking these requirements upon entrance must begin language study during the first year of residence.

Course Requirements. General Requirements: Students are required to complete a minimum of nine courses, five of which must be at the 200 level. Only 4 units of 596A, 596B, or 596C, and 4 units of 597 or 598 may apply toward the total course requirement. No more than 4 units of all types of 500 series courses may be applied toward the minimum graduate course requirement. Upper division courses that may be counted toward the minimum of nine courses include: 103A-103B, 104A-104B, 105A*-105B*, 106A*-106B*, 107A*-107B*, 107C*, 108, 109A-109B, 110A-110B, 111A-111B, 112A-112B, 118, 119A-119B-119C, 127A-127B-127C-127D-127E-127F, 140A**, 140B**, 140C**, 141, 142A-142B, 143A-143B, 145, 146A-146B-146C, 147A-147B, 148, 149, 151A-151B, 152, 153A-153B-153C, 156A-156B, 157, 175, M180, M181, 184, 185, 187. A maximum of one course in chamber ensembles (175) may be counted toward the degree. Course 598 serves to guide the preparation of the thesis and should normally be taken during the last quarter of residence.

Course of Study: Course requirements for each field of study are as follows:

Historical Musicology: 200A, 201ABC, either 210 or 211 (students planning to enter the Ph.D. program are strongly advised to take both 210 and 211 in the first year of residence), 250A or 250B, two terms of 260A-260F, and one course elective upon the recommendation of the Graduate Adviser.

Systematic Musicology: 200A-200B, three terms of 272, one from 255, 269; 273, or 275; and three courses elective upon the recommendation of the Graduate Adviser.

Ethnomusicology: 190A-190B, 200A-200B; and five courses elective upon the recommendation of the Graduate Adviser.

Composition: 200A, one from 251A-251D, three terms of 252 (252A, B, and C in sequence, with the option of substituting 596A for 252C), 266A or 266B, and three courses elective upon the recommendation of the Graduate Adviser.

Music Education: 185, 200A-200B, two terms of 270A-270F, and four courses elective upon the recommendation of the Graduate Adviser. Students may elect either the Thesis Plan or the Comprehensive Examination Plan (see below).

Comprehensive Examination Plan. (Music Education only — optional.) The Comprehensive Examination Plan is acceptable only for those not going on to the Ph.D. The examination the student is expected to pass is in lieu of a thesis, and consists of a 3-hour examination in one selected area (general, choral, or instrumental); a 3-hour examination in the broad field of Music Education; and a 2-hour examination in either Theory, Composition, Historical Musicology, Systematic Musicology, or Ethnomusicology.

If a student fails one or more parts of the Comprehensive Examination, he/she may be reexamined upon the recommendation of the committee.

The committee includes three members of the Department, all in the professional ranks; two in Music Education and one in the area of the third examination.

Thesis Plan. In all areas except Composition, the thesis will be an extended essay. For students in Composition, the thesis will be a work proposed by the student and approved by the Composers' Council. Students in Music Education may elect either the Thesis Plan or the Comprehensive Examination Plan (see above).

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.

Orientation meetings on the format of the thesis are held quarterly by the Manuscript Adviser (134 Powell Library). Notices of these meetings are posted on the Graduate Bulletin Board (first floor, across from 1420 Schoenberg Hall) and in the Student Services Office.

Master's Committee. The master's committee is made up of three members from the Music Department, all in the professional ranks; two in the student's area of specialization, one member outside the student's area. Occasionally, faculty outside the Music Department may serve in lieu of one of the departmental members.

Advancement to Candidacy. Forms are obtained from the Student Services Office and returned to that office for processing. The forms should be submitted no later than one week before the deadline date posted in the Schedule of Classes in the quarter in which the degree is to be granted.

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.

When the student is ready for the Final Oral Examination, the Student Services Office should be notified; they will contact the committee members and arrange a meeting.

Time to Degree. For a full-time student with no deficiencies upon admission to graduate status, the normal progress toward the degree is as follows:

(a) From graduate admission to completion of required courses: six quarters.

(b) From graduate admission to award of degree: seven quarters.

Master of Fine Arts Degree

For Major Fields and Admission Requirements see "General Information Applicable to all Degrees" above.

Foreign Language Requirement. A reading knowledge of French, German, or Italian is required. Candidates in the opera specialty must also be fluent in speaking one of these languages.

A writing language requirement must also be satisfied by the end of the first year of residence.

Terminology Examination: All M.F.A. students will be required to pass a departmental examination covering standard musical performance terminology (expression, dynamics, interpretation, performance practices, instrumentation, style, tempo) in French, German and Italian. This examination should be satisfactorily completed by the end of the second year of residence.

Course Requirements. General Requirements: Students are required to complete a minimum of 18 courses, including a minimum of six at the 200 level and six or more in the 400 series. Only 4 units of 596A, 596B, or 596C, and 8 units of 598 may apply toward the total course requirement. No more than 4 units of all types of 500 series courses may be applied toward the minimum graduate course requirement.

Course of Study: Course requirements are as follows: 200A, three terms of 261A-261F, six terms of 400 level performance instruction, two
terms (8 units) of 598, and six electives. Conducting students will declare either a choral or instrumental specialization. Six terms of 475 will be required in the area of specialization and at least two in the other. (On a 2-year program, the ratio would be four to one.) Recommended electives are: 108, 127A-127F, 140ABC, 175, 187, 596, and additional courses from the 200 and 400 level series. A maximum of 4 units in chamber ensembles (175) may be counted toward the minimum 18 courses. Course 598 serves to guide the preparation of the final project and should normally be taken during the last two quarters of residence.

Performance Requirements: With the exception of the first quarter in residence, the student must participate in a public performance of a soloistic nature each quarter for the first two years. One of the required performances each year must be a complete solo recital on campus (preferably a noon concert) with a faculty committee in attendance to evaluate the performance. Program notes for the annual performance project, written by the candidate, must be submitted with the program to the Graduate Adviser in Performance Practices at least one month before the concert date. Conducting students will present a program, or a substantial portion thereof, approved by the conducting faculty, either on or off campus.

The other performances (either on or off campus) must simply feature the student in a soloistic capacity (joint recital, soloing with a performance organization, accompanying, etc.) and may be only a portion of the program. Conducting students will present a minimum of one work, or a substantial movement of a longer work, in a public concert. Programs should be submitted to the Student Services Office for the student's file.

Final Project. This is to be completed during the last year of residence. A solo recital and appropriate scholarly paper will be required in all areas. In addition, a major operatic performance is required in the area of opera. Conducting students will present an on-campus program, or a substantial portion thereof, with one of the Department's performance organizations. The scholarly paper should be equivalent to a graduate seminar paper (15-25 pages in length) and will be concerned with performance problems which can be elucidated through research and analysis. The topic for the final project will be decided by the student in consultation with the committee chair, who will be responsible for supervising the work. Pieces drawn from or relating to the study will be included in the final recital. Both the paper and the recital will be evaluated by the student's committee.

A completed first draft of the scholarly paper must be submitted to the student's committee members by the first day of classes of the quarter in which the final recital has been scheduled. If this requirement is not met, the recital will be postponed until the next regular academic quarter in which this requirement can be met.

Concise, well-written program notes, including a brief biography of the student must be written by the candidate and submitted to the Graduate Adviser in Performance Practices for approval at least one month prior to the final recital. Publicity information for the final recital must be submitted to the Graduate Adviser at the beginning of the previous quarter.

The final version of the scholarly paper, with the accompanying recital program, must be submitted in the format of a thesis. (Students should contact the Manuscript Adviser — 134 Powell Library — for information.) The final paper, signed by all M.F.A. committee members, must be submitted in duplicate (two thesis-quality xeroxes or the original and one xerox copy to the Student Services Office by the last day of classes in the quarter in which the student is to graduate.

The terminology examination, language requirement, and a majority of the coursework must be completed before the student submits the final project proposal and request for an M.F.A. committee. The proposal which is to include the complete recital program and an abstract of the scholarly paper should be submitted in the Fall Quarter of the last year of residence. It is first approved by the Performance Council, then by the Graduate Committee.

M.F.A. Committee. The M.F.A. committee is made up of four members from the Music Department: two from the area of performance, one of whom is the student's applied instructor, and two from another academic discipline within the Department. Following these guidelines, the student may propose the chair and the other members. Occasionally, faculty outside the Music Department may serve in lieu of one of the departmental members. M.F.A. candidates should have committees appointed at the beginning of their last year in residence.

Advancement to Candidacy: See Master of Arts section.

Time to Degree. For a full-time student with no deficiencies upon admission to graduate status the normal progression toward the degree is as follows:

(a) From graduate admission to completion of required courses: nine quarters.

(b) From graduate admission to award of degree: nine quarters (10 quarter maximum).

The Ph.D. Degree

For Major Fields and Admission Requirements, see "General Information Applicable to all Degrees" above.

Foreign Language Requirement. A reading knowledge of French and German is required in Systematic Musicology, Ethnomusicology, and Music Education; Of French, German, and a choice of Italian, Latin or another language approved by the Council in Historical Musicology. In the field of Composition, two languages are required; one of which must be German or French; the other may be chosen from German, French, Latin, Italian, or Russian.

Course Requirements

A Ph.D. student may petition to his/her area council on the advice of his/her 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 as follows:

Historical Musicology: 200A, 201ABC, 210, 211, 250A or 250B, and five terms of 260A-260F. Students who have received the M.A. in Historical Musicology from UCLA will normally take a minimum of three terms of 260A-260F in the Ph.D. program. Students may complete their residence requirement by electing courses, upon the recommendation of the Graduate Adviser, from 200 level courses or 100 level courses listed under the general requirements for the M.A.

Systematic Musicology: 200A-200B, five terms of 272, and one term of 255, 269, 273, or 275. Students who have received the M.A. in Systematic Musicology from UCLA will normally take a minimum of two terms of 272 in the Ph.D. program. Students may complete their residence requirement by electing courses, upon the recommendation of the Graduate Adviser, from 200 level courses or 100 level courses listed under the general requirements for the M.A.

Ethnomusicology: 190A-190B, 200A-200B, and six seminars, at least three of which shall be 260; the others are to be chosen from 248, 253, 254A-254B, or 255. Students are also expected to complete two area studies courses.

Parts of these requirements may be completed at the M.A. level. Students may complete their residence requirement by electing courses, upon the recommendation of the Graduate Adviser from 200 level courses or 100 level courses listed under the general requirements for the M.A.

Composition: 200A, one from 251A-251D, six terms of 252 (252A, B, and C in sequence with the option of substituting 596A for 252C), and 266A or 266B. Students who have received the M.A. in Composition from UCLA will normally take a minimum of three terms of 252 in the Ph.D. program. Students who have received the M.A. in composition elsewhere will normally take two full cycles of 252A,B, and C in sequence with the option of substituting 596A for either or both 252Cs. Students may complete their residence requirement by electing courses, upon the recommendation of the Graduate Adviser, from 200 level courses or 100 level courses listed under the general requirements for the M.A.

Music Education: 185, 200A-200B, and five terms of 270A-270F. Students who have received the M.A. in Music Education from UCLA will normally take a minimum of three terms of
270A-270F in the Ph.D. program. Under advisement, two of the three terms of 270A-270F may be completed under special studies (596C). Students who wish to pursue the Ph.D. in Music Education with a minor in Ethnomusicology will be required to take 185, 190A-190B, 200A-200B, three terms of 270A-270F, and two courses from 141-143, 145-149, 152, 153A-153B-153C, or 251-253. Electives are to be selected from 140ABC, M180, M181, 187, 254AB, 255, and 280. Students may complete their residence requirement by electing courses, upon the recommendation of the Graduate Adviser, from 200 level courses or 100 level courses listed under the general requirements for the M.A.

Form I: The status of students in all fields of concentration is provisional subject to the departmental approval of the Form I Application (Notice of Intention to Proceed to Candidacy for the Ph.D. Degree). This form is normally filed at the end of the first year of residency, provided that all but one of the languages have been passed. The application may be secured from the Student Services Office and returned to same for processing.

The Doctoral Program: The Graduate Committee for the student will be made up of five members, three from the Department, all in the professional ranks. The committee must include at least two members in the student's area of concentration, one of whom will guide the dissertation and be the chair of the doctoral committee. Other members are elected according to the examinations to be taken. The Graduate Committee will appoint one member to act as chair.

Guidance Committee: The guidance committee will assist the student in the preparation of the written and oral qualifying examinations. Students may suggest the membership. The committee is made up of five members in the Department, all in the professional ranks. The committee must include at least two members in the student's area of concentration, one of whom will guide the dissertation and be the chair of the doctoral committee. Other members are elected according to the examinations to be taken. The Graduate Committee will appoint one member to act as chair.

Written and Oral Qualifying Examinations. When the student and his/her committee feel he/she is ready to take the Qualifying Examinations, the student 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 will act as proctor for the tests. Normally the six written examinations (delineated below) are spread over a 2-week period but should be completed within three weeks. Should the student not pass one or more of the tests, repeats will be scheduled after consultation with the guidance committee and after a stipulated period of time. Upon successful completion of the written examinations, an Oral Qualifying Examination will be scheduled by the Apprentice Assistant.

In the fields of Historical Musicology, Ethnomusicology, and Music Education, the written examinations consist of the following:

(a) history of musical styles in Western civilization (three hours); (b) analysis of form and style (three hours); (c) an examination to demonstrate a basic knowledge of music in non-Western cultures (two hours); and (d) a choice of one or more from: acoustics of music, aesthetics of music, psychology of music, and organology (two hours). Further written examinations totaling six hours are required in two areas: (1) Historical Musicology: one area to be selected from Ancient, Medieval, Renaissance, or Baroque music; the other area from Classic, Romantic, or 20th Century music; (2) Ethnomusicology: two areas to be selected from contrasting musical cultures; and (3) Music Education: two areas, one to encompass historical, philosophical, and psychological bases, the other to be selected from Music Education emphasizing elementary, secondary, or college-university levels. For the student in Music Education with a minor in Ethnomusicology, the second examination will relate the fields of Ethnomusicology and Music Education.

In the field of Systematic Musicology, the written examinations consist of the following: (a) composition of a short homophonic and short polyphonic piece within a 24-hour period optionally either on or off campus; (b) general history of music (three hours); (c) analysis of form and style (three hours); (d) one or more of the following: acoustics, aesthetics, psychology of music, sociology of music, and organology (six hours).

In the field of Composition, the written examinations consist of: (a) composition of a short homophonic and short polyphonic piece within a 24-hour period optionally either on or off campus; (b) general history of music (three hours); (c) analysis of form and style (three hours); (d) one or more of the following: acoustics, aesthetics, psychology of music or ethnomusicology (two hours); (e) 20th Century music (two hours); and (f) music theory from the medieval period to the present, with an optional emphasis on theoretical writings before or after 1700 (three hours).

Upon completion of the Written and Oral Qualifying Examinations, the student may submit the dissertation topic and request for a doctoral committee for approval. The dissertation topic is first approved by the student's area council; the topic and the composition of the doctoral committee are then taken up by the Graduate Committee.

Doctoral Committee. The committee is made up of five members, three from the Music Department and two from other departments on campus, all in the professional ranks. The three members from the Music Department include two in the student's area of concentration and one outside the area. Note: Only two members from the guidance committee can be continued on the doctoral committee.

The first meeting of the doctoral committee is concerned with the presentation and discussion of the dissertation topic.

Dissertation. In all fields but Composition, the dissertation will be an extended monograph. In the field of Composition, the dissertation will consist 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. Students are eligible to receive the optional Candidate in Philosophy degree upon advancement to candidacy for the Ph.D.

Advancement to candidacy is processed by the Graduate Division upon completion of the qualifying examinations and presentation of the dissertation topic to the doctoral committee.

In-Candidacy Fee Offset Grant Program: Students who begin graduate study at UCLA after September 1, 1979 will be mandatorily included in this program. Those students with graduate standing prior to September 1, 1979, have a choice of whether or not to join the program. Specific information may be obtained from the Student Services Office.

Final Oral Examination. A Final Oral Examination is required by the Department of Music. When the student is ready for the Final Oral Examination, he/she should notify the Student Services Office who will contact the committee members and arrange the meeting.

Time to Degree. For a full-time student with no deficiencies upon admission to graduate status, the normal progress toward the degree is as follows:

(a) From graduate admission to admission to the doctoral program: four quarters.

(b) From graduate admission to Written and Oral Qualifying Examinations: six quarters.

(c) From graduate admission to approval of dissertation prospectus: eight quarters.

(d) From advancement to candidacy to Final Oral Examination: seven quarters.

(e) From graduate admission to award of degree: 15 quarters.

Lower Division Courses

6GA-6GB. Graduate Review of Music History and Analysis.

8G. Graduate Piano Sight-Reading.

Upper Division Courses

185. Historical and Philosophical Foundations of Music Education.

190A-190B. Proseminar in Ethnomusicology.

Graduate Courses

200A. Research Methods and Bibliography. Three hours weekly. A survey of general bibliographic material in music. Mr. D'Accone, Mr. Hudson

200B. Research Methods and Bibliography. Three hours weekly. Prerequisite: course 200A. Guided writing, utilizing specific bibliography, in systematic musicology, ethnomusicology, and music education. Mr. Drapek, Mr. Murray and staff.
Theory from Antiquity through Zarlino; Music. (Formerly numbered 250.) Prerequisite: Western and non-Western notation.

250A-250B. Seminar in the History of European Instruments. Three hours weekly. Mr. Hammond

270A-270F. Seminar in Music Education. Three hours weekly. Prerequisite: consent of instructor. May be repeated for credit. 270A. Tests and Measurements. 270B. Non-Western Musics; 270C. Psychological Innovations; 270D. Philosophical Problems; 270E. Historical Foundations; 270F. General Topics. Mrs. Murray, Miss Hooper

272. Seminar in Systematic Musicology. Three hours weekly. Prerequisite: course 108 and consent of instructor. May be repeated for credit.

273. Seminar in the Acoustics of Music. Prerequisite: course 108 or consent of instructor. May be repeated once for credit.

275. Seminar in Aesthetics of Music. Three hours weekly. Prerequisite: course 107, or consent of instructor. May be repeated once for credit.

276. Seminar in the Psychology of Music. Three hours weekly. Prerequisite: course 104 or consent of instructor. May be repeated for credit. Selected topics in the psychology of music include: recent findings in brain research, musical perception, learning, cognition, memory, therapy, affect, meaning, and measurement.

280. Seminar in Ethnomusicology. Three hours weekly. Prerequisite: courses 109-110 and 200A-200B. May be repeated for credit.

281. Music of Indonesia. Three hours weekly. Prerequisite: consent of instructor. The 2000-year cultural history of Indonesia will serve as a background for the materials of this course. During the first quarter emphasis will be on the music of related performing arts of Java, including an analytical and comparative concentration on music as well as exercises in the melody writing of classical gender; a similar emphasis in the second quarter will be devoted to the music and performing arts of Bali. Concurrent participation in one of the Indonesian performance groups is required.

282. Music of Iran and other non-Arabic Speaking Communities. Three hours weekly. 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. Concurrent participation in the Near East Performance group is required.

283. Music of Thailand. Three hours weekly. Prerequisite: consent of instructor. A study of the traditional music of Thailand; historical background and intercultural influences, instruments and ensembles, theatrical and dance music, music and music in its social contexts; a study of folk and styles through examination of representative compositions, with practice in composing in basic styles. Concurrent participation in the Thailand performance group is required.


285. Music of Tibet. Three hours weekly. Prerequisite: consent of instructor. A study of the traditional music of ethnic Tibet as ritual, art and folklore in a cultural matrix, and its relationship with other arts. Topics include traditional instruments and ensembles and studies in formal and stylistic analysis.

Crossley-Holland

286A-286B. Classical Music of India. Three hours weekly. Prerequisite: consent of instructor. A study of the history, theory and practice of North and South Indian classical music. The first quarter will concern primarily with music and historical and cultural history, while the second quarter will involve analysis of present-day forms, styles, techniques, and musical instruments. Concurrent participation in the Indian music performance group is required.

Jairazbhoy


288. Seminar in North American Indian Music. Three hours weekly. Prerequisite: consent of instructor. A survey of representative musical styles of Native American Indians, including problems of transcription, methods of analysis, symbolic implications of song texts. Emphasis will be placed on interrelationship between music and cultural context. The influence of Western music in cultural context will also be discussed.

Draper

Professional Courses

370. Music in General Education. (½ course) Two hours weekly. Prerequisite: acceptance into the teacher training program through the School of Education. All music students shall take Music 370 concurrently with Education courses 100, 112, 113, and 145. Course may be repeated for credit up to six units. Critical discussions related to supervised teaching in progress.

Miss Hooper, Mr. Anderson

460A-465. Graduate Instruction in Performance. Prerequisites: admission to the M.F.A. program. Individual instruction of one hour per week with performance laboratory at the discretion of the instructor. May be repeated for credit. Intensive study and preparation of musical literature in the area of specialization.


472. Master Class in Opera. Three hours weekly. Prerequisite: consent of instructor. Intensive study and preparation of opera literature. May be repeated for credit.

475. Master Class in Conducting. Three hours weekly. Prerequisite: consent of instructor. Intensive study and preparation of musical literature in the specialized field of conducting.

Individual Study and Research

596A. Directed Individual Studies in Orchestration and Composition. (½ to 1 course) May be repeated for credit. A maximum of one course (four units) may be applied for credit for the M.A. degree.

599B. Directed Individual Studies in Musicology. (¾ to 1 course)

599C. Directed Individual Studies in Music Education. (¾ to 1 course)

597. Preparation for the Comprehensive Examination for the Master’s Degree or the Qualifying Examination for the Ph.D. (½ or 1 course)
598. Guidance of Master's Thesis or M.F.A. Final Project. (1 or 2 courses) M.A. candidates may apply 4 units toward degree requirements. M.F.A. candidates may apply 8 units toward degree requirements. May be repeated for credit.

599. Guidance of Doctoral Dissertation. (1 or 2 courses)

Related Courses in Other Departments


Near Eastern Languages and Cultures

(Office, 376 Kinsey Hall)

Amin Banani, Ph.D., Professor of Persian and History
Arnold Bard, Ph.D., Professor of Hebrew
Andras Bodrogligeti, Ph.D., Professor of Turkic and Iranian (Chair of the Department).
Seager A. Bonebakker, Ph.D., Professor of Arabic.
Giorgio Buccellati, Ph.D., Professor of Ancient Near East and History.
Herbert A. Davidson, Ph.D., Professor of Hebrew.
Avedis Karian, Ph.D., Professor of Armenian.
Hanns-Peter Schmit, Ph.D., Professor of Indo-Iranian.
Stanislav Segert, Ph.D., Professor of Biblical Studies and Northwest Semitics.
Wolfgang Dohler, Docteur-a-Lettres, Emeritus Professor of Hebrew and Semitic Linguistics.
Moshe Perimann, Ph.D., Emeritus Professor of Arabic.
Ismael Poonawala, Ph.D., Professor of Arabic.
Claude-Francois Audebert, Ph.D., Associate Professor of Arabic.
Elizabeth Carter, Ph.D., Associate Professor of Near Eastern Archaeology.
John Callender, Ph.D., Associate Professor of Egyptology.
Lev Hakak, Ph.D., Associate Professor of Hebrew.
Thomas Penchoen, Ph.D., Associate Professor of Berber.
Yona Sabor, Ph.D., Associate Professor of Hebrew.
Deborah Lipshtadt, Ph.D., Assistant Professor of Jewish Studies.

Shimeon Bismam, Lecturer in Hebrew.
Stanford Shaw, Ph.D., Professor of History.

The Master of Arts Degree

Admission Requirements. In addition to the regular University requirements, a bachelor's degree or its equivalent in the language area chosen for the degree, the Graduate Record Examination Aptitude Test (minimum score requirement 1500), and three letters of recommendation are required. Prospective students may write to: Department of Near Eastern Languages and Cultures, 376 Kinsey Hall, UCLA.

Advising. Graduate Adviser: Andras Bodrogligeti, Chair, Department of Near Eastern Languages and Cultures, 376 Kinsey Hall, UCLA.

Each graduate student is assigned a guidance committee of three faculty members whose interests are in the student's area of specialization. The Chair of the Department selects the committee and appoints one member to serve as chair of the committee and adviser.

An advising appointment is made for each new student at the beginning of his/her first quarter. During this appointment, the student and his/her adviser agree upon a study list and his/her future program. In each subsequent quarter it is the student's responsibility to discuss his/her plan for that quarter with his/her adviser and obtain approval of his/her study list. Petitions to alter this study list after it has been formulated must be approved by the Department Chair, who is the official Graduate Adviser for the Department. Departmental policy requires the signature of the Chair of the Department for approval of all other petitions as well.


The candidate may concentrate on either language or literature in his/her chosen field but will be required to do work in both. In the case of the Ancient Near Eastern field, the candidate may concentrate on a combination of both language and literature with Near Eastern archaeology.

Foreign Language Requirement. The candidate 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 his/her adviser. The student has the option of satisfying this requirement by one of the following methods: (1) Educational Testing Service (ETS) examination, (2) departmentally administered examination, (3) two years of college level or equivalent in the language selected. It is strongly recommended that the student who intends to continue toward a Ph.D. degree acquire a knowledge of a second major European language other than English while still a candidate for the M.A. degree.

Course Requirements

Departmental General Requirements. A minimum of nine upper division and graduate level courses, of which at least six courses must be on the graduate level. All candidates will be required to take one quarter of Near Eastern Languages 200 (Bibliography and Method).

Specific Requirements. The specific requirements for the M.A. degree in the several areas of specialization are as follows: The candidate in Ancient Near Eastern Civilizations will be required to study two ancient languages of the Ancient Near East (Ancient Egyptian, Akkadian, or Hebrew), and the history and archaeology of the related area. The major area of concentration may be either the linguistic, literary, or archaeological aspect of the discipline. The candidate in Hebrew will be required to study Hebrew and another Semitic language; in Semitics, three Semitic languages; in Turkish, two Turkic languages, and in Arabic, Armenian and Iranian, one other related Near Eastern Language in addition to his/her major language area.

Comprehensive Examination Plan. Upon completion of his/her course requirements and foreign language examination, the candidate will be required to take a written Comprehensive Final Examination in both his/her major and related fields administered by his/her guidance committee. The guidance committee of three faculty members is appointed by the Department Chair. A student may be reexamined a second time. A committee is appointed for each student, in the quarter in which the degree will be awarded.

Examinations are offered whenever the student is ready to take them.

Time to Degree. Average time from graduate admission to conferral of the degree: six quarters.

500 Series Course Limitations.

<p>| Course Unit Type of Number of Times May |</p>
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<tr>
<th>No. Value Grading</th>
<th>Be Repeated</th>
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<tr>
<td>596</td>
<td>2-8</td>
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</table>

Number of 500 series quarter units which may apply toward the total course requirement: 12 units (596).

Toward the minimum graduate course requirement: 8 units (596).

Disqualification. The specific conditions which may lead to termination are: (1) terminal master's degree (recommendation from the student's master's committee), (2) scholarship (critical recommendation from the Graduate Committee), (3) failure to make normal progress toward the degree (recommendations from the Department Section in the student's specialization).

In all cases, the student's personal and academic progress are discussed in depth by the Department Section concerned with making the recommendation. A recommendation for termination is forwarded to the Department Chair for final review and decision. If termination is upheld, the Chair notifies the student in writing.

Appeals. Should the student wish to appeal such a decision, he/she should submit a letter to the Chair stating his/her reasons and the Chair will transmit it to the Department Section for consideration.

The Ph.D. Degree

Admission Requirements. In addition to the regular University requirements, a M.A. or its equivalent in the applicant's field, the Graduate Record Examination (GRE) Aptitude Test
(minimum scores requirement: 1500), and three letters of recommendation are required. Prospective students may write to: Department of Near Eastern Languages and Cultures, 376 Kinsey Hall, UCLA.

The Department does not have an application form in addition to the one used by Graduate Admissions.

Completion of the master's degree in his/her field is required. The GRE is required. The M.A. program need not have been completed at UCLA.

Advising. Graduate Adviser: Andras Bodrogi, Chair, Department of Near Eastern Languages and Cultures, 376 Kinsey Hall, UCLA.

All graduate students are assigned a guidance committee of three faculty members whose interests are in the student's area of specialization. The Chair of the Department selects the committee and appoints one member to serve as chair of the committee and adviser.

An advising appointment is made for each new student at the beginning of his/her first quarter. During this appointment, the student and his/her adviser agree upon a study list and his/her future program. In each subsequent quarter, it is the student's responsibility to discuss his/her plan for that quarter with his/her adviser and obtain approval for his/her study list. Petitions to alter this study list after it has been formulated must be approved by the Department Chair who is the official Graduate Adviser for the Department. Departmental policy requires the signature of the Chair of the Department for approval of all other petitions as well. The guidance committee usually serves as the departmental members of the doctoral committee.

Major Fields or Subdisciplines. Ancient Near Eastern Civilizations, Arabic, Armenian, Hebrew, Iranian, Semitics, Turkic. The candidate may concentrate on either language or literature in his/her chosen field but will be required to do work in both. In all areas of specialization, the student's program of study will be devised in consultation with his/her adviser.

Foreign Language Examinations. Two modern major European languages other than English. 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 the student's interests.

The requirement is fulfilled by one of the following three options: (1) Passing the Educational Testing Service (ETS) examination, (2) Passing an examination administered by the Department with a minimum grade of "B", (3) Two years college work in the language or the equivalent.

The student is expected to pass one of the two required European languages at the beginning of his/her first quarter, and the second language not later than at the beginning of the fourth quarter.

Course Requirements. A candidate specializing in the languages of the Near East is expected to take the equivalent of one year of general linguistics and one year of grammar in his/her field of concentration (e.g., Semitics or Turkic). He/she is also required to achieve competence in three related languages within his/her field of concentration with particular emphasis on two major languages. It is mainly the structural mastery of the languages and familiarity with their development and their position within the appropriate family of languages that are required. The student is also advised to acquaint himself/herself with the historical, literary, religious, and social background of the various language areas of his/her interest.

A candidate specializing in the literatures of the Near East is required to achieve competence in two languages; his/her second language must be a literary language from the cultural area related to his/her first language (e.g., a Hebraist can choose Akkadian, Arabic, Aramaic or Yiddish; an Arabist can choose Persian or Turkish, and so on). The candidate will also be required to 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.

A candidate specializing in Ancient Near Eastern Civilization will be required to achieve competence in two ancient languages. His/her major area of concentration may be in either the linguistic, literary, or archaeological aspect of the discipline.

Written and Oral Qualifying Examinations. Before the Chair of the Department recommends the formation of a doctoral committee, all students must pass Written Qualifying Examinations.

The candidate in languages will be examined in three Near Eastern languages and the literary and historical background of at least two of them. The candidate in literature will be examined in the literatures written in two languages within the cultural area of his/her concentration and the historical and cultural background of these languages with emphasis on one of them. The candidate in Ancient Near Eastern Civilizations will be examined in two ancient languages and the history and archaeology of the major areas of the Ancient Near East.

Doctoral Committee. The regulations are synonymous with those of the Graduate Council.

Final Oral Examination Following Completion of the Dissertation. The Department does not require an oral defense of the dissertation except when deemed necessary by the candidate's doctoral committee.

Time to Degree (Average)

1) From graduate admission to admission to the doctoral program, it is not synonymous: 6 quarters.

2) From appointment of an adviser or Departmental Guidance Committee to completion of master's degree, if a requirement: 6 quarters.

3) From graduate admission to the Written and Oral Qualifying Examinations: 12 quarters.

4) From graduate admission to the approval of the dissertation prospectus: 10 quarters.

5) From approval of dissertation prospectus to the Oral Qualifying Examination: 2 quarters.

6) From graduate admission to the award of the degree: 18 quarters.

Candidate in Philosophy Degree. The Department of Near Eastern Languages and Cultures has been approved to grant this degree upon advancement to candidacy.

Disqualification. The specific conditions which may lead to termination are: (1) Scholarship (critical recommendation from the Graduate Committee), (2) Failure to make normal progress toward the degree (recommendation from the Department section). In all cases, the student's personal and academic progress are discussed in depth by the Department Section concerned with making the recommendation. A recommendation for termination is forwarded to the Department Chair for final review and decision. If termination is upheld, the Chair notifies the student in writing.

Appeals. Should the student wish to appeal such a decision, he/she should submit a letter to the Chair stating his/her reasons and the Chair will transmit it to the Department Section for consideration.

Ancient Near East

Graduate Courses

210. Late Egyptian. (Formerly numbered 122A-122B.) Lecture, three hours. Prerequisites: courses 121A-121B-121C and consent of instructor. Late Egyptian grammar and reading of both hieroglyphic and hieratic texts. The quarters in which this course is offered vary from year to year. Check with department. 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. 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. Prerequisites: consent of instructor. Readings of texts from various Sumerian periods and literary genres; selected problems in linguistic or stylistic analysis and literary history. 250. Seminar in Ancient Mesopotamia. Prerequisite: consent of instructor. Selected topics on the political, social and intellectual history of ancient Mesopotamia. May be repeated for credit. Mr. Bucchetta.
### Individual Study and Research

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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>596</td>
<td>Directed Individual Study</td>
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<tr>
<td>598</td>
<td>Dissertation Research and Preparation</td>
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</tbody>
</table>

### Related Courses in Other Departments

<table>
<thead>
<tr>
<th>Art 104</th>
<th>History of Ancient Egypt</th>
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<tr>
<td>105</td>
<td>History of Ancient Mesopotamia and Syria</td>
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<tr>
<td>1930</td>
<td>Religions of the Ancient Near East</td>
</tr>
<tr>
<td>201</td>
<td>Topics in History</td>
</tr>
</tbody>
</table>

### Arabic

#### Graduate Courses

*220A-220B-220C. Islamic Texts. Lecture, two hours. Scripture and interpretation in Islam; traditional scholarship; historical and literary problems of modern research; selections from various fields of Islamic thought. May be repeated for credit. 
Mr. Poonawala

*220A-230B-230C. Arabic Poetry. Lecture, two hours. Prerequisite: consent of instructor. Readings in Arabic poetry from various periods. May be taken independently for credit. 
Mr. Bonebakker

*220A-240B-240C. Arab Historians and Geographers. Lecture, two hours. Readings from the works of the most outstanding Arab historians and geographers of the classical period of Islam. 
Mr. Poonawala

*225A-250B-250C. Seminar in Arabic Literature. Two hours weekly. May be repeated for credit with consent of instructor. 
Mr. Bonebakker

*225A-250B-250C. Introduction to Modern Arabic Dialects. Lecture, three hours. Prerequisites: Arabic 103A-103B or consent of instructor. Survey of partition and geographic distribution of Modern Arabic dialects; common structural features and contrasts with Classical Arabic; socio-linguistic evaluation of the Arabic diglossia; analysis of representative texts. 
Mr. Poonawala

#### Individual Study and Research

| 596 | Directed Individual Study |
| 597 | Examination Preparation |
| 598 | Dissertation Research and Preparation |

### Related Courses in Other Departments

| 112A-112B-112C | Armenian History |
| 113 | The Caucasus Under Russian and Soviet Rule |
| 200S | Advanced Historiography: Armenian |
| 211A-211B | Seminar in Armenian History |
| Indo-European Studies M150 | Introduction to Indo-European Linguistics |

### Berber

#### Related Courses in Other Departments

| 109A-109B | History of North Africa from the Moslem Conquest |

### Hebrew

#### Graduate Courses

*2110. History of the Hebrew Language. Prerequisites: courses 103A-103B 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 Israel. May be repeated for credit. 
Mr. Sabar

*220. Studies in Hebrew Biblical Literature. Lecture, three hours. A critical study of the Hebrew text in relation to the major versions; philological, comparative, literary, and historical study of various Biblical books. May be repeated for credit. 
Mr. Segert

*230. Seminar in Medieval Hebrew Literature. Three hours weekly. May be repeated for credit. 
Mr. Davidson

### Iranian

#### Graduate Courses

*211A-211B. Modern Iranian Dialects. Lecture, four hours. Prerequisites: Linguistics 100 or equivalent and consent of instructor. A survey of the Northern and Southwestern Iranian languages and their interaction with the non-Iranian languages of Iran. Discussion includes historical development, linguistic affinities and modern distribution. Material gathered in the field will supplement lecture texts. May be repeated for credit with consent of instructor. 
Mr. Banani

*2220A-222B. Classical Persian Texts. Lecture, three hours. Prerequisites: courses 103A-103B or consent of instructor. Study of selected classical Persian texts. May be taken independently for credit. 
Mr. Banani

### Linguistics

#### 225M. Linguistic Structures: Berber

#### Hebrew

#### Graduate Courses

#### Iranian

#### Related Courses in Other Departments
226 / NEAR EASTERN LANGUAGES AND CULTURES

**221A-221B, Middle Iranian. (Formerly numbered Indo-European Studies 231A-221B.) Lecture, four hours. Prerequisite: consent of instructor. Studies in the grammars and the texts of such Middle Iranian languages as best serve the students’ needs (e.g., Pahlavi, Sakaiian). 221B only may be repeated for credit. Mr. Schmidt**

**2250. Seminar in Classical Persian Literature.** Three hours weekly. Prerequisites: courses 103A-103B-103C and Iranian 196 or consent of instructor. May be repeated two times for credit. Mr. Banani

**2260. Seminar in Paleography.** Three hours weekly. To provide the students with the ability to cope with varieties of manuscripts.

Individual Study and Research

596. Directed Individual Study. (½ to 2 courses)

597. Examination Preparation. (½ to 2 courses)

598. Dissertation Research Preparation. (½ to 2 courses)

Related Courses in Other Departments

History 110A-110B-110C. Islamic Iran.

Oriental Languages 160. Elementary Sanskrit.


162. Advanced Sanskrit.


290A-290B. Seminar in Indo-European Mythology.

290A-290B. Seminar in Indo-Europian Linguistics.

290B. Persian Phonology and Syntax.

290V. Persian Syntax. Prerequisite: course 225U.

Music 81L. Music of Persia.

**Semitics**

Graduate Courses

201A-201B-201C. Old Ethiopic. Lecture, two hours. Grammar of Old Ethiopic and reading of texts.

202A-202B-202C. Readings in Old Ethiopic Literature. Lecture, two hours. Prerequisites: courses 201A-201B-201C.

209A-209B-209C. Comparative Study of the Ethiopian Languages. Lecture, two hours. Prerequisite: consent of instructor. Comparative study of the various Semitic Ethiopian languages: Geez, Tigre, Amharic, Harari, Gurage, and Gafat.

212A. Ancient Aramaic. Lecture, two hours. Prerequisite: course 130 or consent of instructor. Reading of the surviving inscriptions and papyri. May be repeated for credit. Mr. Segert

215A-215B. Syriac. Lecture, two hours. Morphology and syntax of the Syriac language; readings in the Syriac translation of the Bible and Syriac literature. 215B only may be repeated for credit. Mr. Segert

220A-220B. Aramaic. Reading of texts. May be repeated for credit. Mr. Segert

222A-222B. Hebrew. Lecture, two hours. Prerequisites: Hebrew 102A-102B-102C or consent of instructor. Study of the Ugaritic language and literature. 222B only may be repeated for credit. Mr. Segert

225. Phoenician. Lecture, two hours. Prerequisites: Hebrew 102A-102B-102C or consent of instructor. Study of Phoenician language and inscriptions. May be repeated for credit. Mr. Segert

230. Seminar in Northwest Semitic Languages and Literatures. Lecture, two hours. Prerequisite: consent of instructor. May be repeated for credit. Mr. Segert

240. Seminar in Akkadian Language. Two hours weekly. Prerequisite: consent of instructor. Readings of texts from various dialects of Akkadian; selected problems in the linguistic analysis of Akkadian dialects. May be repeated for credit. Mr. Buccellati

240X. Seminar in Akkadian Language. (½ course) Prerequisite: consent of instructor. Readings of texts from various dialects of Akkadian; selected problems in the linguistic analysis of Akkadian. 240X only may be repeated for credit. Mr. Buccellati

241. Seminar in Akkadian Literature. Two hours weekly. Prerequisite: consent of instructor. Readings of texts from various Akkadian literary genres; selected problems in literary history and stylistic analysis. May be repeated for credit. Mr. Buccellati

241X. Seminar in Akkadian Literature. (½ course) Prerequisite: consent of instructor. Readings of texts from various Akkadian literary genres; selected problems in literary history and stylistic analysis. May be repeated for credit. Mr. Buccellati

270A-270B-270C. Comparative Morphology of the Semitic Languages. Lecture, three hours. Prerequisites: courses 290A-290B-290C or consent of instructor. Comparative study of the noun and verb of the various Semitic languages (Arabic, Hebrew, Ethiopic, Akkadian, and Aramaic). Mr. Leslau

Individual Study and Research

596. Directed Individual Study. (½ to 2 courses)

597. Examination Preparation. (½ to 2 courses)

598. Dissertation Research and Preparation. (½ to 2 courses)

**Turkic Languages**

Graduate Courses


**221. Ottoman Diplomatics.** Lecture, three hours. Prerequisites: courses 210A-210B-210C or equivalent. Organization and contents of the Ottoman archives; reading and discussion of documents and registers. Introduction to the use of Ottoman archive materials as a source for historical research. Mr. West

229A-229B-229C. Chadagay. Lecture, three hours. Prerequisite: Turkish 101A-101B-101C or 112A-112B-112C or 114A-114B-114C or consent of instructor. Introduction to Chadagay: descriptive grammar, Arabic, Persian and Tajik elements in grammar and vocabulary. Reading and composition drills. Mr. Bodrogi
teti

222A-222B-222C. Old Turkic: Turk and Uygur. Lecture, three hours. Prerequisites: Turkish 180A-180B-180C and consent of instructor. Textual and linguistic analysis of Turk and Old Uyghur documents; inscriptions, manichean and buddhist literary works. Given in alternate years; to be given 1978-1979. Mr. Bodrogi
teti

223A-223B. Middle Turkic: Karakhand, Khorasanian, Mamlukkipchak and Old Anatolian. Lecture, three hours. Prerequisites: Turkish 180A-180B-180C and consent of instructor. A survey of Middle-Turkic documents; textual and linguistic analysis of Middle-Turkic texts from various literary genres. Given in alternate years; to be given 1978-1979. Mr. Bodrogi
teti

240A-240B-240C. Islamic Texts in Ottoman. Lecture, three hours. Prerequisite: Turkish 101A-101B-101C or 112A-112B-112C or 114A-114B-114C or consent of instructor. A philological and linguistic survey of the basic Islamic source material written in the Ottoman literary language. Reading and discussion of Ottoman texts on Islamic topics.

250A-250B-250C. Islamic Texts in Chadagay. Lecture, three hours. Prerequisites: Turkish 220A-220B-220C or consent of instructor. A philological and linguistic survey of the basic Islamic source material written in the Chadagay literary language. Reading and discussion of Chadagay texts on Islamic topics. Mr. Bodrogi
teti

**260A-260B. Seminar in Modern Turkish Literature.** Seminar, two hours. Prerequisites: Turkish 102B or equivalent and consent of instructor. Specifc issues and trends in the development of Turkish literature from the middle of the 19th century to the present. Mr. West

Related Course in Another Department

History 107A-107B. Islamic Civilization.

Near Eastern Languages

Graduate Courses

220. Bibliography and Method of Near Eastern Languages and Literatures. Lecture, two hours. Prerequisite: consent of instructor. One quarter required for the M.A. in Near Eastern Languages and Literatures. Introduction to bibliographical resources and training in methods of research in various areas of specialization offered by the department. May be repeated for credit.

**221. Survey of Afro-Asiatic Languages.** Lecture, three hours. Prerequisite: consent of instructor. A survey of the structures of a number of the representative languages from various major branches of the Hamito-Semitic (Afro-Asiatic) language family. This course is equivalent to Linguistics 225.

**292A. Folklore and Mythology of the Near East.** (Same as Folklore 292A.) Prerequisite: Folklore 101 or equivalent.

290A-290B-290C. Seminar in Comparative Semitic. Two hours weekly.

290A-290B-290C. Comparative Morphology of the Semitic Languages. Lecture, three hours. Prerequisites: courses 290A-290B-290C or consent of instructor. Comparative study of the noun and verb of the various Semitic languages (Arabic, Hebrew, Ethiopic, Akkadian, and Aramaic). Mr. Leslau

Individual Study and Research

596. Directed Individual Study. (½ to 2 courses)

597. Examination Preparation. (½ to 2 courses)

598. Dissertation Research and Preparation. (½ to 2 courses)
## Neuroscience

### (Interdepartmental)

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.

### The Ph.D. Degree

**Admission Requirements.** 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: Neuroscience Office, 73-346 CHS, UCLA, Los Angeles, CA 90024; Phone: (213) 825-8153.

**Advising.** The Graduate Adviser for the Neuroscience Program is: Professor Samuel Eiduson, Neuroscience Office, 73-346 CHS, Campus.

Upon admission to the Neuroscience Program, each new student is assigned an administrative adviser. These advisers are selected by the Neuroscience Committee and are not future dissertation advisers, although they could, of course, serve in this capacity. Generally, later in the student's career, he/she will change advisers once the dissertation sponsor has been selected.

Quarterly evaluations are made of each student's academic progress. The overall assessment is made by the student's adviser and is reviewed by the Chair who reports to the Neuroscience Committee.

Each adviser meets with the student at least once every quarter. Advisers are required to approve all course enrollments every quarter, and to discuss the student's progress and any difficulties he/she might be having.

### Course Requirements

#### Major Fields or Subdisciplines
- Biobehavioral Sciences
- Neuroanatomy
- Neurochemistry
- Neurocybernetics and Communication
- Neuroendocrinology
- Neuroimmunology
- Neuropathology
- Neuropharmacology
- Neurophysiology

#### Foreign Language Requirement

The Neuroscience Program does not have a language requirement but does have a breadth requirement which can be satisfied by successfully completing one of the following:

a. By passing the Graduate School Foreign Language Test in one of the approved languages (French, German, or Russian). Any exceptions to the above must be approved by the Neuroscience Committee. Normally, a score of 500 is considered passing.

b. By completing one of the recommended series of Biomathematics computer courses.

(c) By completing an in-depth "minor" in an area related to the student's field. A minor is defined as at least 8 units of study beyond the introductory level.

No student will be advanced to candidacy who has not met the above-mentioned breadth requirement.

#### Course Requirements

Basic course requirements of the Neuroscience Program include:

- Anatomy 206A-D; Biological Chemistry 201A-B-C; Biology 166; Biology 171; Neuroscience 233; Neuroscience 254; Electives and lab rotations (as determined by the student and his/her adviser).

Substitutions to the basic requirements may be made depending upon the background of the individual and with the consent of the Graduate Adviser. It is recommended that, when possible, required core courses be completed within the 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 required course, Neuroscience 233.

#### Written and Oral Qualifying Examinations

A Written Qualifying Examination is required following completion of the core requirements. The objective of this examination is to test the student's basic knowledge, ability to relate knowledge in different Neuroscience areas, to locate and interpret literature and to evaluate the student's aptitude for applying research problems.

Following the successful completion of the Written Qualifying Examination, the student and his/her adviser choose the doctoral committee (see Doctoral Committee).

An Oral Qualifying Examination, administered by the doctoral committee, is normally taken after the Written Qualifying Examination and the breadth requirements have been completed.

#### Doctoral Committee

The student and his/her adviser choose a doctoral committee consisting of three "inside" members and two "outside" members. In addition, the members of the committee must represent at least three different disciplines of academic study. Approval of the doctoral committee by the Neuroscience Committee is required.

#### Final Oral Examination Following Completion of the Dissertation

The Final Oral Examination is optional with the student's doctoral committee. If the doctoral committee unanimously agrees to it, the Neuroscience Committee concurs, the Final Oral Examination may be waived.

#### Time to Degree

In general, overall progress toward the degree will be accomplished by completing a prequalifying program of 12 to 16 units in each of the six full quarters and by passing the Oral Qualifying Examination two years after entrance. The student is expected to pass the Written Qualifying Examination within three attempts. The approved normative time-to-degree is 18 quarters.

#### Disqualification

The specific conditions which may lead to termination prior to degree are:

a. Failure to obtain at least a "B" in all core courses.

b. Failure to pass the Written or Oral Qualifying Examinations.

c. Failure to maintain progress toward the degree.

Because of a student's failure in any of the above categories, and following discussions with both student and adviser, the entire Interdepartmental Neuroscience Committee may vote to terminate the student.

#### Appeals

The student may appeal in writing to the entire Committee and at a meeting of the entire Committee, present additional or mitigating information. This presentation may be made in person or in writing at the discretion of the student.

#### Other Relevant Information

**West Coast Regional Consortium in the Neurosciences.** The students in our Neuroscience Ph.D. program are eligible to participate in the West Coast Regional Consortium in Neuroscience. The consortium is a cooperative association of neuroscience programs at 11 universities enabling predoctoral and postdoctoral students to undertake short-term laboratory work and research using facilities or techniques not available at their home institutions. It also assists faculty and advanced graduate students to travel to member universities to demonstrate specific techniques or methods which otherwise would not be available on those campuses. Students and faculty at the Brain Research Institute and other neuroscience programs at participating universities may thus have access to the best educational opportunities available in the western region.

Following the completion of the required courses of the Program, the student and his/her adviser choose from a rich variety of
courses available in the associated departments and selected with regard to the student's interest and direction of research.

Graduate Courses

200A-200B-200C. Clinical Concepts in the Neurosciences. (½ course each) Presents information concerning neuroanatomical and psychiatric disorders for students from basic science backgrounds.

Mr. Walter M201A-M201B-M201C. The Functional Organization of Behavior. (½ course each) (Same as Psychiatry M201A-M201B-M201C) Prerequisite: Consent of instructor. Consent of instructor to M201B required completion of M201A; admission to M201C requires completion of M201A-M201B. The course is divided into three quarters. The Fall Quarter 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 for the Fall Quarter. The Winter Quarter focuses on special questions of behavior and integrates behavior with research approaches to brain study, e.g., neurophysiology, neuroendocrinology, brain structure, neuropharmacology, and others. Behavior will be correlated with the development of the brain during this quarter. Consent of instructor to M201B required. M202. Fundamental Concepts of Neuroendocrinology. (Same as Anatomy M202) Two hours of lecture and two of discussion per week in the Winter Quarter of odd-numbered calendar years. Prerequisite: Biochemistry 101, Anatomy 206A-206B, or consent of instructor. Basic concepts of neuroendocrine integration including analysis of the current literature and research techniques.

M251. Neuronal Circuit Analysis. (½ course) (Same as Anatomy M251) Three hours of lecture or discussion per week in the Winter Quarter. Prerequisite: Anatomy 206A and 206B or equivalent. The course will be run in a small seminar form with strong emphasis on specific reading assignments. It will present an overview of current knowledge and analysis at an advanced level and examine the layout and performance of a variety of basic neuronal circuits serving different control functions. Mr. Schlag

Individual Study and Research

596. Directed Individual Study or Research. (½ to 3 courses) Prerequisite: consent of instructor. Mr. Eiduson

597. Preparation for the Doctoral Qualifying Examination. (½ to 3 courses) Prerequisite: consent of instructor. Mr. Eiduson

598. Dissertation Research for Ph.D. Candidates. (½ to 3 courses) For students requiring significant instruction or time to work on dissertation. Mr. Eiduson

Nursing

(Office: 2-137 Louis Factor Building, Center for Health Sciences)

Mary E. Rens, R.N., M.P.N., Ed.D., Dean and Professor of Nursing.

Phyllis A. Putnam, R.N., Ph.D., Associate Dean and Associate Professor of Nursing.

Betty L. Chang, R.N., D.N.Sc., Assistant Dean of Student Affairs and Associate Professor of Nursing.

Charles E. Lewis, M.D., Sc.D., Professor of Medicine/General Medicine and Health Services Research, Public Health, and Nursing.

Sharon J. Reeder, R.N., Ph.D., Professor of Nursing.

Marwa J. Seraydarian, Ph.D., Professor of Nursing.

Donna L. Vredevoe, Ph.D., Professor of Nursing.

Barbara J. Hambrecht, R.N., D.N.Sc., Emeritus Professor of Nursing.

Lulu Wolf Hasenplug, R.N., M.P.H., Sc.D., Emeritus Professor of Nursing.

Donald E. Johnson, R.N., M.P.H., Emeritus Professor of Nursing.

Harriet C. Moinel, R.N., M.A., Emeritus Professor of Nursing.

Agnes A. O'Leary, R.N., M.P.H., Emeritus Professor of Nursing.

Pamela J. Brink, R.N., Ph.D., Associate Professor of Nursing and Anthropology.

Irma D'Antonio, R.N., Ph.D., Acting Associate Professor of Nursing.

Sally A. Thomas, R.N., Ph.D., Associate Professor of Nursing.

Gwen Van Servellen, R.N., Ph.D., Associate Professor of Nursing.

Donna F. Ver Steng, R.N., Ph.D., Associate Professor of Nursing.

Aleen B. Canfield, R.N., Ed.D., Assistant Professor of Nursing.

Barbara H. Davis, R.N., Ed.D., Assistant Professor of Nursing.

Kathleen Dracup, R.N., D.N.Sc., Acting Assistant Professor of Nursing.

Jacqueline Flesch-Holaday, R.N., Ph.D., Assistant Professor of Nursing.

Joy Graves, R.N., Ph.D., Assistant Professor of Nursing.

Maryalice Jordan-March, R.N., Ph.D., Assistant Professor of Nursing.

Jean A. Kerr, R.N., Ph.D., Assistant Professor of Nursing.

Deborah Koniak, R.N., Ed.D., Assistant Professor of Nursing.

Susan Ludwig, R.N., Ph.D., Assistant Professor of Nursing.

Elizabeth Post, R.N., Ph.D., Assistant Professor of Nursing.

Juliet Pen, R.N., D.N.Sc., Assistant Professor of Nursing.

Margaret Topf, R.N., M.S., Acting Assistant Professor of Nursing.

Cecily L. Betz, R.N., M.N., Assistant Clinical Professor of Nursing.

Eleanor Bazzaz, R.N., M.A., M.Ed., Assistant Clinical Professor of Nursing.

Randy Caine, R.N., M.S., Assistant Clinical Professor of Nursing.

Mary Canobbio, R.N., M.S., Assistant Clinical Professor of Nursing.

Anayis Dersdarian, R.N., M.N., Assistant Clinical Professor of Nursing.

Marlyn Eise, R.N., M.N., Assistant Clinical Professor of Nursing.

Margaret Gallier, R.N., M.S.N., Assistant Clinical Professor of Nursing.

Robert Goolsby, R.N., M.S., Assistant Clinical Professor of Nursing.

Jacklin Knable, R.N., M.S., Assistant Clinical Professor of Nursing.

Gloria Kilburn, R.N., M.S.N., Assistant Clinical Professor of Nursing.

Susan Griffin, R.N., M.S., Assistant Clinical Professor of Nursing.

Gerrie Kilburn, R.N., M.S.N., Assistant Clinical Professor of Nursing.

Linda Sarna, R.N., M.N., Assistant Clinical Professor of Nursing.

Carolyn F. Troupe, R.N., M.N., Assistant Clinical Professor of Nursing.

Sheila Weibert, R.N., M.S., Assistant Clinical Professor of Nursing.

Genevieve Bult, R.N., M.N., Visiting Lecturer in Nursing.

William Crawford, Ed.D., Visiting Lecturer in Nursing.


Mary Hoban, R.N., M.N., Visiting Lecturer in Nursing.

Celine Marsden, R.N., M.N., Visiting Lecturer in Nursing.

Brooke Hardell, R.N., M.N., Visiting Lecturer in Nursing.

Cynthia Scalzi, R.N., Ph.D., Visiting Lecturer in Nursing.

Esther Seeley, R.N., M.N., Adjunct Lecturer in Nursing.

Evelyn Sobol, R.N., Ph.D., Visiting Lecturer in Nursing.

Jo Ann Wegehmann, R.N., M.S.N., Visiting Lecturer in Nursing.

The School of Nursing offers graduate study leading to the degree Master of Nursing (M.N.). Graduates of this program contribute to
improved 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.

The Master of Nursing (M.N.) Degree

Admission Requirements

1. Graduation from a recognized college or university having an NLN accredited baccalaureate nursing program satisfactory to the School of Nursing, University of California, Los Angeles and satisfactory to the Graduate Division, Los Angeles. Students who have completed other curricula (e.g., students who have graduated from a foreign institution) may be required to enroll in certain undergraduate nursing courses which generally will not be accepted in fulfillment of the requirements for advanced degrees.

2. Status as a licensed registered nurse in the State of California. Prior to entry into any clinical practicum, evidence of current licensure as a registered nurse in the State of California is mandatory.

3. An upper division statistics course, or a lower division statistics course with content equivalent to Public Health 100A must be completed prior to entrance into the School of Nursing.

4. An upper division, research course equivalent to N193 must be completed prior to entrance into the School of Nursing.

5. Professional and/or academic competence in nursing attested through three letters of recommendation.

6. A scholarship record satisfactory to the Graduate Division, Los Angeles and to the School of Nursing, University of California.

Foreign Students. Foreign students are cautioned that written and verbal communication skills are basic to the practice of nursing. It is therefore 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 take the Test of English as a Foreign Language Examination (TOEFL) and to attain a score of 550 or above on that examination. All foreign applicants, regardless of Registered Nurse licensure in the United States, and regardless of their first language, are required to take and pass the Committee on Graduate of Foreign Nursing Schools Examination (CGFNS).

Application Procedure. Prospective students interested in the Master of Nursing program, must file two applications: (1) Application for Admission to Graduate Status, and (2) Application for Admission to Graduate Study in the School of Nursing. The Application for Admission to Graduate Study in the School of Nursing can be obtained through the Student Affairs Office, School of Nursing, Los Angeles. Application deadlines are as follows:

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<thead>
<tr>
<th>Quarter</th>
<th>Deadline</th>
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</thead>
<tbody>
<tr>
<td>Fall</td>
<td>December 30</td>
</tr>
<tr>
<td>Spring</td>
<td>December 30</td>
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The application to the School of Nursing is free and must be returned to the School of Nursing directly. Please refer to the ADMISSIONS section of this catalog for information on the Admission to Graduate Status forms.

Advising. The School of Nursing gives direction to interested potential applicants through monthly open counseling sessions. Applicants may call the Student Affairs Office, (213) 825-7181, for dates and places of these sessions.

Up on admission to the School, each student is assigned a faculty adviser who has the responsibility to aid the student in planning a total program. Student and adviser together identify academic and personal needs and match them with School and University resources available in order to maximize the student's ability to reach educational and professional goals.

Transcripts and grade reports are reviewed quarterly. Evaluations of performance in clinical coursework are written at the end of the quarter and placed in the student's file. The student is requested to read and sign the evaluation. Individual instructors are encouraged to contact the adviser of the student if they feel the student needs guidance in any academic endeavor. Signed records of all interviews are kept on counseling forms in the student's file. If a student has academic difficulties, his/her record is reviewed by the adviser and the Assistant Dean of Student Affairs who meets with the student to determine guidance and recommendations. This meeting is also recorded in the counseling notes of the student's folder.

Major Fields. The School of Nursing offers graduate studies in the following areas:

Community Mental Health
Psychiatric Nursing
Community Mental Health
Liaison Nurse
Mental Health Ethnic Specialist
Gerontology
Clinical Specialist
Nurse Practitioner
Maternal Child Health
Maternity
Pediatrics
Medical-Surgical Nursing
General
Cardiovascular
Oncology
Respiratory
Nursing Administration

Primary Ambulatory Care
Adult
Family
Occupational Health
Pediatrics
Women's Health

Students may choose to add preparation in education or administration to their clinical requirement.

Degree and Course Requirements

Degree Requirements

1. A minimum of 10 courses (40 units) in the 100, 200, 400 and 500 series; eight of these 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.

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 in full time (8 units/quarter) is required for academic residence.

4. A Comprehensive Examination or a thesis is required.

Required Courses. The candidate for the M.N. degree must successfully complete a minimum of one course from each of the following areas:

1. Research in Nursing (204).
2. Nursing Theory (203, 210, 211, 212, 221, 222, 223, 224, 225, M217).
3. Cultural Diversity course (158, 196, 250, 251 or PH M283G).

Additional course requirements vary according to specialty area listed below.

Community Mental Health Specialty. The primary intent of this specialization is the preparation of clinicians who can function in leadership roles in mental health settings. Students may elect additional preparation as consultants or Liaison Nurses (mental health consultants in general health care settings). This specialty requires a total of 10 to 171/2 courses:

Psychiatric: 204, one Theory course, one Cultural Diversity course, 405, 424A, B, C; one elective course.

Community Mental Health: 204, one Theory course, one Cultural Diversity course, 405, 424A, B, 440A, B, 441A, B.

Liaison Nursing: 204, one Theory course, one Cultural Diversity course, 403, 405, 424A, B, 440A, B, 441A, B.

Mental Health Ethnic Specialist: 204, one Theory course, 260, 403, 405, 424A, B, 440A, B, 441A, B, five cognate courses, a seminar in Cultural Concepts.
Gerontological Nursing Specialty. The Gerontological Nursing specialty is designed to develop basic knowledge and skills providing multifaceted care that is required for the maintenance of health in the elderly. Goals of care include the retardation of decline and the promotion of remaining assets in health and illness.

Clinical Specialist option: Clinical nursing in this option is organized around the concept of stress and alleviation of its effects in the lives of the elderly in both health and illness. This option requires a total of 15 courses including: 204, 221, one Cultural Diversity course, 425A-B-C, 403, 6 elective courses chosen with faculty advice.

Nurse Practitioner option: The nurse practitioner option of the gerontology nursing specialty program focuses on the knowledge and skills needed to develop competent practitioners, who will be prepared to provide primary care to aged clients in ambulatory and long-term care facilities, at home, and in alternative settings.

This option requires a total of 15 courses including: 204, 221, one Cultural Diversity course, 420A-B, 264, 425A-B, 429A-B-C.

Maternity Clinical Nursing Specialty. The primary goal of this specialty is to augment, expand, and refine knowledge and basic preparation in clinical expertise in giving care to the childbearing family in all phases of the reproductive cycle. The program focuses on the nursing process, patient and colleague teaching, and the development of leadership and research skills in the area of clinical practice. This specialty is one option in the Master of Nursing degree program and may be taken in conjunction with another clinical specialty of the student's choice. This specialty requires a total of 10 courses: 204, 203, one Cultural Diversity course, 212, 223, 422A, B, 422C or two functional elective courses are also required.

Medical-Surgical Nursing Specialty. The primary goal of this specialty is to develop highly skilled clinical nurse specialists in selected areas of Medical-Surgical Nursing in one or more of the following subspecialties:

Cardiovascular Subspecialty: The primary goal of this subspecialty within Medical-Surgical Nursing is to prepare cardiovascular clinical nurse specialists to meet the increasing demand for improved health services to patients with cardiovascular diseases. Several years of prior experience in respiratory nursing, critical care, or rehabilitation are highly recommended. This subspecialty requires a total of 10 courses: 204, 210, one Cultural Diversity course, 423A, B, C, 414, 415.

Nursing Administration Elective. The major objective of the graduate program in nursing administration is to prepare middle and top-level nursing administrators. Students will learn to analyze the health needs of large groups of patients, organize and implement the delivery of nursing services to meet those needs in collaboration with other disciplines, evaluate the results of nursing care delivery, and take steps to adjust nursing practice as required.

The program in nursing administration requires six quarters of full-time study and a three-month summer administrative residency. Stipends are provided by the institutions in which the residency is done.

The program is part of the curriculum of the School of Nursing, leading to a Master of Nursing degree. In addition to the required courses in the School of Nursing, students in this program take courses in the School of Public Health's division of Health Services Management. It is suggested that nursing administration students select Medical-Surgical Nursing as their clinical specialization. This program requires a total of 15 courses: 204, one Nursing Theory course, one Cultural Diversity course, 423A, B, 478A, B, and five Health Services Management courses offered through the School of Public Health.

Pediatric Clinical Nursing Specialty. The primary goal of this specialty is the expansion of knowledge and clinical expertise needed by the professional nurse specialist in pediatric nursing. The following clinical options are available within the pediatric program: acutely ill child, ambulatory care, chronically ill child, developmental disabilities, and oncology.

The nursing process and a theoretical framework are utilized as a basis for clinical practice. The program also focuses on the components of the clinical specialist role: clinical practice, research, education, management, and consultation. This specialty requires a total of 10 courses: 204, 203, one Cultural Diversity course, 212, 223, 421A, B, 421C or two functional elective courses are also required.

Primary Ambulatory Care/ Nurse Practitioner Specialty. The Primary Ambulatory Care specialty courses focus on the knowledge and skills needed to develop competent nurse practitioners who will function in family, adult, women's and/or pediatric primary ambulatory health care settings. Within the framework of the population areas, the focus is upon the individual within the family context.

This specialty requires a total of 12 courses: 204, one Theory course, one Cultural Diversity course, 402A, B, 264, 429A, B, C.

Occupational Health Option for Adult Nurse Practitioners. Students in Primary Ambulatory Care may elect the Occupational Health option, integrating principles of occupational health assessment and care with primary ambulatory care of the adult. This practitioner evaluates the individual as seen within his/her work setting as well as within the family group. Primary focus and emphasis is placed on health status assessment, health promotion, illness/accident prevention and rehabilitation.

Students will meet requirements for preparation in occupational health nursing through combination of courses and experiences specific to the delivery of occupational health care services. This specialty requires a total of 14 courses: 204, 223, one Cultural Diversity course, 420A, B, 264, 429A, B, C, and occupational health courses chosen with faculty advisor.

Thesis Plan. Students who choose a thesis plan normally select a thesis committee by the beginning of the third quarter or following completion of N204 and N205A or B. The thesis committee is composed of three members. One member is normally selected from outside the School of Nursing. Thesis students are expected to complete the thesis within the normal five to six quarter time period. Completed theses should be filed approximately two weeks before the awarding of the degree.

Comprehensive Examination Plan. The Comprehensive Examination Committee is a subcommittee of the Curriculum Committee. There are five faculty members including the Chair; all members are appointed by the Dean.

The Comprehensive Examination is given in written form. The examination is scheduled...
each quarter. Students are eligible to take the examination during the quarter in which they are advanced to candidacy. Students will be allowed to repeat the Comprehensive Examination, in its entirety or in part, twice. Students must complete all requirements for the degree within one calendar year after advancement to candidacy.

Time to Degree. Normal progress from graduate admission to conferment of degree is five to six quarters.

500 Series Course Limitations. A total of 8 units of 500 series courses may be applied toward the total course requirements for the degree. The School of Nursing uses Satisfactory/ Unsatisfactory grading on all 500 series courses. The 500 series courses, 596, 597, and 598 all have unit value of 4 to 8 units. 597 may be repeated only once, while 596 and 598 have no limit on the number of times they may be repeated.

Disqualification and Appeal of Disqualification.

Specific conditions leading to termination:
A. Failure to maintain a grade point average of 3.0.
B. Grades of B— or lower in clinical courses regardless of overall grade point average.
C. Unprofessional or unethical conduct as a registered nurse.

Process of decision to recommend termination:
A. Written report of conduct to Assistant Dean of Student Affairs by faculty member, graduate adviser, clinical supervisor or other concerned person.
B. Consultation by Assistant Dean with student.
C. Consultation by Assistant Dean with Dean as appropriate.
D. Final decisions are made by the Assistant Dean except for matters other than failure to maintain academic standing. Such cases are sent for review by Associate Dean, Graduate Division, in consultation with the Assistant Dean for Student Affairs, School of Nursing, with the final decision being made at the Graduate Division level.

Graduate Courses

I. Research in Nursing, Nursing Theory, and Cultural Diversity

203. Theoretical Framework for Nursing Practice. Lecture, four hours. 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. Ms. Derdiarian

204. Research in Nursing: An Advanced Course. Lecture, four hours. Prerequisite: course 193 or equivalent upper division basic research methodology course. This course focuses on complex research designs and analysis of multiple variables. Emphasis will be placed on techniques used in the planning, execution, and analysis of a research study. Content will be discussed in terms of clinical nursing research problems. Ms. Vredevoe and Staff

205A. Qualitative Research Methods in Nursing. Lecture, four hours. Prerequisite: course 204. Emphasis is placed on nursing research design including the field method approach, ethnological, and/or inductive methods. Ms. Brink

205B. Quantitative Research Methods in Nursing. Lecture, four hours. Prerequisite: course 204. Emphasis is placed on nursing research designs requiring statistical analysis of data. Ms. Seraydarian

210. Respiratory Physiology As It Relates to Nursing. Lecture, three hours; discussion, one hour; seminars. 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 will be stressed. Ms. Seraydarian

211. Cardiovascular Physiology As It Relates to Nursing. Lecture, three hours; discussion, one hour; seminars. 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 will be stressed. Ms. Seraydarian

217. Medical Anthropology. (Same as Anthropology M263.) Lecture, three hours. Prerequisite: course M156 or consent of Instructor. Any of the topics covered in upper division course M156, will be selected each quarter, for intensive literature review and interdisciplinary projects. The course may be repeated for credit. Ms. Brink

221. Theoretical Frameworks for Developmental Problems, Middle and Later Years. Lecture, four hours. Aspects of life span development relevant to understanding health and illness. Pertinent variables affecting the family's definition of the situation, their resources, strategies for coping, and utilization of professional services are explored and their relevance to the nurse practitioner will be examined. Ms. Rodney M217. Medical Anthropology. (Same as Anthropology M263.) Lecture, three hours. Prerequisite: course M156 or consent of Instructor. Any of the topics covered in upper division course M156, will be selected each quarter, for intensive literature review and interdisciplinary projects. The course may be repeated for credit. Ms. Brink

222. The Concept of Grief and Loss. Lecture, three hours; laboratory, two to four hours. Prerequisite: enrollment in a clinical nursing course or concurrent. This course will deal with the concepts and theories of grief and loss. Pertinent variables will be studied. Emphasis will occur when a person assumes the role of a sick patient. Ms. Thomas

II. Clinical Practice

401. Nursing Assessment and Intervention. Lecture, two hours; laboratory, four to eight hours. Prerequisite: course 203 or concurrent. 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 Nurses Practitioners. Lecture, four hours; laboratory, four hours; demonstration and practice, two hours. Prerequisites: satisfactory completion of anatomy and physiology pretest, consent of instructor. Collection, analysis, and reporting of data used by the nurse practitioner in identification of patient problems. Principles and practice in history-taking, physical examination, laboratory, and other diagnostic methodology. Pathology and pathophysiology are integrated into systems approach. Ms. Meier, Ms. Troupe
401. Physical Assessment for the Clinical Specialist. (1 to 1 1/2 course) Lecture, four hours; option seminar, two hours; discussion, one hour; laboratory, eight to ten hours. Prerequisite: consent of instructor, not open to Primary Ambulatory Care majors. An introductory study of the basic techniques of history-taking and physical examination which are used by clinical specialists as part of the total nursing assessment process. Includes theory, demonstration, and practice of physical assessment methodologies. Option seminars provide content pertinent to selected specialty areas. Ms. Meier, Ms. Trupe

404. Comprehensive Approach to Oncology Nursing. (2 courses) Lecture, two hours; laboratory, two hours. This course will offer an indepth study of group dynamics and group therapy, applicable to any health service area. It will focus on the study and application of group theory and practice relevant to nursing. The student will gain in-depth knowledge of group dynamics and group therapy, know how to apply the above theory to any area of nursing, develop a beginning ability to function as both leader and participant in the area of group dynamics and group therapy, and develop the ability to evaluate the effectiveness of group therapy.

405. Assessment in Psychiatric Nursing. Lecture, two hours; laboratory, six to eight hours. A preparatory course for Advanced Clinical Practice. The specific aim is the critical analysis of the components of assessment strategies which affect assessment of psychological behavior. Ms. Kerr, Ms. Tien

410A-410B-410C. Nursing Care of the Developmentally Disabled. (Same as Psychiatry M472A-472B-472C) Lecture, two hours; discussion, one hour; laboratory, eight hours. Prerequisite: enrollment in the Master's Program in the School of Nursing. Study of the handicapping conditions of the developmentally disabled. Emphasis is on prevention, systematic assessment, planning, implementation and evaluation of nursing care. During the final term the student participates in the assessment, planning, delivery and planning of health care to the developmentally disabled in the community. Ms. Savino, Ms. Yoshioka

414. Current Perspectives in Respiratory and Cardiovascular Nursing. (1 to 1 1/2 courses) 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. Ms. Forsythe

415. Assessment in Respiratory and Cardiovascular Nursing. (1 to 1 1/2 courses) Lecture, one to four hours; laboratory, four to eight hours. Prerequisites: course 210 or 211, and consent of instructor. Instruction in applied concepts and principles of respiratory and cardiovascular function in health and illness, with emphasis on their application in clinical nursing practice. Ms. Dracup, Ms. Forsythe

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 staging, treatment and evaluation of individuals with cancer. Ms. Sarna, Ms. Hoben, Ms. Wegmann

417. Systematic Approach to Oncologic Nursing. Lecture, two hours; discussion, two hours; laboratory, eight to ten hours. Prerequisite: consent of instructor; course 416. 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 providing the student with theoretical and technical skills necessary for the interventions of these problems. Ms. Sarna, Ms. Wegmann, Ms. Hoben

421A. Clinical Nursing Care of Children. Discussion, two hours; laboratory, ten hours. Prerequisites: course 204 or concurrent and one theory course; consent of instructor for non-Medical-Surgical Specialization students. Continued refinement of the nursing process and extension of professional knowledge and skills with a selected patient population. Emphasis on the assessment, planning, implementation and evaluation of interventions for nursing problems of medical-surgical patients. Students select a specific patient population for concentration in the course: 1) Oncology, 2) Cardiovascular, 3) Respiratory, 4) General Medical-Surgical. Non-Medical-Surgical Specialization students may enroll for 2 units with consent of instructor. Ms. Canfield and Staff

421B. Advanced Clinical Nursing Care of Children. (2 courses) Discussion, two hours; laboratory, twenty hours. Prerequisite: course 210 or 211, and consent of instructor. Focus will be on the process of psychotherapy with special emphasis on the knowledge and skills of assessment and diagnosis. Content includes theoretical and practical issues related to the clinical specialist role. Ms. D'Antonio, Ms. Holaday

421C. Clinical Specialization in Maternal Care of Children. (2 courses) Discussion, two hours; laboratory, twenty hours. Prerequisite: course 210 or 211, and consent of instructor. Focus will be on the process of psychotherapy with special emphasis on the knowledge and skills of assessment and diagnosis. Content includes theoretical and practical issues related to the clinical specialist role. Ms. D'Antonio, Ms. Holaday

422A. Advanced Clinical Maternity Nursing. (2 courses) Discussion, two hours; laboratory, forty hours. Prerequisite: course 422A. Knowledge and clinical expertise are refined and extended with content emphasis on high risk conditions and complications in the reproductive process. Utilization of the nursing process is continued with emphasis on the prescriptive, intervention, and evaluation phases of the process. The student will study the physiology of the child-bearing family is stressed. A family-centered orientation is stressed and theoretical models for the study of the family and the development of nursing practice are examined and utilized in care giving. Pertinent variables affecting the delivery of care and utilization of health services for all segments of society are examined. Ms. Reeder

422B. Advanced Clinical Maternity Nursing. (2 courses) Discussion, two hours; laboratory, forty hours. Prerequisite: course 422A. Knowledge and clinical expertise are refined and extended with content emphasis on high risk conditions and complications in the reproductive process. Utilization of the nursing process is continued with emphasis on the prescriptive, intervention, and evaluation phases of the process. The student will study the physiology of the child-bearing family is stressed. A family-centered orientation is stressed and theoretical models for the study of the family and the development of nursing practice are examined and utilized in care giving. Pertinent variables affecting the delivery of care and utilization of health services for all segments of society are examined. Ms. Reeder

425A. Clinical Gerontological Nursing. (1 to 2 courses) Discussion, three hours; laboratory, fifteen to thirty hours. Prerequisite: one course in nursing theory. Principles and practice of assessment of physiologic and psychosocial needs of older adults. Emphasis placed on integrated understanding of multiple variable influences in total health. Ms. Davis, Ms. Trupe

425B. Advanced Clinical Gerontological Nursing. (1 to 2 courses) 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. Davis, Ms. Trupe

425C. Clinical Specialization in Gerontological Nursing. (1 to 2 courses) 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. Davis, Ms. Trupe

429A-429B. Preceptorship in Primary Ambulatory Care Nursing. (2 courses each) Lecture, three hours; discussion, three hours; laboratory, minimum of sixteen hours. Prerequisites: courses 4202A-4202B; consent of instructor. Theory and clinical practice for nursing students, with evaluation of health problems in a selected ambulatory population. Health maintenance is emphasized. Attention is given to the developmental and cognitive needs of clients in relation to family, social, and cultural structures. Ms. Lewis, Ms. Petz
429C. Advanced Preceptorship in Primary Ambulatory Care Nursing. (2 courses) Discussion, three hours; laboratory, twenty-four hours. Prerequisites: courses 429A, 429B, consent of instructor. Advanced specialization in primary ambulatory care. Emphasis is placed upon the refinement and extension of assessment, management, and evaluation skills, family health care, and community health concepts. Clinical options include family practice or specialization in adults, pediatric, or women's health care. Ms. Lewis, Ms. Potez

440A-440B. Clinical Specialization in Community Mental Health Consultation. Lecture, three hours; clinical, ten hours. Prerequisites: consent of instructor; course 441A concurrently with 441A and 441B. The study and application of mental health consultation theory and practices relevant to community mental health nursing. 'The focus is on group consultation skills. The development of the nurse in the interdisciplined health team approach to mental health services. The course is a two-quarter, in-Progress sequence. Ms. Flaskerud

442. Lialson Nursing. Lecture, three hours; laboratory, ten hours. Prerequisites: consent of instructor. courses 424B, concurrent with 440A and 440B. Course focuses on the process of community health assessment and program evaluation and planning for health services. Emphasis is placed on health advocacy, prevention of mental illness, and planned change concepts. The course is a two-quarter, in-Progress sequence. Ms. Flaskerud

441A-441B. Clinical Specialization in Community Organization. Discussion, three hours; clinical, ten hours. Prerequisites: consent of instructor. Consent of instructor. Option 423, 423A, concurrent with 441A and 441B. The study and application of mental health consultation theory and practices relevant to community mental health nursing. 'The focus is on group consultation skills. The development of the nurse in the interdisciplined health team approach to mental health services. The course is a two-quarter, in-Progress sequence. Ms. Flaskerud

Ill. Functional Preparation 473. General Consultation. (1 to 2 courses) Discussion, three hours; laboratory, ten to twenty hours. Prerequisites: introductory and intermediate clinical practicum, and one course in group dynamics and process or the equivalent. The study and application of group theory and practice relevant to nursing. Emphasis will be placed on the refinement of knowledge and skills necessary to establish a nursing role as an interdependent clinical nursing consultant. The concepts presented in this course are based on those theories from the following areas: group dynamics, learning, communication, change and nursing process. Ms. Flaskerud, Ms. Graves

475. Human Relations in Administration. Lecture, four hours; laboratory, five hours. A systematic study of the principles of human relations in administration with emphasis upon their application to the field of nursing. 477A-477B. Seminar in Nursing Administration. Discussion, four hours; laboratory, eight hours. Prerequisites: 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 settings. Seminars are augmented by field visits to residency sites to complete data collection for projects. Ms. Scalzi

IV. Individual Study and Research 596. Directed individual Studies for Graduate Students. (1 to 2 courses) Prerequisite: consent of instructor. Opportunity for graduate students in nursing to pursue special research interests. May be repeated for credit, but only one quarter course (4 quarter units) may be applied toward the Master of Nursing degree. Graded only on a S/U basis.

597. Individual Study for Comprehensive Examination. (1 to 2 courses) Individual study for comprehensive examination. May be repeated for credit, but only one quarter course (4 quarter units) may be applied toward the Master of Nursing degree. Graded only on a S/U basis.

598. Research for Thesis. (1 to 2 courses) Prerequisite: consent of instructor. May be repeated for credit, but only one quarter course (4 quarter units) may be applied toward the Master of Nursing degree. Graded only on a S/U basis.

Ooral Biology (Office, 63-090 Health Sciences Center)

Thomas K. Barber, D.D.S., M.S., Professor of Pediatric Dentistry and Public Health.
Andre A. Chaconas, D.D.S., M.S., Professor of Periodontics.
Andrew D. Dixon, D.D.S., M.S., Ph.D., D.Sc., Professor of Dentistry.
Louis J. Goldberg, D.D.S., Ph.D., Professor of Dentistry (Oral Biology and Anatomy) (Chair of the Oral Biology Section).
Douglas Jungen, Ph.D., Professor of Oral Biology and Physiology.
E. Barrie Kenney, D.D.S., M.S., Professor of Periodontics.
Carol M. Newton, M.D., Ph.D., Professor of Biostatistics.
Barnard S. Sarnat, M.D., M.S., Adjunct Professor of Oral Biology and Plastic Surgery.
Max H. Schoen, D.D.S., M.P.H., Ph.D., Professor of Public and Preventive Dentistry.
Norman S. Simmons, D.M.D., Ph.D., Professor of Oral Medicine and Research Biochemist.
Alfred Wiestock, D.D.S., Ph.D., Professor of Periodontology and Anatomy.
Fred Herzberg, D.D.S., M.S., Emeritus Professor of Pediatric Dentistry and Anatomy.
John Beumer, III, D.D.S., M.S., Associate Professor of Restorative Dentistry.
Fred K. Frankel, Ph.D., Professor of Oral Biology.
Michael G. Newman, D.D.S., Associate Professor of Periodontics.
George K. Riviere, D.D.S., M.S., Ph.D., Associate Professor of Pediatric Dentistry and Oral Biology.
William K. Solberg, D.D.S., M.S., Associate Professor of Pediatric Dentistry and Oral Biology.
Edward C. Brundt, D.D.S., M.S., Assistant Professor of Restorative Dentistry.
Stuart C. White, D.D.S., Ph.D., Associate Professor of Oral Biology.
Russell J. Alston, D.D.S., M.S., Assistant Professor of Oral Biology.
Glen M. Grant, D.D.S., M.S., Assistant Professor of Gnathology.
Joseph P. Cooney, D.D.S., M.S., Assistant Professor of Restorative Dentistry.
Donald J. Buerson, D.D.S., M.S., Assistant Professor of Pediatric Dentistry and Public Health.
Lawrence Wolinsky, D.D.S., Ph.D., Assistant Professor of Oral Biology.

Robert P. Thye, D.M.D., M.S., Clinical Professor of Restorative Dentistry.

Master of Science Degree Admission Requirements. 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. Applicants with foreign degrees will be considered individually upon an evaluation of their curriculum and training. The Graduate Record Examination and the Dental Aptitude Test are not required, but may be submitted if the student desires to do so. An English language proficiency exam will be required of foreign students. Three letters of recommendation are required as part of the admissions packet. Letters should be sent to the Graduate Adviser in the Section of Oral Biology, School of Dentistry, UCLA. For further information contact: Graduate Adviser, Section of Oral Biology, School of Dentistry, University of California, Los Angeles, California 90024.

Advising. Students are required to select a sponsor who will direct their research programs. This sponsor should be within the School of Dentistry, but may also be selected from outside the School. If the latter is the case, there must also be a co-sponsor from the School of Dentistry. The Graduate Adviser of the Oral Biology program keeps records of the students' progress and performance in the program. When a student appears to be having academic problems he/she is contacted by the Graduate Adviser for counseling. To contact the Graduate Adviser write the Oral Biology Office, 63-090 CHS, School of Dentistry, UCLA, Los Angeles, California (213) 825-1955.

Major Fields or Subdisciplines. Areas of specialization or subdisciplines which may be followed by completion or completion of the degree requirements include: Anatomy, Biological Chemistry, Cell Biology and Virology, Immunology, Microbiology, Pharmacology and Physiology.

Course Requirements. The Oral Biology program requires a total number of nine courses, five of which must be at the graduate level. Flora of the Human Mouth, Oral Physiology, Secretory and Gastrointestinal Immunity, The Biochemistry of Saliva and Dental Caries, Brainstem Control of Rhythmic Movements, Biology of Bone, and Principles and Methods of Research are the program's seven required graduate core courses. These courses should be taken during the first year of graduate study.

Jay Gerashen, D.D.S., Ph.D., Assistant Professor of Pediatric Dentistry and Public Health.
Lawrence Wolinsky, D.D.S., Ph.D., Assistant Professor of Oral Biology.

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There is one upper division course, Selected Biomathematical Topics for Researchers in Medicine and Biology, which is required for completion of the degree. The program also offers a course in Communicating Scientific Information to better prepare the student in the preparation of scientific writing and communication. This course is also required.

**Thesis Plan.** The master’s thesis is intended to demonstrate the candidate’s 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 shall direct the work of the thesis. A committee shall consist of at least four faculty members (including at least one member from the faculty of the Section of Oral Biology), recommended by the Graduate Adviser and the student’s faculty sponsor, and appointed by the Dean of the Graduate Division. This committee shall pass upon the merits of the master’s thesis.

**Thesis Proposal.** Approximately on completion of course requirements, the candidate will prepare and send to his/her graduate committee a brief description of the proposed research project. This may also be done before completion of course requirements, if the student is ready.

The proposal will be two or three pages in length, setting forth the general background for the project, and outlining the experiments to be performed and the expected method of analyzing the results. The committee will then discuss the proposal with the candidate and make suggestions.

**Thesis.** The thesis will be prepared in accordance with the requirements of the Graduate Division and the University Archivist. Some guidelines for the Oral Biology master’s thesis in particular are: The length will be typically thirty to fifty pages, doublespaced. An Abstract describes the work carried out. In terms of specific experiments and general conclusions, the Introduction and Background states the problem in the context of previous work in the field, and reviews the related literature, with perhaps fifty or less references. The Materials and Methods section describes techniques and procedures used, in sufficient detail to permit another researcher to repeat the experiments. Results contains data collected in the course of experiments, presented in a logical sequence. This should include text, graphs, tables, or photographs, but a minimum of literature review of “splitting of fine hairs.” Discussion relates the work to other studies in the field, explains inconsistent results or unexpected findings, and perhaps suggests future experiments.

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 thesis and termination from the program, to allow committee members to read and comment on the manuscript. Caution is advised about unexpected delays which often occur with preparation of illustrations, typing, and proofreading, and making final revisions and corrections.

**Time to Degree.** The master’s degree in Oral Biology is a two-year program. The student can finish his/her required course in three quarters and begin on the research in the Summer Quarter. The student should be finished by the following summer. If a student comes into the program with a research project and knows exactly what he/she wants to collaborate with, it may be possible to complete the program in five quarters.

500 Series Course Limitations. Direct Individual Study or Research OB596 and Thesis Research and Preparation OB598 are required 500 series courses. The student is eligible to take two to eight units at a time on a Satisfactory/Unsatisfactory grading basis as many times as is needed. Only eight units of the 500 series may be applied toward the total course requirement of which four of those units may be applied toward the minimum graduate course requirement.

**Disqualification.** Recommendations for termination of students on probation, or students admitted provisionally, or others who are not making sufficient progress toward the degree may be made in the following way: the Program Chair or Department Chair may recommend termination of a student by submitting a written statement to the Department Chair (who is also Dean, School of Dentistry) setting forth the reasons for the recommendation. The student will be asked to withdraw from the program for cause.

**Appeals.** Such students may petition, stating in writing his/her basis for the appeal of disqualification, to have their situation reviewed by a faculty Review Committee. In all cases the Review Committee will consist of three members. One member will be the student’s principal adviser, one will be appointed by the Department Chair, and one by the student. If the student does not have a principal adviser, the Department Chair will appoint two members.

The Committee will review the formal record of the student, and in every case, conduct a personal interview with the student. Its recommendations will be communicated in writing to the Department Chair with a copy to the student and the Program Chair. These recommendations should be specific, including (but not limited to) recommendation for leaving absence for a specified period of time for the purpose of removing incomplete grades, or reviewing academic goals, etc.; continuance as a registered student in the program for a specified period of time with expectations of the committee clearly stated; or termination. Leaves of absence will be granted to students on academic probation only by special petition to the Dean of the Graduate Division.

**Other Relevant Information.** The master’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 Graduate Admissions.

**Graduate Courses**

202. Principles and Methods of Research. One hour lecture and three hours of lab per week. This course is designed to familiarize the student with the experimental method and its application to basic and applied research. It will include experimental method and design and interpretation of data. The student will be exposed to research instrumentation and the advantages and limitations of various investigative tools.

Mr. Junge and the Staff

M203. Oral Embryology. (Same as Anatomy M203.) Four hours per week in the Spring Quarter. A course of lectures and laboratory instruction, the development and historical attributes of the facial region, and the oral and peripheral organs and tissues.

Mr. Bernard and the Staff

204. Flora of the Human Mouth. (½ course) Two hours lecture and discussion per week. Required for Oral Biology. A study of the major bacterial, fungal and viral residents of the oral cavity with emphasis on determinants of habitat and other ecologically relevant topics. Host-mediated parameters which regulate various aspects of the oral ecosystem are also emphasized, e.g. salivary constituents and mechanisms leading to specific surface interactions. Offered Spring Quarter.

Mr. C.K. Franker

M205. Oral Physiology. (Same as Physiology M203.) Lecture, one hour; discussion, one hour. The organ-level and cellular physiology of the following systems will be discussed, in a somewhat flexible framework: (1) Salivary glands, including the mechanisms of secretion, abnormalities such as Mikulicz-Sjogren 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) Dental pain mechanisms, hydrodynamic 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, normal time-course of development of various sounds in children. Classes are supplemented with audio-visual materials and many references from the literature. To be offered Fall Quarter.

Mr. Junge

M206. Secretory and Gastrointestinal Immunity. (Same as Microbiology and Immunology M206.) Lecture, two hours. The anatomy and physiology of the oral cavity, the intestines, and the related lymphatic and blood vascular systems will be reviewed in reference to the immune system. The secretory and systemic immune systems will be discussed in detail with particular emphasis on the innate properties of Siga. The ability to process enteric antigens, to respond, and to regulate enteric immunity will be discussed in terms of recent experimental findings. The role that enteric immunity may play in diseases of the GI tract such as dental caries and inflammatory bowel diseases will be presented. The class will meet for two hours one day per week. Students will participate in discussions following each lecture and will present seminars based on a review of the relevant scientific literature. 20 hours. To be offered Spring Quarter.

Mr. Riviere
207. Brainstem Control of Rhythmical Movements. Lecture, 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 nuclei, pattern generators and "voluntary" control centers.

Mr. Goldberg

208. The Biochemistry of Saliva and Dental Caries. (1/4 course) Lecture, two hours. This course will be organized into two seminars in which current research in the field of salivary biochemistry and its relationship to the development of dental caries will be discussed. Each student will be expected to present a current article for discussion. To be offered in the Winter Quarter.

212. Current Views on the Neuromuscular Control of Jaw Movement. (1/4 course) This course involves discussion and evaluation of recent papers concerning motor control of the jaw. Mr. Goldberg

M214. Anatomy of Bone. (1/4 course) (Same as Anatomy M225.) Two hours of lecture and one hour of discussion per week in the Winter Quarter. Prerequisites: consent of instructor. Embryology of bone tissue; bone as an organ; growth and development of specific bone areas; bone physiology; modelling of bone; crystallography of hydroxyapatite; pathological calcifications; pathology of bone; mechanisms and lineage of a calcium: clinical correlations.

Mr. Bernard

215. Genetics in Dentistry. (1/4 course) Two hours of lecture per week. This course includes molecular and cytologic basis of inheritance, human cytogenetics, mendelian genetics and polygenic modes of inheritance, inborn errors of metabolism, genetic diseases affecting the oral facial area, and recent advances, i.e., amniocentesis, linkage, and cell hybridization.

Mr. Stewart

216. Biological Electron Microscopy in Dental Research. (1/4 course) Prerequisite: consent of instructor. A review of the application of electron microscopy to hard and soft tissues of the oral-facial region. Emphasis given to oral health problems. Course content adapted to special interests of the participants.

Mr. Dixon

218A. Oral Pathology. (1/4 course) Two hours lecture per week. This course encompasses the embryology, cell biology, histopathology, histophysiology, and symptomatology of oral pathologic condition of local or systemic origin. The course consists of lectures, demonstrations, and laboratory sessions. The laboratory equals one hour of electron microscopy dealing with the developmental, inflammatory, neoplastic, metabolic, degenerative diseases and physical injuries and healing of wounds.

Mr. Riviere

222. Oral Immunopathology. (1/4 course) Prerequisite: consent of instructor. The course will present the involvement of immunological phenomena in the pathogenesis of oral diseases such as dental caries, periodontal disease, oral ulceration, and hyperaesthesia reactions. Alterations of the immune system which affect the oral cavity will also be discussed.

Mr. Riviere

M224A-M224B. Structure and Chemistry of Connective Tissues. (1/4 course each) (Same as Anatomy M224A-M224B.) Two hours of discussion per week in the Fall and Winter Quarters. Prerequisites: histology, biochemistry. A seminar course designed for graduate students in dentistry, medicine, or basic science. Fundamental information on the line structure and chemical composition of tissues dentin, cementum, cartilage and cells of connective tissue in general, as well as enamel with emphasis on the biosynthesis of collagen, noncollagenous proteins and glycoproteins, and glycosaminoglycans (mucopolysaccharides). The possible roles of the cellular and noncellular elements in the process of biological mineralization and correlation of biological processes to periodontal pathology, in-Progress grading.

Mr. Weinstock

225. Gross Postnatal Craniofacial Growth and Development. (1/4 course) This seminar is designed primarily to develop a critical sense in the evaluation of the research literature and an appreciation of the dynamic complexity of postnatal craniofacial growth. At each session students will present reviews and critiques of original articles. This will be followed by group discussion. Specific aspects of the following topics on growth of bone and bones will be considered in detail: Historical review; modes of growth; general and craniofacial (mandible, midface, craniofacial growth; methods of assessing, factors affecting; and conflicting hypotheses. The student will be encouraged to pursue his particular interest.

Mr. Dixon

227. Dental Embryology and Histology. (1/4 course) The student will be able to describe and interpret the major developmental mechanisms and events in the development of the orofacial apparatus and histological features of its component tissues. The student will be able to critique scientific literature relevant to the course content and will analyze the knowledge status of our knowledge about selected features of the orofacial apparatus which are of significance to the clinical dental specialist.

Mr. Dixon

228. Dental Therapeutics. (1/4 course) Lecture, two hours. A course of lecture/seminar sessions considering the specific problems of clinical dentistry. The compounds and preparations available within each class of agents will be described, their basic pharmacology reviewed, dosages and schedules of administration analyzed, and indications and contradictions for their use discussed. For each agent, possible adverse reactions and interactions with other drugs will be emphasized. Mr. Hume

M233. Major Concepts in Oncology. (Same as Cell Biology, Virology M293 and Pathology M283.) Lecture, three hours. Prerequisite: Graduate Standing or consent of instructor. Course designed for graduate students contemplating research in oncology. Lecture. Topics include: primary, secondary, metastatic growths, DNA replication, DNA repair, human cytogenetics, epidemiology of cancer, tumor immunology, principles of cancer surgery, radiation therapy and chemotherapy.

490. Professional Writing for Dentistry. (1/4 course) Prerequisite: consent of instructor. Workshop in scholarly publication. Analysis of syntactic, rhetorical and stylistic features of scientific prose will help students see the relationship of language to abstract thought and of writing to research. Coordinates with OB 202, Principles and Methods of Research. Offered on a satisfactory/unsatisfactory (S/U) grade basis only. May be repeated once for credit.

Mr. Bork

Individual Study and Research

596. Directed Individual Study or Research. (1/2 to 1 course) Graded S/U.

598. Thesis Research and Preparation. (1/4 to 1 course) Graded S/U.

Oriental Languages

(Office, 222 Royce Hall)

Hartmut E. Schartz, Ph.D., Professor of Indic Studies (Chair of the Department).

Enbo Asahikaga, M.Lit., Giko, Emeritus Professor of Oriental Languages.

Kenneth S. Chen, Ph.D., Emeritus Professor of Oriental Languages.

Kao, Yan Hung, Emeritus Professor of Oriental Languages.

Richard C. Rudolph, Ph.D., Emeritus Professor of Oriental Languages.

Ben Belu, Ph.D., Associate Professor of Oriental Languages.

Hung-hsiang Chou, Ph.D., Associate Professor of Oriental Languages.

Robert C. Epp, Ph.D., Associate Professor of Oriental Languages.

William R. LaFleur, Ph.D., Associate Professor of Oriental Languages.

E. Perry Link, Jr., Ph.D., Associate Professor of Oriental Languages.

Herbert E. Plotschow, Ph.D., Associate Professor of Oriental Languages.

Shiow S. Wong, Ph.D., Associate Professor of Oriental Languages.

Richard E. Strasberg, Ph.D., Assistant Professor of Oriental Languages.

Y. C. Chu, M.A., Lecturer in Chinese.

Kuo-yi Pao (Unenseen), M.A., M.S., Lecturer in Oriental Languages.

Hanns-Peter Schmidt, Ph.D., Professor of Indo-Iranian Studies.

The Master of Arts Degree

Admission Requirements. Students seeking admission to graduate status in Oriental Languages are expected to meet, in addition to general University requirements, not only the minimum requirements for the undergraduate major, but in addition, a minimum of three courses in classical Chinese or Japanese at the upper division level. Students whose undergraduate preparation was not in the field of Oriental Languages will be admitted only if they can meet the departmental standards in linguistic competence and complete the minimum departmental requirements for the equivalent of a B.A. degree within the period of one year. Selection will be based on 1) prior scholastic performance (at the junior, senior and/or graduate levels), 2) recommendations by professors and others, 3) score on the Graduate Record Examination (aptitude Test), and 4) degree of commitment to the field of study. Foreign students, furthermore, are required to attain a satisfactory score on the Test of English as a Foreign Language administered by the Educational Testing Service, and may be required to take English 106J (Advanced Composition for Foreign Students) and 106J (Introduction to Literature) beyond the minimum University requirements in English.

A brochure describing the Department can be obtained at the departmental office, 222 Royce Hall. No additional application forms are required by the Department besides those used by Graduate Admissions.

Advising. See the Departmental Office on an annual basis for the appropriate advisers in Japanese studies and Chinese studies.

Besides this formal advising, students are encouraged to consult with faculty members.

Academic progress will be monitored closely if a student's grade point average falls below 3.0; the progress of all graduate students will be evaluated at the end of the academic year at the meeting of the entire faculty of the Department.

Students are required to meet with their Graduate Adviser at least once every quarter to establish their study program and check their progress in it. Advisers keep short informal notes of these meetings. Departmental committees to administer the M.A. examination in Chinese and Japanese are established each year by the Chair of the Department.
Major Fields. The Department recognizes two fields of specialization at the M.A. level: Chinese language and literature and Japanese language and literature.

Foreign Language Requirements. Students majoring in Chinese will be required to present evidence of completion of one year of Japanese with a grade of B or better, and those majoring in Japanese will be required to present evidence of completion of one year of Chinese with a grade of B or better. This requirement need not be fulfilled before admission to the M.A. program.

Course Requirements. Total number of courses required for the degree: 11. Number of graduate courses required for the degree: 5. Required graduate course: For the Chinese major — O.L. 295 (Chinese Bibliography); For the Japanese major — O.L. 296 (Japanese Bibliography).

With the approval of the Department, up to two courses taken outside the Department will count toward the 11 courses but not toward the five graduate courses.

Thesis or Comprehensive Examination Plan. All students will take Comprehensive Examinations in the areas of Chinese or Japanese 1) language 2) literature and 3) civilization. These exams are given at the end of each quarter.

In addition, a brief research paper embodying the results of independent investigation will be required. The results of the examinations and the quality of the paper will determine whether the student will be permitted to enter the Ph.D. program.

Time to Degree. A full-time student with no deficiencies upon admission to graduate status and with a standard course load should be able to obtain his/her degree after seven quarters.

500 Series Course Limitations. 500 series courses do not count toward the number of required courses.

The Ph.D. Degree

Admission Requirements. The M.A. degree in the Department or its equivalent is required for admission to the doctoral program. A student admitted with an M.A. degree in Oriental Languages from another institution may be required to take supplementary courses before proceeding to the doctoral program. A student admitted with an M.A. degree in a field other than Oriental Languages must fulfill the course requirements for the M.A. degree. In either case, the student may be required to submit a brief research paper demonstrating his/her ability to conduct original research and his/her aptitude in communicating his/her findings.

A brochure describing the Department can be obtained at the departmental office, 222 Royce Hall.

Three letters of recommendation by professors and others are required.

No additional application forms are required by the Department besides those used by Graduate Admissions.

Advising. See the Departmental Office on an annual basis for the appropriate advisers in Japanese and Chinese studies.

Personal advisers are assigned to new students at the time of admission; changes can be made for good reason.

The student's progress will be evaluated at the end of the academic year at a meeting of the entire faculty of the Department.

Students are required to meet with their advisers at least once every quarter to review their progress and plan their program; the Graduate Advisers keep short informal notes of these meetings.

A guidance committee consisting of three members, two of whom will be from the student's major language area and one from the minor language area, will be appointed for all entering doctoral level students. The student will select his/her fields of examination with the approval of this committee.

Major Fields or Subdisciplines. The Department recognizes three major fields at the Ph.D. level:

a. Chinese language and literature with the subdisciplines: poetry, drama, fiction and archaeological inscriptions.

b. Japanese language and literature with the subdisciplines: ancient, medieval, early modern and modern Japanese literature.

c. Buddhism with the subdisciplines: Chinese Buddhism and Japanese Buddhism.

Foreign Language Requirement. The student will demonstrate a reading knowledge of French and German by passing the Graduate School Foreign Language Test administered by the Educational Testing Service (minimum passing score: 500), or by successful completion of a level 5 course (with a grade of B or better). (With the approval of the Department, one of these languages may be substituted by another language or an additional year of Japanese for the Chinese major or Chinese for the Japanese major.)

Course Requirements. A minimum of five courses beyond the M.A. degree is required. In addition, students whose major field of interest is Chinese language and literature will present evidence of successful completion of three courses in modern Japanese at the intermediate level (19A-19B-19C) or higher; those whose major field of interest is Japanese language and literature will present evidence of successful completion of three courses in classical Chinese (13A-13B-13C) or higher. Those whose major field of interest is Buddhism must take five quarters of Sanskrit and, in addition, one quarter of Pali. A grade of B or better is required for all language courses.

Written and Oral Qualifying Examinations

The Language Examination: The student will take a language examination in his/her major language area well in advance of the Written Qualifying Examinations. The examination will consist of translations into English to test the student's ability to render the language into English accurately and in an acceptable style.

Written Qualifying Examinations: The student will take three written examinations, as follows:

1. For the major in Chinese language and literature:
   a. A general examination in Chinese language and literature.
   b. An examination in poetry, drama, fiction or archaeological inscriptions.
   c. An examination in one of the following fields: Japanese language and literature, Buddhism (Chinese), Chinese archaeology (not open to those who offer archaeological inscriptions as a subfield) or a cognate field offered in another departmental or interdepartmental program in the Graduate Division and approved by the Department.

2. For the major in Japanese language and literature:
   b. An examination in ancient, medieval, early modern or modern Japanese literature.
   c. An examination in one of the following fields: Chinese language and literature, Buddhism (Japanese) or a cognate field offered in another departmental or interdepartmental program in the Graduate Division and approved by the Department.

3. For the major in Buddhism:
   a. A general examination in Buddhism.
   b. An examination in a specified subfield in Buddhism.
   c. A general examination in Chinese or Japanese language and literature or a cognate field.

All three examinations must be taken within four weeks. The student will take these Written Qualifying Examinations after satisfying all language and course requirements. With the approval of the Department, a student may repeat the examinations once only.

After successful completion of these examinations, the Chair of Department recommends the formation of a doctoral committee.

The Oral Qualifying Examination: The student must pass an Oral Qualifying Examination on the proposed dissertation topic and in appropriate related areas of study.

The Dissertation: The student will present a dissertation embodying the results of independent investigation. If the student changes his/her dissertation topic after being advanced to candidacy, he/she will be required to take written examinations in fields relevant to the new topic. Students who fail to meet the maximum time limit for the completion of the dissertation will be required to take the Written Qualifying Examinations again.

Final Oral Examination Following Completion of the Dissertation. A final oral defense of the dissertation will be optional at the discretion of the doctoral committee.
Graduate Courses

203A-203B. Chinese Philosophical Texts. May be repeated for credit with consent of instructor.

213. Chinese Buddhist Texts. May be repeated for credit with consent of instructor.

214A. Paninirs Grammar. A knowledge of Sanskrit equivalent to course 122A, and consent of instructor. Grammatical studies and reading of texts. Compr.

219-221B. Introduction to Paninirs Grammar. Prerequisite: course 122A or equivalent. Reading of selected passages of the text with an introduction to Paninirs technique.

221A-221B. Introduction to Paninirs Grammar. Prerequisite: course 122A or equivalent. Reading of selected passages of the text with an introduction to Paninirs technique.

222A-222B. Vedic. (Same as Near Eastern Languages (Ibn) Section M) 222A-222B. Prerequisites: introduction to Chinese equivalent to course 122A, and consent of instructor. Characteristics of the vedic dialect and readings in the Rig-Vedic hymns. 222B only may be repeated for credit. Mr. Schmidt

223. History of the Japanese Language. 222A-222B. Japanese Buddhist Texts. May be repeated for credit with consent of instructor.

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 with consent of instructor. Ms. Wong

242A-242B. Japanese Classics. 242A. Prose and poetry up to 1600. 242B. Prose and poetry from 1600 to 1868. May be repeated for credit with consent of instructor.

255. 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.


270. Seminar: Selected Topics in Chinese Cultural History. May be repeated for credit with consent of instructor.

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. Also other selected topics concerning the cultural development of ancient and medieval China. May be repeated for credit.

285. Selected Topics in Buddhist Culture. May be repeated for credit with consent of instructor.

298. Introduction to Mushaku Sansatsu. Introduction to Mushaku Sansatsu. May be repeated for credit with consent of instructor.

301. Teaching an Oriental Language as a Foreign Language.

Individual Study and Research

All of these courses will be graded S/U. A student may repeat these courses with consent of instructor; however, none of these may apply toward the minimum course requirement for the M.A.

501. Cooperative Program. (1/2 to 2 courses) Prerequisites: approval of UCLA Graduate Adviser and Graduate Dean. Approval of 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. To be graded S/U.

596. Directed Individual Studies. (1 to 3 courses)

597. Preparation for the Comprehensive Examination for the M.A. or the Qualifying Examination for the Ph.D.

599. Research for and Preparation of the Doctoral Dissertation. (1 to 3 courses)

Related Courses in Other Departments

Anthropology 166. Comparative Minority Relations. 175S. Japan.

261. Comparative Minority Relations. Art 114A. The Early Art of India.

114B. Chinese Art.

114C. Japanese Art.

115A. Advanced Indian Art.

115B. Advanced Chinese Art.

115C. Advanced Japanese Art.


140. Criticism.

201. Approaches to Literary Criticism.

Geography 168. Contemporary China.

285. Modern China.


183. Modern China, 1840-1920.

184. The Chinese Revolution.

185. The Mongols in East Asian History.


189A. History of India.


210. Topics in History: L. China, M. Japan, P. History of Religions.
Pathology

(Office, '13-267 Center for the Health Sciences)

Marcel A. Beluda, Ph.D., Professor Pathology.
Luciano Barajas, M.D., Professor of Pathology in Residence.

William Brown, M.D., Professor of Pathology and Psychiatry.

Ailis J. Cochran, M.D., Professor of Pathology and Surgery/Gynecology in Residence.

Wayland F. Coulson, M.D., Professor of Pathology (Vice-Chair of the Department).

Robert Y. Fosu, M.D., Professor of Pathology.

Hideo E. Itohashi, M.D., Professor of Pathology and Neurology in Residence.

Harriet L. Latta, M.D., Professor of Pathology.

Klaus J. Lewin, M.D., Professor of Pathology in Residence.

Michael Lubran, M.D., Ph.D., Professor of Pathology in Residence.

Robert J. Morin, M.D., Professor of Pathology in Residence.

Byron A. Myhre, M.D., Ph.D., Professor of Pathology in Residence.

Donald E. Paglia, M.D., Professor of Pathology.

David D. Porter, M.D., Professor of Pathology.

Denise O. Rodgerson, Ph.D., Professor of Pathology in Residence.

George S. Smith, M.D., Professor of Pathology.

Julien L. Van Lander, Ph.D., Professor of Pathology (Chair of the Department).

Malcolm Anthony Verity, M.D., Professor of Pathology.

Roy L. Wallford, M.D., Professor of Pathology.

Luciano Zamboni, M.D., Professor of Pathology in Residence (Vice-Chairman of Department).

William H. Barnes, M.D., Emeritus Professor of Pathology.

Ruth Gussen, M.D., Adjunct Professor of Pathology.

Judith A. Berliner, Ph.D., Associate Professor of Pathology in Residence.

Arthur M. Cohen, M.D., Associate Professor of Pathology in Residence.

Paul C. Fu, Ph.D., Associate Professor of Pathology in Residence.

Juan Lachago, M.D., Ph.D., Associate Professor of Pathology in Residence.

Joseph M. Mirra, M.D., Associate Professor of Pathology.

David S. Bruckner, Sc.D., Assistant Professor of Pathology in Residence.

Suzanne Fligel, M.D., Adjunct Assistant Professor of Pathology.

Oliver Hanson, Ph.D., Assistant Professor of Pathology in Residence.

Dorothy Rosenthal, M.D., Adjunct Associate Professor of Pathology.

Nora C. J. Sun, M.D., Assistant Professor of Pathology in Residence.

Takamori Tomura, M.D., Ph.D., Specialist.

The Ph.D. Degree (Experimental Pathology)

**Admission Requirements.** In addition to the University minimum requirements, Graduate Record Examinations (GRE) Aptitude Tests are required (may be waived for foreign applicants or M.D.s), and three letters of recommendation. There is no application form in addition to the one used by the University. Because of the sequencing of classes, applicants are generally considered for admission to the Fall Quarter only. For departmental brochures, write to: Chair, Department of Pathology, CHS 13-327, UCLA.

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, one year of physics, one year of general chemistry, one year of organic chemistry, and one year of biological sciences. Physical chemistry, a course in molecular biology, and a course in histology are also strongly recommended. In some cases, deficiencies in the prerequisite may be fulfilled in the first year of study.

**Advising.** Graduate Adviser: Dr. Judith Berliner (same address). Due to the small size of the program, Dr. Berliner serves as adviser for all first-year students. Students are required to consult with the adviser before registering for courses each quarter. After the first year, the student chooses an individual thesis adviser who heads the committee and serves as the adviser.

Failure to maintain a 3.0 average in more than one quarter may lead to academic probation or termination. At the end of two years, the student must pass Written Qualifying Examinations, evaluated by staff generally and by the student's committee.

**Course Requirements.** The following courses are required: Pathology 231A, M240, 242A, 242B, 242C, 244, 250, 251, and Biobmathematics 170A. In addition, students beginning the program with a bachelor's degree select 40 units from remaining Pathology courses and related biomedical areas of interest at the upper division or graduate level. Students entering the program with a master's degree or M.D. may have fewer elective units to complete toward the Ph.D.

**Teaching Experience.** Students must act as teaching assistants for one quarter in medical or dental student pathology courses.

Written and Oral Qualifying Examinations. After the core course requirements are completed, usually at the end of the second year, a comprehensive Written Qualifying Examination covering general knowledge is administered by the departmental staff. It is given as a 6-hour written examination; if evaluators feel that some questions should be elaborated on orally, students will do this within three months of the written examination. If failed, the examination may be repeated once. Six months to one year after the written examination, an Oral Qualifying Examination is administered by the student's doctoral committee. This examination normally includes defense of the subject matter of the proposed dissertation topic. Each student will be expected to have done preliminary work before the examination. Candidates must demonstrate a wide and comprehensive knowledge of their special subject. Upon passing, the student will advance to candidacy.

**Doctoral Committee.** The doctoral committee is formed according to the conditions set by the Graduate Council.

**Final Oral Examination Following Completion of the Dissertation.** All candidates are required to defend their dissertation at an oral open to the public. The purpose of the dissertation is to demonstrate ability for independent investigation and proficiency in the field.

**Time to Degree.** From admission to Written Qualifying Examination: six quarters. From Written Qualifying Examination to approval of proposal and Oral Qualifying Examinations: two quarters. From advancement to candidacy to Final Oral Examination: three to six quarters. From graduate admission to awarding of degree: 12 to 15 quarters.

**Disqualification and Appeal.** Students not obtaining at least a 3.0 average in more than one quarter will be terminated. Failing the Written or Oral Qualifying Examination twice also leads to disqualification. The student may appeal by letter to the graduate committee.

**Additional Information.** Students are generally accepted into the program for the purpose of obtaining a Ph.D. in Experimental Pathology. However, the Department has also been approved to award a master's degree in Experimental Pathology. This has been reserved for cases in which a student was unable to finish the full Ph.D. program but whose completed work was 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. The student will also be expected to enroll in a minimum of 8 units of 599 each quarter starting in the third year. These do not count toward the minimum course requirements for the degree.
Graduate Courses

209A. Dental Pathology. (4 courses) Prerequisites: consent of instructor. Course I of Pathology for Dental Students emphasizing the fundamental causes of disease processes, using as examples selected lesions or diseases of major organ systems.

Mr. Foss and the Staff

M215. Interdepartment Course in Tropical Medicine. (1½ courses) (Same as Microbiology and Immunology M215, Medicine M215 and Pediatrics M215.) Prerequisites: basic course in microbiology and parasitology or infectious diseases in the schools of medicine or public health. The course draws upon expertise in the Departments of Medicine, Pediatrics, Pathology and Microbiology and Immunology to present current knowledge on disease processes in tropical areas of the world. Lectures, demonstrations and audiovisual materials will be used to describe diseases which are prevalent in or localized to certain geographic areas. Although major emphasis will be in infectious, parasitic and tropical diseases, non-infectious diseases will be covered. A syllabus will supplement the topics covered in the classroom. Graded S/U.

Mr. Verity and the Staff

231A. Pathological Anatomy and Physiology. (1½ courses) Lecture, two hours; discussion, six hours; laboratory, four hours; other, six hours. Prerequisites: Graduate Standing and consent of curriculum. Prerequisite 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 will be presented. Concentration will be in the area of General Pathology.

Mr. Lewin and the Staff

231B-231C. Pathophysiology of Disease. (1½ courses) Prerequisites: course 209A, regular graduate student status and 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 will be presented. Concentration will be in the area of General Pathology. In-Progress grading basis.

Mr. Lewin and the Staff

232. Topics in Vertebrate Neurobiology. (½ course) 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. (½ course each) Prerequisites: consent of instructor. Description of intracellular information flow in mammalian cells by stimuli of different natures as well as induced changes such as induction, repression, differentiation and neoplastic transformation will be analyzed. Use of culture models and its biopathological implications will be stressed. To be offered alternate years. 235A, Fall Quarter, and 235B, Winter Quarter.

236B. Immunopathology. (½ course) (Same as Medicine M236B.) Lecture, two hours per week. Prerequisites: Immunology course and consent of instructor. Study of the role of immunologic phenomena in the production of lesions and disease. Topics will include immune reactivity of the body, immunologic mediators, cell-mediated immunity, and infectious diseases.

Mr. Glassock and Mr. Porter

242A. Molecular Mechanisms in Disease. (½ course) Prerequisites: course 221A, consent of instructor. The course concerns itself with description of molecular events resulting from administration of injurious chemical agents (e.g., x-rays, carcinogens, toxins, etc.) and from reactions to injuries (e.g., necrosis, degeneration, hyperplasia, neoplasia, inflammation, etc.) and also with an interpretation of structural and functional disturbances in the terms of molecular alterations.

Mr. Van Lancer and the Staff

242B. Molecular Mechanisms in Disease. (½ course) Prerequisites: course 242A or 242C; consent of instructor. This course is a continuation of Pathology 242A, both of which concern themselves with description of molecular events resulting from administration of injurious chemical agents (e.g., x-rays, carcinogens, toxins, etc.) and from reactions to injuries (e.g., necrosis, degeneration, hyperplasia, neoplasia, inflammation, etc.); and also with an interpretation of structural and functional disturbances in the terms of molecular alterations.

Mr. Van Lancer and the Staff

242C. Molecular Mechanisms of Disease. Prerequisites: consent of instructor. This course is part of Molecular Mechanisms of Disease (A, B, C) and will cover aspects of neoplasia in relation to alterations in the control of cell growth, carcinomaogenesis and the biology of cancer.

Mr. Hankinson

244. Electron Microscopy in Experimental Pathology. (½ course) Prerequisites: consent of instructor. Ultrastuctural aspects of pathology including introduction to use of modern methods of electron microscopy in pathological studies, essentials of normal ultrastructure and ultrastructural phenomena in disease. Prerequisites and consent of instructor. The course concerns itself with a description of molecular events resulting from administration of injurious chemical agents (e.g., x-rays, carcinogens, toxins, etc.) and from reactions to injuries (e.g., necrosis, degeneration, hyperplasia, neoplasia, inflammation, etc.); and also with an interpretation of structural and functional disturbances in the terms of molecular alterations.

Mr. Van Lancer and the Staff

245. Environmental Pathology. Prerequisites: Graduate Standing and consent of instructor. This course is designed to explore the interrelationships of man with his total environment. A series of special lectures will be given on chemical agents effecting changes in the composition of air, water, soil and other materials. Graded S/U.

Mr. O'Donnell and the Staff

250A-250B-250C. Pathology Graduate Student Seminar. Prerequisites: open only to students in experimental pathology. Required for all pathology graduate students. Review and discussion of current literature and research in special topics of experimental pathology.

251. Pathology Graduate Student Laboratory Seminar. Prerequisite: consent of instructor. This course consists of ten, two-hour seminars which may include demonstrations of apparatus and methods dealing with high resolution electron microscopy and tissue culture and radiography. Graded S/U.

Mr. O'Donnell

252. Free Radical Pathology. (½ course) Lecture, four and one half hours per week. Prerequisites: Biochemistry. Physical Chemistry. Free radicals, mechanisms of formation, properties and reactions. Their reactions with significant biomolecules. Modes of action in vivo. Reactions in vivo. Protection against and sensitization towards these damaging effects.

Mr. Hankinson

258. Seminar in Viral Oncology. (½ course) (Same as Microbiology and Immunology M258.) An advanced course designed to cover aspects of viral oncology and current developments in the field. Selection of current subjects and publications dealing with tumor viruses, oncogenesis, development, and cellular regulation.

Mr. O'Donnell

267. Introduction to Toxicology. Lecture, four hours. Prerequisite: Pharmacology 241 or consent of instructor. Biochemical and systemic toxicology, basic mechanisms of toxicity and the interaction of toxic agents with specific organ systems.

Mr. Taylor

M258. Pathologic Changes in Toxicology. (Same as Pharmacology M258.) This course is designed to give students experience in learning the normal histologic structure and disease processes of tissues and the range of pathologic changes that occur in these tissues. Liver, bladder, lung, kidney, nervous system and vascular system will be covered. Mr. Berliner

261B-261C. Laboratory Rotation. (½ course each) (Formerly numbered 251A-251B-251C.) Laboratory, six hours. Students will get an introduction to research with individual instructors, laboratories.

M293. Major Concepts in Oncology. (Same as Cell Biology & Virology M293, Microbiology M293 and Oral Biology M293.) Lectures, three hours. Prerequisite: Graduate Standing or consent of instructor. Course designed for graduate students contemplating research in oncology. Lectures. Topics include cancer pathophysiology, genetics, membranes, molecular 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.

Mr. Hankinson, Mr. Sugar

Individual Study and Research

586. Directed Individual Study or Research. (1 to 3 courses) Individual research with members of our staff or of other departments, the latter for the purpose of supplementing programs available in our department. Graded S/U.

587. Preparation for Qualifying Examination. (½ to 2 courses) Prerequisite: one year of course work in pathology. Individual study for qualifying exam. Graded S/U.


Pharmacology

(Office, 23-278 Center for the Health Sciences)

1John A. Bevan, B.Sc., M.B., B.S., Professor of Pharmacology

2Arthur K. Cho, Ph.D., Professor of Pharmacology (Vice Chairman of the Department)

3Robert George, Ph.D., Professor of Pharmacology

4Donald J. Jenden, B.Sc., M.B., B.S., Professor of Pharmacology and Biometrics (Chair of the Department)

5Peter Lomax, M.D., D.Sc., Professor of Pharmacology

4Dermot B. Taylor, M.A., M.D., Professor of Pharmacology

6Jeremy H. Thompson, M.D., F.R.C.P., Professor of Pharmacology

7Jorge R. Barrio, Ph.D., Associate Professor of Pharmacology and Radiological Sciences

8Rosedale D. Bevan, M.D., Adjunct Associate Professor of Pharmacology

9Don H. Catlin, M.D., Associate Professor of Pharmacology and Medicine

10M. F. Cantor, M.D., Associate Professor of Pharmacology and Medicine
The Ph.D. Degree

Admission Requirements. In addition to meeting the requirements of the Graduate Division, the student must have received the 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 status, but any deficiencies will have to be removed within a specified time. Graduate Record Examination scores are required of all applicants to the Department as well as three (3) letters of recommendation. Applications are accepted for the Fall Quarter only. The Departmental Graduate Training Committee (three faculty members) is solely responsible for the selection of new students. Interviews may be requested by the Graduate Training Committee.

Prospective students may write for a departmental brochure to the following address:
Graduate Student Office, Department of Pharmacology, UCLA School of Medicine, Los Angeles, California 90024, (213) 825-6567.

Advising. Address: Dr. Arthur K. Cho, Graduate Adviser, Department of Pharmacology, UCLA School of Medicine, Los Angeles, California 90024, (213) 825-6567.

Dr. Cho is the Graduate Adviser for all entering graduate students and/or students in their first and second year of study. All students must obtain approval from Dr. Cho for enrollment into courses each quarter and may want to discuss their own academic program. By the end of the second year, the student chooses a faculty sponsor to serve as his/her main adviser in thesis research.

Major Fields or Subdisciplines. Cardiovascular Pharmacology; Chemical Pharmacology; Clinical Pharmacology; Immunopharmacology; Neuroendocrine Pharmacology; Neuropharmacology; Psychopharmacology.

Course Requirements

Courses Required: Biological Chemistry 101-A,B,C; or Biological Chemistry 201-A,B; Biological Chemistry 101C; Pharmacology 200 (Introduction to Laboratory Research) - three quarters; Pharmacology 201 (Principles of Pharmacology and Toxicology); Pharmacology 202-A,B (Clinical Pharmacology); Pharmacology 212-A,B (Graduate Commentary - Clinical Pharmacology); Pharmacology 234-A,B,C (Experimental Methods in Pharmacology); Pharmacology 237-A,B,C (Neurotransmission); Pharmacology 241 (Introduction to Chemical Pharmacology); Pharmacology 251 (Seminar in Pharmacology) — must be taken every quarter; Pharmacology 291 (Selected Topics in Pharmacology) — three quarters (or alternative courses); Physiology 101; Physiology 102; Physiology 103; One course in Biostatistics.

All coursework should be completed by the end of the sixth quarter prior to taking the Departmental Comprehensive Examinations.

Student Rotation. The Pharmacology Department has provided a system of laboratory rotations (Pharmacology 200) in order to familiarize the student with a variety of pharmacological research areas and techniques. During the first six quarters the student is in the Department, he/she will participate in projects of his/her choosing. If possible, two of these will be during the regular academic year and the third will be during the summer. He/she will also become familiar with the literature relevant to the various research projects, and thus establish a basis for the selection of his/her own research area. Those students who have already chosen a research area at the time they enter the Department may benefit by choosing to work in the related laboratory during the summer prior to entry into the Department. This would provide an uninterrupted period of over two months to work on a research project.

The student must submit to the Graduate Training Committee a report of his/her activities in the various research groups by the end of the quarter. The report should include:
1. The nature of the project.
2. How the student participated.
3. The results obtained.
4. Critical evaluation of the project.

Teaching Experience. Seminar presentations are required of all students in the graduate program.

The responsibility for completion of all technical requirements for the doctoral degree rests solely with the candidate.

Written and Oral Qualifying Examinations

Examinations in Pharmacology 'Core' Courses. 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. The course instructor reserves the right to dictate the form and content of the examinations.

Departmental Comprehensive Examination. Upon the completion of the first two years of study, each student will be required to take a Departmental Comprehensive Examination consisting of a written part and an oral part. The student will then be recommended:

a) For continuation of his/her studies towards the Ph.D. degree.
b) For further remedial study.
c) 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. Students will be expected to know basic principles of pharmacology and also the status of topics of current interest in pharmacology.

Oral Qualifying Examination. After passing the Departmental Comprehensive Examination, the student must take the Oral Qualifying Examination within 18 months. This oral examination is administered by the doctoral guidance committee. The guidance committee is selected by the student pending approval by the Graduate Training Committee and the Department Chair.

The student may be asked any question of pharmacological relevance; however, most questions will concentrate on the background literature, experimental methods, and implications of his/her field of interest and dissertation project. When the student fails this examination, he/she is eligible to petition the Graduate Division for advancement to doctoral candidacy.

Final Oral Examination. The Guidance Committee may administer (and usually does) a Final Oral Examination after the student has submitted his/her dissertation (Defense of Dissertation).

Credit by Examination. Graduate students may arrange to take courses for credit by examination. Up to three courses of credit may be earned in this manner. Approvals must be obtained from the course instructor, the Department, and the Dean of the Graduate Division.

Students not passing any of the above required examinations may be reexamined at a later date determined by the Guidance Committee.

Final Oral Examination. Following Completion of the Dissertation. A final oral examination may be administered upon submission of the dissertation.

Time to Degree

1. Students must select a major professor by the end of the sixth quarter.
2. Students must take the Departmental Comprehensive Written and Oral Examinations by the end of the sixth quarter.
3. The Oral Qualifying Examination must be taken within 18 months after the Departmental Comprehensive Examination.
4. Time to final completion of the graduate program is 15 quarters.
Disqualification. The graduate student's progress is evaluated by performance in coursework and in the Comprehensive and Qualifying Examinations. A grade point average of at least 3.0 is required for coursework or the student may be subject to dismissal by the Graduate Training Committee. Performance in the latter two examinations is graded pass, fail and deferral. Deferral means that the student will be asked to repeat some part or all of the examination.

Appeals. In the event that the student is graded "fail" and wishes to appeal the decision, he/she may do so in writing to either the Graduate Training Committee or to the Chair of the Department. The letter should state his/her reasons for the appeal and for reconsideration of the decision. These statements will be reviewed either by the Graduate Training Committee or an Ad Hoc Committee within the Department.

Other Relevant Information. 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
101A-101B-101C. Elements of Pharmacology. (2 courses) Prerequisite: enrollment in School of Dentistry or consent of instructor. Required course for junior dental students. A general consideration of the modes of action and the pharmacological and toxicological effect of drugs with a more detailed study of those agents used in clinical dentistry and the principles governing their use. Mr. Lomax in charge 110. Drugs: Mechanisms, Uses and Misuse. (1 course) Prerequisites: Biology 5, 6, 7; Chemistry 21, 23, 25; or their 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.

190. Special Studies. (½ to 2 courses) Prerequisites: consent of instructor and Chairman of the Department. Special studies in pharmacology, including either reading and laboratory work or both, designed for appropriate training of each student who registers in this course.

Graduate Courses
200. Introduction to Laboratory Research. (½ to 1 course) Prerequisite: consent of instructor. Individual projects in laboratory research for beginning graduate students. At the end of each quarter the student will submit to his/her supervisor a report covering the research performed. Pharmacology graduate students must take this course three times during their first two years in residence.

201. Principles of Pharmacology. Prerequisites: Mammalian Physiology and Biochemistry. A systematic consideration of the principles governing the interaction between drugs and biological systems, and of the principal groups of drugs used in therapy. Particular attention is focused on the modes of action, pharmacokinetics and disposition to provide a scientific basis for their rational use in medicine.

202A-202B. Clinical Pharmacology. (2 courses) A series of lectures and case presentations designed to illustrate the principles of pharmacology in a clinical context, and the solution of problems of practical therapeutics by reference to pharmacokinetics, mechanisms of action and disposition of drugs. Mr. Conolly in charge 212A-212B. Graduate Conference: Clinical Pharmacology. (½ course each) Prerequisites: Mammalian Physiology and Biochemistry. A supplementary program of topics covered in Pharmacology 202A and 202B. Primarily for graduate students. Mr. Conolly.

234A-234B-234C. Experimental Methods in Pharmacology. (1 course 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. Cho, Mr. George.

234D. Neuropharmacology. Prerequisites: Neurology, Advanced pharmacology, 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. George.

237A-237B-237C. Neurotransmission. Prerequisites: courses 241, 243A-243B-243C. Consent of instructor. A detailed examination of neurochemical transmission, dealing in particular with the cholinergic and adrenergic transmission mechanisms and pharmacological agents that effect them. The evidence for those mechanisms involving other possible transmitters will also be critically examined. Mr. Bevan, Mr. George, Mr. Jenden.

238. Behavioral Toxicology. Prerequisite: consent of instructor. Lectures and discussions designed to examine the effects of 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 like toxic states become apparent. Consideration will be given 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 pre- and post-natal exposure. Particular emphasis will be placed on the relevance of this knowledge to human behavior. Mr. Russell.

239. Psychopharmacology. (Same as Psychiatry M259) Prerequisite: consent of instructor. A prerequisite of the course is an introductory course in psychology and knowledge of the basic concepts of psychology. An introduction to the principles of psychology and their application to behavior in a variety of chemical and physical agents on behavior. Mr. George.

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, and the physiological effects of drugs. Mr. Jenden.

251. Seminar in Pharmacology. (½ course each) Seminars presented by students, faculty, and guest lecturers on a variety of topics. Mr. Baker.

253. Seminar in Environmental Toxicology. (½ course) Prerequisite: consent of instructor. Oral reports and discussions of current research on environmental pollutants in the environment, their effects on biological systems and the mechanism of these effects. Mr. Jenden.

257. Introduction to Toxicology. Prerequisite: Pharmacology 241 or consent of instructor. Biochemical and systemic toxicology, basic mechanisms of toxicology, and interaction of toxic agents with specific organ systems. Mr. Taylor.

258. Pathologic Changes in Toxicology. (Same as Pathology M258) This course is designed to give students experience in learning the normal histology of tissues which are major targets of toxins and the range of pathologic changes occurring in these tissues. The black and white staining of the nervous system and vascular system will be covered. Mr. George.

261. Introduction to Clinical Pharmacology. (½ course) Prerequisite: consent of instructor. Lectures, case presentations and discussions designed to acquaint graduate students with fundamental concepts and effects encountered in clinical use of drugs, including absorption, metabolism and excretion, drug interactions and interference with clinical laboratory analysis.

291. Special Topics in Pharmacology. (½ to 1 course) Prerequisite: consent of instructor. Examination in depth of topics of current importance in pharmacology. Emphasis on recent contributions of special interest to advanced doctoral candidates, academic staff or visiting faculty. May be taken for credit three times.

Individual Study and Research
506. Directed Individual Research in Pharmacology. (1 to 3 courses)
599. Research for and Preparation of the Doctoral Dissertation. (1 to 3 courses)

Philosophy
(Office, 321 Dodd Hall)

Marilyn McCord Adams, Ph.D., Professor of Philosophy.
Robert Merritw Adams, Ph.D., Professor of Philosophy.
Roger Albritton, Ph.D., Professor of Philosophy.
Tyler Burge, Ph.D., Professor of Philosophy.
Alonzo Church, Ph.D., Professor of Philosophy and Mathematics in Residence.
Keith S. Donnellan, Ph.D., Professor of Philosophy.
Philopas Foot, M.A., Professor of Philosophy.
Montgomery Furth, Ph.D., Professor of Philosophy.
Donald Kalish, Ph.D., Professor of Philosophy (Chair of the Department).
David Kaplan, Ph.D., Professor of Philosophy.
Herbert Morris, Ph.D., Professor of Philosophy and Law.
Robert M. Yost, Ph.D., Professor of Philosophy.
Hugh Miller, Ph.D., Emeritus Professor of Philosophy.
Westley Robson, Ph.D., Emeritus Professor of Philosophy.
Thomas E. Hill, Jr., Ph.D., Associate Professor of Philosophy.
Warren S. Quinn, Ph.D., Associate Professor of Philosophy.
Jean Hampton, Ph.D., Assistant Professor of Philosophy.
Richard A. Hasley, Ph.D., Assistant Professor of Philosophy.

The Master of Arts Degree
Admission Requirements. It is the policy of the Department to admit only those who plan to earn the Ph.D. degree. For a discussion of admission requirements, consult description under "The Ph.D. Degree." Advising. Consult description under "The Ph.D. Degree."

Foreign Language Requirement. The student must demonstrate a reading knowledge of French, German, Latin or Greek. (When relevant to the student's research, another language may be substituted, with the approval of the Department.) This requirement can be satisfied by passing, with a score of at least 500, the Educational Testing Service 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. A student must complete at least nine courses (36 units) numbered over 100 (excluding 199), of which five courses (20 units) must be in the philosophy series numbered between 200-296.
Thesis or Comprehensive Examination Plan. Students seeking the M.A. must pass the Master's Comprehensive Examination. (Consult description under "The Ph.D. Degree.") A student who does not pass the Comprehensive Examination on the first try may repeat the examination.

500 Series Course Limitations. 500 series courses may not be applied toward the course requirements for the M.A. in philosophy.

Time to Degree. A full-time student with no deficiencies upon admission to graduate status in the Philosophy Department should be able to complete the requirements for the M.A. in three academic quarters.

Disqualification and Appeal of Disqualification. See description under "The Ph.D. Degree."

The Ph.D. Degree

Admission Requirements. 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), official scores from the Aptitude Test of the Graduate Record Examination (GRE) (the Advanced Test in Philosophy is not required), and one official transcript from each institution attended should be sent to the Graduate Counselor, Department of Philosophy. (Such material becomes a permanent part of the applicant's file and will not be returned or forwarded elsewhere.) Departmental information and application can be obtained by writing the Graduate Counselor, Department of Philosophy, UCLA, 405 Hilgard, Los Angeles 90024.

At the end of the student's first year of graduate work, the faculty determine, on the basis of the student's total record, including coursework and the results of the Master's Comprehensive Examination (MAC), whether the student is admitted to the doctoral program. Passing the MAC is neither necessary nor sufficient for admission to the program. In exceptional circumstances, the decision may be postponed for some time during the second year. While the first year does function as a probationary term, the high standards employed for admission to graduate study result in practice in admission of students who are expected to qualify for admission to the doctoral program.

Advising. The purpose of the departmental advising program is three-fold: (1) to assure that the student is aware of all the relevant requirements, opportunities, safeguards, perils, and prospects; (2) to assist him or her to make normal progress toward the degree through a regular sequence of steps; and (3) to provide intellectual guidance and advice in the area of his or her interests. Advising for the first-year students begins with an orientation meeting held during the first week of the Fall Quarter. At that meeting, each first-year student is assigned an adviser for his or her first year. After the first year, a student may continue to work with his or her initial adviser, choose a new adviser, or use the departmental Graduate Adviser. Every student must consult with his or her adviser each quarter before registering. The adviser must approve and sign the student's study list before it can be officially filed. Students are encouraged to use the advising services of the Department as fully as possible at any time and for any academic purpose.

Foreign Language Requirement. The student must demonstrate a reading knowledge of French, German, Latin or Greek. (Another language may be substituted, with the approval of the Department, if it is used in the student's doctoral work.) The student may satisfy this requirement by having completed, with a grade of C or better, the final course in a 2-year sequence (four semesters or six quarters) of college courses in an approved language. Alternatively, the student may satisfy the requirement by passing the Department language examination. For this examination, the student selects a philosophical book in the foreign language. The book must be of moderate linguistic difficulty and it must be at least 100 pages long. (If the book is longer than 100 pages, portions amounting to 100 pages may be selected for study.) The book must be approved by the department committee responsible for graduate foreign language examinations. In the examination, which is written, the student must translate 25 lines of the approved book without a dictionary and 25 lines with the aid of a dictionary in a 90-minute period. A student planning to take an examination must give the committee two weeks notice so that it will have time to select the passages on which he/she will be examined. 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 study courses), distributed as follows:

Logic: Two upper division or graduate courses in logic, in either the Philosophy or Mathematics Department, approved by the student's 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 the student's 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 a student who has completed course work elsewhere may petition the Department (through his or her adviser) to have previous graduate coursework substituted for some of the 12 required courses, and in exceptional cases such a petition may be granted.

Written and Oral Qualifying Examinations

Master's Comprehensive Examination. The Master's Comprehensive Examination (MAC) consists of four different examinations. One is in logic, on the materials covered in Philosophy 31 and 32. Currently, this examination takes the form of the final examination for Philosophy 32, which is offered most quarters. Consult "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 and each occurs after the completion of the seminar to which it applies. All four examinations are graded by a special committee appointed by the Chairperson. The Master's Comprehensive Examination is passed or failed as a whole, which does not necessarily require passing of all four parts. Performance on all four parts is weighed by the Department in determining whether the examination is passed or failed.

Propositions. In the second and third years, students 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. A proposition must include: a) a formulation of an important philosophical problem; b) a formulation of two or three front-running solutions to or treatments of the problem; c) a criticism of these solutions, and d) the author's suggestions as to how discussion of the problem should continue. Propositions should be between 25 and 35 pages in length. Consult the Philosophy Department "Manual for Graduate Students in Philosophy" for further details on format, style and content. Propositions are researched and written in a series of individual studies courses (Philosophy 596) which usually begin in the first quarter of the student's second year.

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 the student can take the Oral Qualifying Examination. Consult the "Manual for Graduate Students in Philosophy" for further details.

Oral Qualifying Examination. In the third year, the student begins a new series of individual studies courses (Philosophy 596) with his or her dissertation supervisor. In these, the student develops a well-defined dissertation project. When the dissertation supervisor judges the project to be sufficiently well-developed, a doctoral committee is chosen and an Oral Qualifying Examination is scheduled. The primary purpose of this examination is to determine whether the student will be able to complete the dissertation successfully. Before the examination is held, the relevant written work
the student has completed under the direction of the dissertation supervisor is made available to all members of the doctoral committee for their inspection. The scope of the examination varies according to the definiteness of the dissertation topic and the extent of the student's preliminary investigations. It need not be narrowly restricted to the announced dissertation topic, but may extend into relevant neighboring philosophical fields, and also into those non-philosophical fields with which the student should be familiar in order to pursue his or her investigations. Although the primary purpose of the examination is to determine the adequacy of the student's preparation and abilities, its secondary purpose is to suggest remedies for any weaknesses that it may reveal. In case of failure, the student's doctoral committee may recommend for or against allowing a second oral examination. If the committee recommends for a second oral, the student may request its scheduling when, in the judgment of the dissertation supervisor, he or she is sufficiently prepared.

Final Oral Examination Following Completion of the Dissertation. The Final Oral Examination may be waived by the doctoral committee. This determination is usually made at the time of the Oral Qualifying Examination.

Time to Degree. A full-time student with no deficiencies upon admission to graduate status in the Philosophy Department should be able to complete the requirements of the Ph.D. in 18 academic quarters.

Candidate in Philosophy Degree. Students are eligible to receive the C.Phil. degree upon advancement to candidacy for the Ph.D.

Disqualification. Students not yet admitted to the doctoral program are reviewed at the end of their first year. At this time, the Department will either admit the student to the doctoral program, admit the student to the doctoral program, or defer the decision until a specific future time. Decisions not to admit or to defer may be appealed by petitioning the Department through the Chairperson.

The record of students admitted to the doctoral program who have fallen seriously behind in normal progress toward the Ph.D. will be reviewed at the end of each academic year. The chief purpose of this meeting will be to provide informal counsel to help the student re-establish normal progress. In rare cases, however, the Department may recommend termination from the program.

Appeals. A terminated student may petition the Department through the Chair to reconsider the case and may submit relevant supporting statements or information for the Department to consider.

*Graduate Courses

No Group

200A, 200B, 200C. Seminar for First-Year Graduate Students. Prerequisites: open only to first-year graduate students in philosophy. Selected topics in metaphysics and the philosophy of history. Required for all first-year graduate students.

Group I. History of Philosophy

201. Plato. Prerequisite: consent of instructor. A study of the later dialogues.

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.

203. Seminar: History of Ancient Philosophy. (Formerly numbered 251A.) Prerequisite: consent of instructor. Selected problems and philosophers. May be repeated for credit with consent of instructor.

206. Topics in Medieval Philosophy. Lecture/discussion, four hours. Prerequisite: consent of instructor. The study of the philosophy and theology of one or several medieval philosophers such as Augustine, Anselm, Abelard, Aquinas, Scotus, Ockham. The study of a single area such as logic or theory of knowledge in several medieval philosophers. Consult the department for topics to be treated in a given quarter. May be repeated for credit with consent of instructor.

207. Seminar: History of Medieval and Renaissance Philosophy. (Formerly numbered 251B.) Prerequisite: consent of instructor. Selected problems and philosophers. May be repeated for credit with consent of instructor.

208. Hobbes. (Formerly numbered 203.) Prerequisite: consent of instructor. Hobbes' political philosophy, especially the Leviathan, with attention to its relevance to contemporary political philosophy.

209. Descartes. Prerequisite: consent of instructor. A study of the works of Descartes with emphasis on the Meditations. Such issues as the problem of scepticism, the foundations of the existence of God, the relation between mind and body will be 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 C111, in which case there will be a two-hour biweekly discussion meeting for graduates only, and additional readings and a longer term paper will be required of graduates.

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 for graduates only, and additional readings and a longer term paper will be required of graduates.

212. Locke and Berkeley. Prerequisite: consent of instructor. Selected topics in the philosophy of Locke and Berkeley. May be offered concurrently with course C112. May be repeated for credit with consent of instructor.

214. Hume. Prerequisite: consent of instructor. Selected topics in the philosophy of Hume. May be concurrently scheduled with course C114. May be repeated for credit with consent of instructor.

215. Kant. (Formerly numbered 207.) Prerequisite: consent of instructor. An intensive study of selected writings of Immanuel Kant.

216. Nineteenth Century Philosophy. (Formerly numbered 211.) Prerequisite: consent of instructor. Topics in nineteenth century philosophy. May be repeated for credit with consent of instructor.

219. Seminar: History of Modern Philosophy. (Formerly numbered 251C.) Prerequisite: consent of instructor. Selected problems and philosophers. May be repeated for credit with consent of instructor.

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-Gödel Theory. May be repeated for credit with consent of instructor.

221B. Non-Neumannian Set Theory. Prerequisite: course 221A or consent of instructor. Standard (so-called ZF) set theory relies on a principle of limitations of size as a means of avoiding antinomy. As this principle was first formulated explicitly as an axiom of set theory by von Neumann, set theories in which it fails may appropriately be spoken of as non-Neumannian. In this course, possibilities in regard to non-Neumannian set theories will be explored; proposed axiomatizations and relative consistency proofs based on the assumed consistency of ZF set theory or of ZF set theory plus a stronger principle of infinity.

222A-222B. Gödel Theory. Prerequisite: several courses in logic, preferably including course 135. First in a series of four courses leading up to Gödel's incompleteness theorems and Tarski's definition of truth.

222B. Prerequisite: course 222A. Second-order arithmetic. Second in series of three courses leading up to Gödel's incompleteness theorem and Tarski's definition of truth.

222C. Prerequisite: courses 222A and 222B. Gödel numbering and Gödel theory. Final course in the Gödel Theory series.

224, 225. Philosophy of Physics. Prerequisite: consent of instructor. Selected philosophical topics related to physical theory, depending on interests and background of the participants. Might include: space and time, the nature of mechanics; foundations of statistical mechanics. May be repeated for credit with consent of instructor.

228. Probability and Inductive Logic. Prerequisite: course 154 or Mathematics 112A-112B or consent of instructor.

229. Topics in Mathematical Logic. Prerequisite: consent of instructor. Content will vary from quarter to quarter. Consult the department for topics to be treated in a given quarter. May be repeated for credit with consent of instructor.

230. Seminar: Logic. (Formerly numbered 261.) Prerequisite: consent of instructor. May be repeated for credit with consent of instructor.

231. Seminar: Intensional Logic. (Formerly numbered 260.) Prerequisite: consent of instructor. Topics may include the logic of sense and denotation, modal logic, the logic of demonstratives, epistemic logic, the intensional logic of Principia Mathematica, possible worlds semantics. May be repeated for credit with consent of instructor.

For concurrently scheduled courses ("C" prefix) syllabus suitable activities and standards for performance and evaluation will be applied for graduates and undergraduates.

*For concurrently scheduled courses ("C" prefix) syllabus suitable activities and standards for performance and evaluation will be applied for graduates and undergraduates.
224. Philosophy of Science. Prerequisite: consent of instructor. Selected topics in the philosophy of science. May be repeated for credit with consent of instructor. Mr. Healey

225. Seminar: Philosophy of Physics. (Formerly numbered 263.) Prerequisite: consent of instructor. May be repeated for credit with consent of instructor. Mr. Healey

Group III. Ethics and Value Theory

241. Topics in Political Philosophy. (Formerly numbered 236.) Prerequisite: courses 150, 156, or 157; 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 with consent of instructor.

242. Problems in Moral Philosophy. (Formerly numbered 237.) Prerequisite: consent of instructor. Selected topics. Content will vary from quarter to quarter. May be repeated for credit with consent of instructor. Mr. Hill, Mr. Quinn

244. Seminar: History of Ethics. (Formerly numbered 270.) Prerequisite: consent of instructor. Selected topics. May be repeated for credit with consent of instructor. Mr. Hampton

246. Seminar: Ethical Theory. (Formerly numbered 271.) Prerequisite: consent of instructor. Selected topics. Content will vary from quarter to quarter. May be repeated for credit with consent of instructor. Mr. Hampton

247. Seminar: Political Theory. (Formerly numbered 272.) Prerequisite: consent of instructor. May be repeated for credit with consent of instructor. Mr. Hampton

248. Problems in Moral Philosophy. (Formerly numbered 273.) Prerequisite: consent of instructor. An intensive study of some leading current problems in moral philosophy. May be repeated for credit with consent of instructor. Mr. Foot

255. Seminar: Aesthetic Theory. (Formerly numbered 277.) Prerequisite: consent of instructor. Selected topics. May be repeated for credit with consent of instructor. Mr. Quinn

259. Topics in Legal Philosophy. (Same as Law 621.) Prerequisite: consent of instructor. An examination of topics such as the concept of law, the nature of justice, problems of punishments, legal reasoning, and the obligation to obey the law. For the specific topic to be examined in any particular offering of the course, consult the instructor. May be repeated for credit with consent of instructor. Mr. Morris

257. Seminar: Philosophy of Law. (Same as Law 654.) Prerequisite: consent of instructor. Selected topics in law and philosophy of law. May be repeated for credit with 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 with consent of instructor. Mr. Albritton

279. Seminar: Aesthetics. (Formerly numbered 241.) Prerequisite: two upper division philosophy courses or consent of instructor. An examination of theories, concepts and problems concerning human actions. Topics might include: analysis of intentional actions; determinism and freedom; the nature of explanations of intentional actions. May be repeated for credit with consent of instructor. Mr. Albritton, Mr. Donnellan

280. 20th Century Continental Philosophy. Prerequisite: consent of instructor. Selected topics in 20th century continental European philosophy. May be repeated for credit with consent of instructor. Mr. Albritton, Mr. Donnellan

281. Seminar: Philosophy of Mind. Prerequisite: consent of instructor. May be repeated for credit with consent of instructor. Mr. Burge

282. Seminar: Metaphysics. Prerequisite: consent of instructor. May be repeated for credit with consent of instructor. Mr. Burge

283. Seminar: Theory of Knowledge. Prerequisite: consent of instructor. May be repeated for credit with consent of instructor. Mr. Donnellan

284. Seminar: Philosophy of Perception. Prerequisite: consent of instructor. May be repeated for credit with consent of instructor. Mr. Albritton

285. Philosophy of Psychoanalysis. Prerequisite: consent of instructor. An examination of topics such as the nature and validity of psychoanalytic explanations and interpretations, psychoanalytic theory and language, metapsychological concepts such as the unconscious, the ego, id, super ego, defense mechanisms, and the psychoanalytic conception of human nature. Mr. Morris

286. Philosophy of Psychology. Relevance of computational simulation to accounts of thinking and meaning; relations between semantical theory and learning theory; psychological aspects of theory of syntax; behaviorism, functionalism and alternatives; and physiology and the brain. Mr. Burge

287. Seminar: Philosophy of Language. Prerequisite: consent of instructor. May be repeated for credit with consent of instructor.

288. Philosophy of Psychoanalysis. Prerequisite: consent of instructor. May be repeated for credit with consent of instructor.

Mr. Burge, Mr. Donnellan, Mr. Furth

289. Seminar: Wittgenstein. Prerequisite: consent of instructor. Mr. Albritton

290. Seminar: Philosophy of Religion. Prerequisite: consent of instructor. May be repeated for credit with consent of instructor.

Mr. Adams, Mrs. Adams, Mr. Albritton

Professional Course

495. Teaching of College Philosophy. (1½ to 2 courses) 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. Graded only on a S/U basis.

Individual Study and Research

The courses in the 500 series do not apply toward the course requirement for the master's degree.

596A-596B. Directed Individual Studies. (1½ to 2 courses) Any properly qualified graduate student who wishes to pursue a problem through reading or advanced study may do so if his proposed project is acceptable to a member of the staff. May be repeated for credit. Course Study offered only on a graded basis; 596B only on a S/U basis.

597. Directed Studies for Graduate Examinations. (1½ to 2 courses) Preparation for either the Master's Comprehensive Examination or the Ph.D. Oral Qualifying Examination. To be graded S/U.

598. Research for Graduate Dissertation. (1½ to 2 courses) Prerequisite: advancement to candidacy for the doctoral degree. May be repeated for credit. Offered on a S/U basis only.

Physics

(Office, 3174 Knudsen Hall)

Ernest S. Abert, Ph.D., Professor of Physics (Chair of the Department).

Robert M. Aultman, Ph.D., Professor of Physics.

Nina Byers, Ph.D., Professor of Physics.

Marvin Chester, Ph.D., Professor of Physics.

W. Gilbert Clark, Ph.D., Professor of Physics.

John M. Corbett, Ph.D., Professor of Physics.

John Dawson, Ph.D., Professor of Physics.

Robert J. Finkelstein, Ph.D., Professor of Physics.

A. Theodore Forrester, Ph.D., Professor of Physics and Engineering.

Burton Fried, Ph.D., Professor of Physics.

Christian Fronsdal, Ph.D., Professor of Physics.

Roy P. Haddock, Ph.D., Professor of Physics.

Theodore Holstein, Ph.D., Professor of Physics.

George J. Igo, Ph.D., Professor of Physics.

A. Leon Knoppoff, Ph.D., Professor of Physics and Associate Director of the Institute of Geophysics and Planetary Physics.

Steven A. Mozakowski, Ph.D., Professor of Physics.

Bernard M. K. Nefkens, Ph.D., Professor of Physics.

Richard N. Norton, Ph.D., Professor of Physics.

Raymond L. Orbach, Ph.D., Professor of Physics.

Philip A. Pincus, Ph.D., Professor of Physics.

J. Regnald Richardson, Ph.D., Professor of Physics.

Isadore Rudnick, Ph.D., Professor of Physics.

J. J. Sakurai, Ph.D., Professor of Physics.

Robert A. Salten, Ph.D., Professor of Physics.

David S. Saxon, Ph.D., Professor of Physics.

Peter Schlein, Ph.D., Professor of Physics.

Julian Schwinger, Ph.D., Professor of Physics.

William J. Slater, Ph.D., Professor of Physics.

Donald H. Stork, Ph.D., Professor of Physics.

Harold K. Ticho, Ph.D., Professor of Physics.

Alfred Y. Wong, Ph.D., Professor of Physics.

Chun I. Yung, Ph.D., Professor of Physics.

Eugene Wong, Ph.D., Professor of Physics.

Byron T. Wright, Ph.D., Professor of Physics.

Alfredo Bahos, Jr., Dr.Eng., Ph.D., Emeritus Professor of Physics.

Hans E. Bommel, Ph.D., Emeritus Professor of Physics.

Joseph Kaplan, Ph.D., Sc.D., L.H.D., Emeritus Professor of Physics.

Kenneth R. MacKenzie, Ph.D., Emeritus Professor of Physics.

Norman A. Watson, Ph.D., Emeritus Professor of Physics.

Charles D. Buchanan, Ph.D., Associate Professor of Physics.

Paul M. Chalkin, Ph.D., Associate Professor of Physics.

Ferdinand V. Coroniti, Ph.D., Associate Professor of Physics.

Seth J. Putterman, Ph.D., Associate Professor of Physics.

Reiner Stenzel, Ph.D., Associate Professor of Physics.

Charles A. Whitten, Jr. Ph.D., Associate Professor of Physics.

Gary A. Williams, Ph.D., Assistant Professor of Physics.

S. Merton Burkhard, M.S., Lecturer in Physics.

J. Kinderman, Ph.D., Lecturer in Physics.

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 the preparation of students in the following fields of Physics: Acoustics/Low Temperature, Elementary Particles, Intermediate Energy Nuclear, Plasma Astrophysics, Solid State & Condensed Matter, Spectroscopy.

Admission Requirements. The applicant must have an excellent undergraduate record in addition to meeting the University minimum requirements. All applicants are required to take the Advanced Test of the Graduate Record Examination in Physics and to submit three letters of recommendation. Foreign applicants who are applying for financial support (fellowships, teaching assistantships & 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: Graduate Office, Department of Physics, Knudsen Hall 3-145G, UCLA, Los Angeles, California 90024.
The Master of Science Degree

Major Fields or Subdisciplines. It is not required to designate an area of specialization for a terminal master's or M.A.T. 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 the student must pass the five fundamental (core) courses: 211A, 211B, 210A, 210B and 215A. To complete the minimum six graduate courses the student is required to take one of the following courses: 221C, 220, 231A, and pass one of the three with "B" or better. 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 chosen from Physics 596 or seminar courses. Physics 597 and Physics 598 are not acceptable courses for the M.S. degree.

Comprehensive Examination Plan. A passing grade on a Written Comprehensive Examination is required. It is required that it be taken during the first year by UCLA graduates in physics and not later than the fourth quarter of residence by other students. This examination is given twice a year in the Fall and Spring Quarters.

Although this Department operates under the Comprehensive Examination Plan rather than the Thesis Plan, arrangements generally can be made for a student to write a Master's thesis, provided he/she has a particularly interesting research problem, and provided some professor is willing to undertake the guidance of his/her work. In this case, the student 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.

Time to Degree. For a full-time student with no deficiencies upon admission to graduate status, taking a course load which is standard for the program: approximately five quarters.

500 Series Course Limitations. (Apply toward the Degree)

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<tr>
<th>Course Unit</th>
<th>Number of Times May Be Repeated</th>
<th>Grading</th>
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<tr>
<td>596 2-8</td>
<td>S/U No limit</td>
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<tr>
<td>597 2-8</td>
<td>S/U Normally only one repeat</td>
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<td>598 2-8</td>
<td>S/U or letter No limit established</td>
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Only 8 units of 500 series quarter units may apply toward the total course requirements for the M.S. degree.

The Master of Arts in Teaching (M.A.T.) Program

Advising. The M.A.T. adviser oversees all stages of progress toward the M.A.T.

All candidates for the M.A.T. degree are required to see the adviser at the beginning of each quarter through the completion of the degree. For further information about the M.A.T. program, direct inquiries to: Director — Merton Burkhard, Master of Arts in Teaching Program, Knudsen Hall 6-130D, UCLA, Los Angeles 90024.

Major Fields or Subdisciplines. It is not required to designate an area of specialization for a M.A.T. degree.

Course Requirements. This degree leads to qualification for teaching credentials at the secondary school or junior college level. Total number of courses — 12%; graduate courses required — five; and professional level courses required (300 series) — five.

A) Required graduate/upper division/professional level courses in physics for the M.A.T. degree:

1) Five graduate physics courses, four of which are chosen from: Physics 210A, 210B, 215A, 221A, 221B
2) Physics 370

B) Also required as part of the M.A.T. in Physics degrees are the courses necessary for completion of the State of California Single Subject Instructional Credential, K-12:

1) Education 100, 122, 312, 315
2) Education 330A, 330B
3) Public Health 187 (½ course)

Teaching Experience. Teaching experience is required insofar as the required Education courses are concerned (supervised teaching at the secondary or junior college level).

Comprehensive Examination Plan. A passing grade on a written Comprehensive Examination is required. M.A.T. candidates who fail to qualify at the master's level of achievement may repeat the examination a second time. Permission to repeat the written Comprehensive Examination a third time may be granted by the Committee of Graduate Advisers only under exceptional circumstances.

Time to Degree. The average period of time to degree is two years (six quarters) from graduate admission to conferral of degree.

500 Series Course Limitations. Not applicable for M.A.T. degree.

The Ph.D. Degree

Admission to the Doctoral Program. This is synonymous with graduate admission.


Course Requirements. Before the Chair of the Department recommends the formation of a doctoral committee, a student in the Ph.D. program must satisfy the following core course requirements by taking: Physics 210A, 210B, 221A, 221B, 215A. These examinations are graded on both a letter and an S/U basis. All students seeking candidacy for the Ph.D. degree must pass with a mark of "S" the final examination in four of the five courses. A student who fails to obtain a mark of "S" on a given examination may petition to the Committee of Graduate Advisers to repeat the examination in question. These five examinations should be completed by all students in the program by the fifth quarter in residence. In addition to these five required courses, a Ph.D. candidate must fulfill a breadth requirement by taking one of the following courses: Physics 221C, 220, 231. The student is required to take only one of these courses and pass it with a "B". Physics 313B (Complex Variables) is the mathematics prerequisite to graduate classes.

If a student has not taken this course or its equivalent in undergraduate status, he/she must plan to do so at the beginning of his/her graduate career.

Written and Oral Qualifying Examinations

All departmental graduate students (master's and Ph.D.) take the same examination, which is graded as follows:

1) Pass at the Ph.D. level of achievement.
2) Pass at the master's level of achievement.
3) Fail.

All students in the Ph.D. program must pass this examination at the Ph.D. level of achievement. If a student fails to do so, he/she may take the examination a second time. Permission to take it a third time may be granted by the Committee of Graduate Advisers, only under exceptional circumstances.

Comprehensive Oral Examination. ("Departmental Field Oral"): The student may arrange for the examination only after completing the core course requirements as well as passing the Comprehensive Written Examination at the Ph.D. level. The examining committee consists of four faculty members in Physics, one designated as Chair, selected by the student. The departmental oral will be a searching and comprehensive exam which may encompass material covered in all graduate level courses but with special emphasis on the field of specialization chosen by the student.

The examination, if failed, may be repeated by the student upon the recommendation of his/her 4-person committee to the Graduate Affairs Officer. All students are expected to complete this examination by the eighth quarter in residence.

After the student has notified the Department that he/she has passed all the preceding examinations, a doctoral committee will be appointed by the Dean of the Graduate Division, acting for the Graduate Council, upon nomination by the Department Chair. This committee
must consist of not fewer than five members, two of whom must be from departments other than Physics. The student, after consultation with his/her research adviser submits a list of proposed committee members to the Chair of the Department. If approved, these nominations are officially submitted to the Graduate Division by the Graduate Student Office.

Oral Qualifying Examination. The committee for the Oral Qualifying conducts an examination which may include a) material in the student's field of specialization, b) related material that members of the committee from other departments may wish to ask, and c) discussion of the proposed dissertation problem. The committee will indicate its decision on the "Report on the Qualifying Examination" form. At the end of a successful examination, the Chair and members of the committee in consultation with the student shall determine which of its members will guide the dissertation 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.

Final Oral Examination. (If required.) This examination is administered by the doctoral committee. It ordinarily will be a discussion of the student's original work, including his/her dissertation, and other related matters to be determined by the committee. It may be, if the committee so desires, a survey or comprehensive examination.

Advancement to Candidacy. When a satisfactory report on the completion of the Written and Oral Qualifying Examinations has been submitted, the student will be mailed an Application for Advancement to Candidacy. The filing of this application and payment of the fee constitutes formal advancement to candidacy for the Ph.D.

Final Oral Examination Following Completion of the Dissertation. The Final Oral Examination is optional with doctoral committee. Time to Degree. From graduation admission to Ph.D. conferral is on the average 18 quarters (six years).

Normal progress toward the Ph.D degree has been established as follows:
A. Written Comprehensive Examination should be taken by the fourth quarter in residence (or during the first year by students whose undergraduate major was Physics at UCLA).
B. Final written examinations in the five fundamental courses and fulfillment of the breadth requirement should be completed no later than the end of the fifth quarter.
C. A specialized course of study should begin during the second year.
D. The Comprehensive Oral Examination ("field oral") should be completed no later than the eighth quarter in residence.
E. The Oral Qualifying Examination (advancement to candidacy) should be completed no later than the end of the 11th quarter.

F. The dissertation and Final Oral Examination (if required) should be finished during the fifth and sixth years.

Disqualification and Appeal of Disqualification. All graduate student record cards are reviewed at the end of each quarter. At this time examination of each student's progress in graduate study is carefully reviewed. Specific conditions which may lead to termination of graduate study are the following: (1) Failure to maintain the required grade point average of 3.0 in Physics and in all courses taken in graduate status. (2) Failure to receive the required "satisfactory" grades in the core course classes. (3) Failure to make satisfactory progress on thesis research. (This may include locating a research sponsor or making normal progress toward thesis completion once a sponsor has been located.) (4) Failure to pass the Written Comprehensive Examination by a second attempt. (A third attempt may be granted under special circumstances.) (5) Failure to pass the field oral examination. In practice, every attempt is made to help those students who may fail in any of the above categories. Before terminating a student, the Department will meet with the student to discuss the problems at hand. In many instances, an extension of time is given to the student to rectify the problem. These cases are interpreted on an individual basis and no fixed formula applies. However, if after the designated extension of time the student has not shown the Department that satisfactory progress is being made, the student will be terminated.

Graduate Courses


213B. Advanced Atomic Structure. The n-i symboils, continuous groups, fractional parentage coefficients, electron systems.


215A. Statistical Physics. Thermodynamics and statistical mechanics with applications.


215C. Quantum Statistical Mechanics and the Many Body Problem. Classical Methods for interacting systems and theoretical techniques in statistical mechanics; Green's-function approach; the Coulomb gas; the imperfect Bose gas; electron-phonon interaction; superconductivity; phase transitions; theory of Fermi liquid.


221A. Quantum Mechanics with Applications. Prerequisite: course 220 or consent of instructor. Quantum mechanics with applications. Rotations and other symmetry operations, perturbation theory, scattering theory.

221B. Quantum Mechanics with Applications. Prerequisite: course 221A. Formal theory of collision processes. Introduction to relativistic quantum mechanics.

221C. Quantum Mechanics. Continuation of nonrelativistic quantum mechanics.


223A. Advanced Classical Mechanics. (Formerly numbered 220B.) Prerequisite: course 220. Topics such as nonlinear mechanics, ergodic theory, mechanics of continuous media.

224. Introduction to the Strong Interaction. Evidence concerning the strong interaction, particularly as exemplified in nuclear-nucleon and pion-nucleon systems. Isospin, the scattering matrix, the density matrix and polarization, the properties of pions, the one pion exchange potential, phase shift analysis.


225B. Advanced Nuclear Physics. Nuclear beta decay, neutrino experiments, parity violation, conserved vector current theory, interaction between nucleons and the electromagnetic field.


231A. Methods of Mathematical Physics. Students may not receive credit for both Physics 231A and Mathematics 265A. Linear operators, review of functions of a complex variable, integral transforms, partial differential equations.


231C. Methods of Mathematical Physics. Students may not receive credit for both Physics 231C and Mathematics 266C. Perturbation theory. Singular integrals: Numerical methods.

232A-232B. Relativity. The special and general theories with applications to elementary particles and astrophysics.

232C. Special Topics in General Relativity.

235. Group Theory and Quantum Mechanics. Prerequisite: course 221A. Group representation theory and applications to the quantum mechanics of atoms, molecules, and solids.


241C. Solid State Physics. Prerequisite: course 241B. Semiconductors, magnetism, phase transitions, superconductivity.


261. Seminar in Special Problems in Theoretical Physics.


265. Seminar in Propagation of Waves in Fluids.

266. Seminar in Spectroscopy.

268A. Seminar in Nuclear Physics.

269B. Seminar in Elementary Particle Physics.

284A. Advanced Laboratory in Acoustics and Cryogenics. Selected advanced experiments in acoustics and cryogenics designed to train the student in the techniques and instrumentation used in acoustic research and low temperature physics.

290. Research Tutorial in Plasma Physics. (½ or 1 course) Seminars and discussion by staff and students, directed toward problems of current research interest in the plasma field. Both experimental and theoretical. Each graduate student doing research in plasma physics will be required to take three quarters of Physics 290, ordinarily during his second or third year of study. May be repeated for credit.

291. Research Tutorial in Elementary Particle Theory. (½ or 1 course) Prerequisites: courses 226A, 230A, and 230B. Seminars and discussion by staff, postdoctoral fellows, and graduate students enrolled in this course. Each graduate student doing research in elementary particle theory is required to take this course, ordinarily in his second or third year of study. May be repeated for credit.

292. Research Tutorial in Spectroscopy, Low Temperature, and Solid State Physics. (½ or 1 course) Seminars and discussion by staff and students on problems of current research interest in spectroscopy, low temperature, and solid state physics. Each graduate student doing research in these fields is required to take this course, ordinarily during his second or third year. May be repeated for credit.

295. Research Tutorial in Solid Earth Physics. (½ or 1 course) Seminars and discussions in solid earth physics. Each physics graduate student doing research in solid earth physics is required to take this course, or Physics 292 if appropriate, ordinarily in his second or third year of study. May be repeated for credit.

298. Research Tutorial in Experimental Elementary Particle Physics. (½ or 1 course) Seminar and discussion by staff and students on current problems in experimental elementary particle physics. Each graduate student doing research in this field is required to take this course, ordinarily during his second or third year. May be repeated for credit. Enrollment limited to six students.

299. Research Tutorial in Nuclear Physics. (½ or 1 course) Seminars and discussions in nuclear physics by staff and students, in both experimental and theoretical. Each graduate student doing research in nuclear physics is required to take this course, ordinarily during his second or third year. May be repeated for credit.

Professional Course in Method

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. This course is part of the Master of Arts, Teaching (M.A.T.) program, but is open to other interested students also.

Individual Study and Research

495. Teaching of College Physics. (½ course) Required of all new teaching assistants. Lecture with discussion 2 or more one-hour meetings during the quarter plus intensive training week at the beginning of the Fall quarter. If necessary this may be expanded to one hour per week or longer meetings. A special course for teaching assistants designed to deal with the ideas and techniques of teaching college physics. The ideas and techniques learned will be applied and evaluated in the sections of each teaching assistant. May be repeated for credit. Graded on S/U basis.

596. Directed Individual Studies. (½ to 2 courses) 597. Preparation for Master's Comprehensive Examinations and Doctoral Qualifying Examinations.

599. Master's Thesis Research and Writing. (2 to 3 courses)

Physiology

(Office, 53-247 Center for the Health Sciences)

Francisco J. Bezanailla, Ph.D., Professor of Neurosciences in Physiology. Allan J. Brady, Ph.D., Professor of Physiology and Director of Graduate Studies. Jennifer S. Buchwald, Ph.D., Professor of Physiology. Michael H. Chase, Ph.D., Professor of Physiology in Residence. Sergio Ciani, Ph.D., Professor of Physiology. James M. Dang, Ph.D., Professor of Physiology. George Eisenman, M.D., Professor of Physiology. Alan D. Grinnell, Ph.D., Director of the Lewis Neuromuscular Research Center and Professor of Physiology. Susumu Hashiba, M.D., Ph.D., Professor of Physiology and Dr. Eleanor I. Leslie Professor of Neuroscience.

Earl Hornshe, Ph.D., Professor of Physiology. Glenn H. Jorgensen, M.D., Professor of Cardiology in Physiology and Medicine (Vice-Chair of the Department). Wilfried F.H.M. Mommaerts, Ph.D., Professor of Physiology and Medicine and Director of the American Heart Association, G.L.A.A. Cardiovascular Research Laboratory (Chair of the Department). Gordon Ross, M.D., Professor of Physiology and Medicine. Ralph R. Sonnenchein, M.D., Ph.D., Professor of Physiology.

John McD. Tormey, M.D., Professor of Physiology.

Bernice M. Wenzel, Ph.D., Professor of Physiology and Assistant Dean of Educational Research.

Brian Whipp, Ph.D., Professor of Physiology and Medicine.

Ernest M. Wright, D.Sc., Professor of Physiology.

SAIty Krasne, Ph.D., Associate Professor of Physiology.

Michael S. Letinsky, Ph.D., Associate Professor of Physiology.

Paul Quinton, Ph.D., Associate Professor, Biomedical Sciences (University of California, Riverside) and UCLA Physiology.

Oscar Scremin, D.M.D., Adjunct Associate Professor of Physiology.

Julio Vergara, Ph.D., Associate Professor of Physiology.

Joy Frank, Ph.D., Assistant Professor of Physiology.

Richard Horn, Ph.D., Assistant Professor of Physiology.

Kenneth D. Philipson, Ph.D., Adjunct Assistant Professor of Physiology.

Douglas Junge, Ph.D., Professor of Oral Biology and Physiology.

Eduardo H. Rubinstein, M.D., Ph.D., Professor of Anesthesiology and Physiology.

Maria W. Seraydarian, Ph.D., Professor of Nursing.

Mary A.B. Brender, Ph.D., D.S., Emeritus Professor of Anatomy and Physiology in Residence.

John Field, Ph.D., Emeritus Professor of Physiology and Anatomy.

Donald B. Lindsay, Ph.D., Emeritus Professor of Physiology and Psychology.


The Ph.D. Degree

Admission Requirements. Candidates for admission to graduate status in the Department of Physiology are expected to pursue the Ph.D. degree. They 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, all candidates for admission, students must have completed courses in: mathematics through calculus (equivalent to UCLA Math 31A, B, C); 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).

Letinsky.

In certain cases, if the discretion of the Department, students lacking some of the preparation but with a strong background in areas pertinent to physiology may be admitted to graduate status, provided that essential deficiencies are removed by appropriate courses within a specified time after admission. Students may also be admitted upon the recommendation and sponsorship of staff members subject to admission committee approval.

The Graduate Record Examination (GRE) Ap-
Applications of prospective students are reviewed by the Graduate Admissions Committee. Completion of a master's program is not required.

Students should request an application packet and/or departmental brochure from: Graduate Student Office, Department of Physiology, UCLA School of Medicine, Los Angeles, CA 90024.

Advising. The Director of Graduate Studies is: Dr. Allan J. Brady, UCLA, Department of Physiology, A3-381 BRI, Los Angeles, CA 90024.

The advisor for first-year graduate students is: Dr. Sally Krause, UCLA, Department of Physiology, 53-247 CHS, Los Angeles, CA 90024.

In the first year, academic progress is evaluated by the Graduate Committee during the year, at the completion of the required coursework, and following the departmental Qualifying Examination. The Graduate Committee is responsible for the overall assessment of progress of the first-year students. At the end of the first year, students are given a written assessment of their progress and areas of weakness.

Upon completion of required courses, it is the student's responsibility to select a sponsor in the area of study he/she wishes to pursue.

Major Fields or Subdisciplines. Cellular Electrophysiology; Membrane Transport; Excitation, Contraction, Energetics and Protein Chemistry of Muscle; Fundamental Neurophysiology; Cardiovascular, Respiratory and Gastrointestinal Physiology.

Course Requirements. Physiology 205 — Physical Chemistry of Membrane and Cellular Systems; Physiology 206 — Biophysics of Membrane Transport; Physiology 213 — Methods in Cell Physiology; Physiology 214 — Cell Physiology: Transport & Electrochemical Properties; Physiology 215 — Cellular Interactions; Physiology 230A, B, C — Selected Topics in Organ Physiology.

The Graduate Training Program consists of two levels of basic subject matter available to our students and students outside the Department. One level is comprehensive but qualitative rather than extensively analytical. The other level involves in-depth study which is rigorous and quantitative. Our first-year students will have the option of taking courses at either level but will be required to take at least two areas of in-depth study.

Course requirements are based on the student's background. Prior to the beginning of formal coursework, students meet with the Graduate Committee for counseling regarding the first-year curriculum.

Written and Oral 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. Questions are solicited from the teaching staff and selected to give a comprehensive coverage of coursework offered to first-year students. Strong emphasis is placed on synthesis in the solicitation and grading of questions. The examination requires two days. 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 the students 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, each student selects a sponsor who will act as chair of his/her doctoral committee and direct his/her thesis research project. By the completion of the second year of study, the student and his/her sponsor must have selected an additional four members for the committees, which would then total three from within the Department and two outside the Department. These five committee members conduct the Oral Examination. The purpose of the Oral Examination is to establish, to the satisfaction of the committee, that the student is capable of conducting a productive research project. At this point in his/her training, the student 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 (either his/her own or in collaboration with his/her sponsor). It is the obligation of the committee to evaluate the ability of the student to formulate a testable hypothesis, based on a clear understanding of the current literature in his/her field and to propose a critical method of approach and analysis to the resolution of that question. At the successful completion of the Oral Examination, the student advances to candidacy and his/her committee elects whether the student will defend his/her thesis in a Final Oral Examination.

Final Oral Examination Following Completion of the Dissertation. The Final Oral Examination is optional with the doctoral committee.

Time to Degree. From admission to Written Qualifying Examination — three quarters; From admission to Oral Examination — six quarters; From admission to the approval of the dissertation prospectus (advancement to candidacy) — six quarters; From advancement to candidacy to the Final Oral Examination — six quarters; From admission to the award of the degree — usually 12 to 15 quarters (four to five years); Normative time-to-degree — 12 quarters.

Disqualification. If, at the time of the Oral Examination, there are apparent weaknesses in the student's abilities, the doctoral committee should make recommendations for remedial study or training which would correct these deficiencies. If the student is judged to be insufficiently capable of performing productive research with a reasonable amount of further training, then in fairness to the student, the University, and the scientific community, it is the obligation of the committee to recommend termination of graduate study for the student. A student may also be recommended for disqualification if he/she exceeds the normative time-to-degree and fails to show sufficient progress toward the degree.

Appeals. Appeals on matters of disqualification can be made to the Department Graduate Committee.

Other Relevant Information. The Department also offers postdoctoral training in research and welcomes students interested in concurrent M.D./Ph.D. programs.

Upper Division Courses

100. Elements of Human Physiology. (1½ courses) Prerequisite: enrollment in School of Dentistry or consent of instructor. Required course for 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 will be presented, where possible, on the basis of information relevant to oral function.

101. Neurovascular and Cardiovascular Physiology. (1½ courses) 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 others with 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.

Mr. Sommerschein and the Staff

102. Renal, Respiratory and Gastrointestinal Physiology. (1½ courses) Prerequisites: same as for course 101. Primarily for first year medical students but open to other students with 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 and the Staff

103A-103B. Basic Neurology. Prerequisite: Medical school status or consent of instructor. Two-hour sessions and one three-hour session per week of the last three weeks of the first semester; two-hour sessions and two three-hour sessions per week in the spring quarter. Lectures, conferences, demonstrations and laboratory procedures necessary to an understanding of the function of the human nervous system. In-Progress grading. (Must be taken concurrently with Anatomy 103.)

Mr. Chase, and Staff

105N. Human Physiology. Prerequisite: enrollment in the School of Nursing or consent of instructor. Required course for third year nursing students. Lecture and discussion emphasizing a correlative approach to anatomy and physiology of the human body.

Ms. Seraydarian

196. Special Studies. (¼ to 2 courses) Prerequisite: consent of instructor. Special studies in physiology, including laboratory assignments or laboratory work or both, designed for appropriate training of each student who registers in this course.
Graduate Courses

200. Transport Across Biological Membranes. Prerequisite: consent of instructor. An in-depth study of transport of ions, non-electrolytes and water across plasma membranes of single cells and epithelia. Lectures will include such topics as membrane structure, the passive permeability of membranes to ions and non-electrolytes and the active transport of amino acids, active ion transport, and the mechanisms of water transport. Experimental work will involve the transport of ions across single cell membranes and epithelia using a diode-tracer and autoradiographic techniques. Mr. Wright

201. Permeability of Biological Membranes to Ions. (1½ course) Prerequisites: Chemistry 113B and 113C or the equivalent, or consent of instructor. Topics include: ion permeation mechanisms, ion distribution, and the physical basis of ion movement across cell membranes. Mr. Diamond

203. Oral Physiology. (Same as Oral Biology M205.) Lecture, one hour; discussion, one hour. The organ-level and cellular physiology of the following systems will be discussed, in a somewhat flexible framework: (1) Salivary glands, including the mechanisms of secretion, abnormalities such as Mikelcz-Sjogren syndrome, and effects on the dentition, (2) Dental pulp and other oral epithelia, (3) Mechanisms of taste, alterations of taste caused by drugs, diseases and aging, (4) 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, normal time-course of development of various sounds in children. Classes to be supplemented with audiovisual materials and many references from the literature. To be offered Fall quarter. M205

204. Physical Chemistry of Membrane and Cellular Systems. Prerequisite: consent of instructor. Survey of the principles of equilibrium and non-equilibrium thermodynamics, electrostatics and fluid mechanics, and their application to problems of electrochemistry, ionic process in solutions, electrode kinetics and transport in membranes. Mr. Ciani

207. Neurophysiology. Prerequisite: consent of instructor. Seminar and laboratory course designed to acquaint the student with behavioral techniques and mechanisms of ion and non-electolytes, active transport of sugars and amino acids, active ion transport, and the mechanisms of water transport. 211A. Survey of Transport Processes in Biological Membranes. Prerequisite: consent of instructor. An introduction to the transport of ions, non-electrolytes and water across plasma membranes of single cells and epithelia. The course presents basic concepts of membrane structure, passive and active transport of sugars and amino acids, active ion transport and the mechanisms of water transport. 211C/S. Laboratory lecture, four hours. Prerequisite: course 213 or 216 or consent of instructor. Structure and function of synaptic transmission, neurotransmitters, excitation/inhibition special sensory receptors. 216A. Integrative Neurophysiology. Lecture, five hours. Prerequisite: course 217B 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 system. 216B. Physiology of Muscle. Lecture, four hours. Prerequisite: course 216 or consent of instructor. Ultrastructure of muscle. Excitation, excitation-contraction coupling, calcium regulation of contraction, myofilament interactions, energetics and chemical kinetics of contraction in vertebrate muscle. 211A-221B-221C. Concepts of Excitation and Contraction in Muscle. (½ to 1½ course) Prerequisite: consent of instructor. This series of courses offers an in-depth study of muscle physiology with material derived from recent reviews and high-impact papers published in other journals. In general, the content of Physiology 221A,B,C will not be the same but will be adapted to the special interests of students enrolled as senior undergraduates. 222. Graduate Commentary: Renal, Respiratory and Gastrointestinal Physiology. (½ course) Prerequisite: course 101. For graduate students. An advanced supplementation of the topics being presented in course 102. 223. Graduate Commentary: Physiology of the Nervous System. (½ course) Prerequisites: same as for course 101; consent of instructor. For graduate students. An advanced supplementation of the topics being presented in basic neurology. Ms. Buchwald

224. Permeation and Gating in Ionic Channels. Prerequisites: Physiology 225, or its equivalent; permission of instructor. This course will be an advanced level seminar on the "state of the art" in research on permeation and gating in ionic channels, both biologic and artificial. Emphasis will be on research from advanced laboratories, and students will present one or more seminars on a subject of his choosing, under guidance of the instructor. Mr. Eisenman

225. Molecular Aspects of Ion Permeation through Peptide Channels. Prerequisites: consent of instructor. An introduction to the biophysics of ion transport) unless waived. Advanced course for students well-grounded in fundamentals of membrane permeation. Covers the most recent theoretical and experimental data on the molecular details of ion permeation in the bacterial and eukaryotic cell membranes of gramicidin as well as relevant observations in biological channels. Ten hours of reading are expected for every two hours of lecture. Mr. Eisenman

226. Bilayer Membranes. Prerequisite: consent of instructor. Advanced lectures and laboratory demonstrating physical and chemical principles that underlie the behavior of lipid bilayer membranes, both artificial and natural.

227. Theoretical Problems in Membrane Permeation. (½ course) Prerequisite: consent of instructor. Tutorial directed to specific theoretical problems of interest to the student. Mr. Ciani

228. Epithelia: Structure and Function. (½ course) Prerequisite: consent of instructor. Lectures and seminars on the physiology of epithelia cells with particular emphasis on membrane transport. Graded S/U only. Mr. Wright

229. Research Topics in Neurobiology. (½ course) Prerequisite: consent of instructor. Discussion of current literature concerning research problems in neurobiology. Graded S/U

230A-230B-230C. Selected Topics in Organ Physiology. (1 to 2 courses) Prerequisite: consent of instructor. Macroscopic, microscopic and ultramicroscopic anatomy and histology of organ and tissue. Advanced consideration of special topics in the physiology of the cardiovascular and gastrointestinal systems, as well as the respiratory, renal and central nervous systems. In-Progress Grading. Mr. Ros and Staff

231A-231B-231C. Cardiovascular and Respiratory Physiology. (¼ to 1½ courses) Prerequisite: consent of instructor. This series of courses offers an in-depth study of the cardiovascular and respiratory systems. Physiology 231A will emphasize respiratory mechanisms and control. Physiology 231B and 231C will include the function and control of the cardiovascular system and its relation to the mechanics of respiration and cellular gas exchange. Study material will consist of critical reviews and discussion of selected articles in journals.

245. Stochastic Analysis of Channel Gating. Prerequisite: consent of instructor. Review of probability theory; combinatorial analysis; introduction to theory of stochastic processes; renewal theory; discrete and continuous-time Markov processes; analysis of kinetic models of channel gating; applications for single channel and "noise" measurements. Grading basis: S/U or letter grade. Mr. Chiu

251A-251B-251C. Seminar in Physiology. (½ course each) Prerequisite: consent of instructor. Review and discussion of current physiological literature, research in progress, and special topics.

260. The Use of Laboratory Animals in Research. (Formerly numbered 301.) Prerequisite: consent of instructor. An introductory course for graduate students in the medical and biological sciences, covering principles and practical problems in the handling and use of common laboratory animal species. Mr. Washington

Individual Study and Research

501. Cooperative Program. (½ to 2 courses) Prerequisites: approval of UCLA Graduate Advisor and Graduate Dean. Approval of host campus instructor, Department Chairperson and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. To be graded S/U.

596. Directed Individual Study or Research. (½ to 3 courses) Prerequisite: consent of instructor.-
Political Science

(Office 4289 Bunche Hall)

Richard E. Ashcraft, Ph.D., Professor of Political Science
Hans H. Bemade, Ph.D., Professor of Political Science
Richard D. Baun, Ph.D., Professor of Political Science
Irving Bernatne, Ph.D., Professor of Political Science
John C. Bollens, Ph.D., Professor of Political Science
David T. Cattell, Ph.D., Professor of Political Science
James S. Coleman, Ph.D., Professor of Political Science
Mettei Dagan, Docteurtes Lettres, Professor of Political Science
Emile A. Engelbert, M.P.A., Ph.D., Professor of Political Science
Leonard Freedman, Ph.D., Professor of Political Science
Robert C. Fried, Ph.D., Professor of Political Science
Edward Gonzalez, Ph.D., Professor of Political Science
Michael D. Intriligator, Ph.D., Professor of Political Science and Economics
Malcolm H. Kerr, Ph.D., Professor of Political Science
Stevens Kolkowicz, Ph.D., Professor of Political Science
Andrzej Korbeiski, Ph.D., Professor of Political Science
Michael L. Lotchie, Ph.D., Professor of Political Science
Dorawin Marvick, Ph.D., Professor of Political Science
Charles R. Nixon, Ph.D., Professor of Political Science
David C. Rapport, Ph.D., Professor of Political Science
John C. Riet, Ph.D., Professor of Political Science
Ronald Rogowski, Ph.D., Professor of Political Science
David O. Sears, Ph.D., Professor of Political Science and Psychology
John R. Sisson, Ph.D., Professor of Political Science (Chair of the Department)
Richard L. Sklar, Ph.D., Professor of Political Science
David O. Wilkinson, Ph.D., Professor of Political Science
David A. Wilson, Ph.D., Professor of Political Science
E. Victor Wolfenstein, Ph.D., Professor of Political Science
Charles E. Young, Ph.D., Professor of Political Science
Ciro Zappo, Ph.D., Professor of Political Science
Winston W. Crouch, Ph.D., Emeritus Professor of Political Science
David G. Farrey, Ph.D., Emeritus Professor of Political Science
J.A.C. Grant, Ph.D., LL.D., Emeritus Professor of Political Science
Foster H. Sherwood, Ph.D., LL.D., Emeritus Professor of Political Science
H. Arthur Steiner, Ph.D., Emeritus Professor of Political Science
L. Blair Campbell, Ph.D., Associate Professor of Political Science
Douglas S. Hobbe, Ph.D., Associate Professor of Political Science
Paul Jabber, Ph.D., Associate Professor of Political Science
Karen J. Orren, Ph.D., Associate Professor of Political Science
John R. Petrock, Ph.D., Associate Professor of Political Science
Duane E. Smith, Ph.D., Associate Professor of Political Science
Leo M. Snowise, Ph.D., Associate Professor of Political Science
Steven L. Spiegel, Ph.D., Associate Professor of Political Science
Arthur A. Stein, Ph.D., Associate Professor of Political Science
Thad A. Brown, Ph.D., Assistant Professor of Political Science
Paul B. Hammond, Ph.D., Assistant Professor of Political Science
Stephen L. Skowronnek, Ph.D., Assistant Professor of Political Science
Robert C. Weiss, Ph.D., Assistant Professor Political Science

James G. Fisk, B.S., Adjunct Professor of Political Science
Pierre-Michel Fontaine, Ph.D., Acting Associate Professor of Political Science
Marvin Hoffenberg, M.A., Professor of Political Science in Residence

The Graduate Program

Admission Requirements. In addition to University minimum requirements, three letters of recommendation and the scores from the Aptitude Test of the Graduate Record Examination are required. Prospective students may write for departmental brochures to the Graduate Studies Office, Department of Political Science, UCLA, L.A., California 90024. Political Science does not have an application form in addition to the one used by Graduate Admissions.

The Department deadline for receipt of all application materials is December 31 prior to the Fall Quarter in which the student plans to register. Applicants will receive notification from the Department in the early Spring concerning their admission into the graduate program.

Financial Assistance. The fellowship-assistantship application is combined with the admissions application, and may be obtained from the UCLA Fellowship Office or from Graduate Admissions. In order to be eligible for a fellowship, students must make sure their file is complete and be admitted to the Department of Political Science. They, therefore, should make sure that all necessary materials have reached the Political Science Graduate Office by the December 31 deadline.

Although every effort is made to provide some financial assistance to all Political Science students, there are only a limited number of fellowships available to first-year graduate students.

Teaching assistantships are awarded only to students who have been graduate students in the Department for at least one year. They are not automatically renewable and must be reapplied for each year. The Department does not ordinarily offer teaching assistantships to students who have (1) held teaching assistantships for three years in the Department (2) held University-administered fellowships and/or teaching assistantships for four years.

Advising. The Political Science Graduate Advisor advises all departmental graduate students on any matters pertaining to the graduate program, and is responsible for approving their study lists. As soon as possible after arriving at UCLA, new students should contact the Graduate Advisor who will assist in planning their studies during the first year in residence.

Faculty submit written evaluations of students' coursework at the end of each academic quarter, and these evaluations are available to the students. Students are encouraged to request an oral evaluation of their academic work in the Department prior to taking the M.A. evaluation sequence, from the Graduate Advisor or the chair of their field examination committee.

Major Fields:
Six fields of study are offered to graduate students in the Political Science Department:
1. Political Theory
2. International Relations
3. Politics
4. Comparative Government
5. Public Law
6. Public Administration and Local Government

Graduate Studies Committee. The chairs of the Ph.D. written examination committees in the six fields, plus the Graduate Advisor (chair), constitute the Graduate Studies Committee, which acts for the Department in supervising the administration of the graduate program. Three graduate students, appointed by the Department Chair, also serve as members of this committee.

The Master of Arts Degree

Course Requirements. A student must take a minimum of five graduate courses (20 units) in Political Science at UCLA, distributed among three fields of study, and four other courses (normally in Political Science or in related subjects) to fulfill the M.A. course requirement. With the approval of the Graduate Studies Committee, two of these nine courses may be P.S. 596, but only one P.S. 596 may be applied toward the requirement of five graduate courses in Political Science. Neither the course P.S. 597 nor any lower division course may be used to satisfy any of the course requirements for the M.A. and Ph.D. degrees.

Students who have completed work in graduate standing at another institution may petition to have those courses counted as partial fulfillment of the M.A. course requirements. With the approval of the Graduate Studies Committee and the Dean of the Graduate Division, a maximum of four courses taken at another campus of the University of California may be
used to satisfy the nine courses needed for the M.A. degree, and two of these courses may be counted as part of the Department's 5-graduate course requirement. If the work was completed at an institution other than the University of California, only two courses can be applied towards the M.A. degree, and these may not be counted among the five graduate courses in Political Science. The University of California discourages duplication of advanced degrees, and persons entering the Department with an M.A. degree should therefore be aware that none of the courses taken for an M.A. degree awarded at another institution can be used to satisfy any degree requirements at UCLA.

Except for teaching assistants, all graduate students will normally take three courses per quarter prior to their completion of the M.A. and Ph.D. requirements. In some circumstances, and with the approval of the Graduate Adviser, the minimum 2-course load (6 units) may be taken. Students may offer 4 units of P.S. 597 in the quarter of their M.A. or Ph.D. examinations, as part of this 8-unit requirement, and they may also take 8 units of P.S. 597 only, once their course requirements have been met.

**Thesis Plan:** The Department normally requires Written and Oral Comprehensive Examinations for the M.A. degree. In exceptional cases, and with the approval of the Graduate Studies Committee, an M.A. thesis may substitute for the examination sequence.

Students are not encouraged to adopt the Thesis Plan, since it normally leads to a terminal M.A. degree. Those students wishing to do so, however, should select, in consultation with the Graduate Adviser, a faculty committee to supervise their thesis. This committee must consist of three faculty members, two from Political Science and one from another UCLA department, and must be approved by the Graduate Studies Committee. The thesis should be submitted to the thesis committee at the beginning of the student's fourth quarter in residence, and must receive the committee's approval prior to the end of that quarter. If the committee does not receive or does not approve the thesis, the student will be considered to have failed the requirement and will not be allowed to resubmit the thesis. Students adopting the thesis plan will not be allowed to continue in the Ph.D. program unless they successfully pass the M.A. Comprehensive Examination requirements described below.

**M.A. Comprehensive Examination Plan.** The M.A. Comprehensive Examinations consist of a written examination in one of the six fields of Political Science, and an oral examination covering the student's knowledge of Political Science in three fields (including the written examination field). The M.A. Comprehensive Examinations are administered in the Fall and Spring Quarters only, and must be taken by the end of the student's fourth quarter in residence. Individuals who enter the graduate program at UCLA with an M.A. degree in Political Science from another institution must take the M.A. examination by the end of their third quarter in residence. Students are allowed to take the M.A. Comprehensive Examinations one time only.

Prior to taking the M.A. examinations, students should have completed at least one graduate course in three of the six fields of Political Science. The M.A. written examination will be taken in the student's major field, and is graded by the Ph.D. examination committee, consisting of three faculty members in that field, appointed by the Department Chair. The M.A. examination, however, is distinct from the Ph.D. preliminary examination, and is evaluated at a different level.

The M.A. oral examination will be held as soon as possible following the M.A. written examination. The M.A. oral examination committee consists of three faculty members; the chair, who is also a member of the student's M.A. written examination committee, and two other faculty members from the two fields in Political Science in which the student has taken a graduate course. (Additionally, and for the purpose of meeting this M.A. oral examination requirement, any two courses from the P.S. 203 A-B-C series may be counted as one field.) Names of the faculty members on both the written and oral M.A. committees will be available to the students.

The M.A. oral examinations committee will evaluate the student's entire record, including performance on the M.A. written and oral M.A. examinations and evaluations of coursework taken, and recommend one of the following:

a) that the student receive the M.A. degree and be encouraged to proceed toward the Ph.D.

b) that the student receive the M.A. degree (when all departmental and University requirements are met) and that his/her status as a graduate student in the Department be terminated.

c) that the student not be awarded the M.A. degree and that his/her status as a graduate student in the Department be terminated at the end of the current quarter.

Graduate students holding teaching assistantships who receive terminal M.A. degrees as a result of the examination sequence will lose the teaching assistantship effective the end of the quarter in which they complete the M.A. degree requirements. In all cases, these requirements must be fulfilled no later than the quarter following notification of termination.

**Time to Degree.** The normal period from graduate admission to completion of required courses and award of the M.A. degree is four quarters.

**500 Series Courses.** The Political Science Department offers the following courses in the 500 series:

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Unit Value</th>
<th>Type of Grading</th>
<th>Number of Times May Be Repeated</th>
</tr>
</thead>
<tbody>
<tr>
<td>596</td>
<td>4</td>
<td>letter</td>
<td>no limit</td>
</tr>
<tr>
<td>597</td>
<td>4</td>
<td>S/U</td>
<td>no limit</td>
</tr>
<tr>
<td>598</td>
<td>4</td>
<td>S/U</td>
<td>no limit</td>
</tr>
<tr>
<td>599</td>
<td>4</td>
<td>S/U</td>
<td>no limit</td>
</tr>
</tbody>
</table>

One 596 course may be counted toward the 5-graduate course requirement, with approval of the Graduate Studies Committee, and two 596 courses may be counted toward the 9-course requirement for the M.A. degree, also with the committee's approval. The courses P.S. 597, 598 and 599 cannot be used for credit for any of the course requirements for either the M.A. or the Ph.D.

**Disqualification and Appeal of Disqualification.** A student who does not receive a recommendation to proceed to the Ph.D. program (b or c above) may appeal that decision by presenting a written request for an appeal to the chair of the M.A. oral examination committee prior to the end of the quarter in which the M.A. Comprehensive Examinations were taken. The M.A. oral committee will then review its decision, and if this appeal is not successful, the student may then appeal to the Graduate Studies Committee, which will make a final determination in the case.

**The Ph.D. Degree**

**Admission.** Successful completion of the M.A. Comprehensive Examinations in Political Science at UCLA is a prerequisite for admission to the Ph.D. program in Political Science at UCLA.

**Advising.** The Graduate Adviser advises all graduate students as to their general progress in meeting the requirements for the Ph.D. degree in Political Science. In addition, soon after a graduate student has passed the M.A. Comprehensive Examinations, a faculty adviser in the individual's major field will be selected by the student and approved by the Department Chair to assist the student in preparing for the Ph.D. Preliminary Examinations.

**Foreign Language or Research Methodology Requirement.** For the Ph.D., students must fulfill one of the following requirements:

1) Demonstration of proficiency in one foreign language. Ordinarily proficiency is demonstrated by passing the Educational Testing Service examination with a minimum score of 500. In other languages where no ETS examination is given, arrangements are made through the Department's Graduate Adviser and a faculty member in the appropriate language department to administer an examination which will test the student's proficiency at a level comparable to an ETS examination score of 500.

2) Demonstration of proficiency in a research methodology. Students are expected to complete three courses with a grade of "B" or better. Two of the courses are to be a sequence in
elementary statistics, plus P.S. 203C. Acceptable statistics classes include Math 50 A/B and Soc 210 A/B. More advanced classes in mathematics or statistics may be substituted for these statistics classes.

Students are expected to have completed this requirement prior to taking the Ph.D. Preliminary Examinations, and must complete it before they can take the University Oral Examination and be advanced to candidacy for the Ph.D.

**Course Requirements.** Prior to taking the Ph.D. Preliminary Examinations in three of the six fields of Political Science, a student must have completed the basic graduate courses in those fields. Each field in Political Science will specify the courses — a minimum of two — the student must take as basic preparation for the Ph.D. Preliminary Examination in that field. In addition to the minimum basic course requirements, a student must satisfy a 2-quarter research requirement in two fields of Political Science. Each field redefines its basic course or research requirements from time to time, and students should therefore consult with the Graduate Adviser regarding the specific course requirements established by the student’s three Ph.D. examination fields.

Also, a student must take a minimum of two graduate courses in a fourth or writeoff field. A student will be examined in a writeoff field during the University Oral Examination. (P.S. 203 A-B-C may be counted as a writeoff field in order to meet this requirement for the Ph.D.).

**Outside Fields.** One of the student’s four fields (three written examination fields and one writeoff field) may be outside the Department of Political Science. In consultation with the student’s major adviser, the instructor with whom he/she wishes to do the work outside the Department, and the Graduate Adviser, a student can submit a written proposal to have work done in a field outside the Department counted as partial fulfillment of the Department’s Ph.D. requirements. The proposal must state the substantive materials to be covered, the course program, and why the outside field is being proposed. The proposal must be signed by the student’s adviser and the outside instructor, approved by the Graduate Adviser, and submitted to the Department graduate office six months in advance of the time the student expects to take the Preliminary Examinations. A minimum of three courses, including two graduate courses, must be taken in the outside field. The outside field may consist of three courses concentrated in one discipline or distributed among several disciplines other than Political Science.

The outside field may be counted as one of the three Ph.D. written examination fields or as the writeoff field. In either case, the outside instructor shall be nominated to serve on the University oral committee.

**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 upon petition to the Graduate Studies Committee.

**Ph.D. Preliminary Examinations.** Within two years after passing the M.A. examinations, the student will take the Ph.D. Preliminary Examinations. These will consist of a written examination in three fields, or in the field in which the M.A. written examination has been taken, a research paper may be substituted for the Ph.D. written examination in that field. Students choosing to write a research paper must submit a precis of the research paper to the appropriate field committee at least one quarter prior to their taking the Ph.D. Preliminary Examinations. The Ph.D. examinations are given twice a year, in November and in May. Students must complete all three examinations (or two examinations and a research paper) during a single examination period. No student will be allowed to proceed to the University Oral Examination until he/she has successfully passed the examinations in three fields.

Each Ph.D. candidate must fill out a form at least six months prior to taking the Ph.D. examination sequence which outlines those fields in which the student will be examined, type of examination, and courses taken to fulfill field requirements. This form must be approved by the student’s chair and the Graduate Adviser, and will then be put in the student’s file for future reference. Copies of this form are available in the Department Graduate Office.

A student failing one or more of the written examinations does not have the automatic right to retake the examination sequence. In no case will a student who has failed all three examinations be permitted to retake the examinations. In other instances, whether the student will be required to retake examinations, and how many examinations the student will be required to retake, will be determined by the Graduate Studies Committee. In no case will a student be allowed to take an examination a third time.

A student may appeal the evaluation of a failure on any Ph.D. written examination by presenting a written request for an appeal to the chair of the Ph.D. examination committee prior to the end of the quarter in which the Ph.D. examinations were taken. The Ph.D. field examination committee will reconsider its decision and submit its written report to the Graduate Studies Committee. If the student’s appeal is not successful, he or she may appeal the case to the Graduate Studies Committee, which will make a final determination of the matter.

**Ph.D. Oral Examination.** Within two quarters of passing the Department’s Ph.D. Preliminary Written Examinations, students must take the University Oral Examination. In the University Oral Examination the student shall be examined in each of his/her four fields, including the writeoff field, by an appropriate representative from each field, nominated by the Department Chair. If the student successfully passes the Oral Examination (and has fulfilled the foreign language requirement), he/she will then be advanced to candidacy for the Ph.D. and will be eligible to receive the C.Phil. degree.

Approval of a written dissertation by the student’s doctoral committee constitutes the final requirement for the Ph.D. degree in Political Science.

**Final Oral Examination Following Completion of the Dissertation.** The Doctoral Committee for each candidate decides whether or not a Final Oral Examination should be required.

**Time to Degree.** Students are expected to complete the Ph.D. program in Political Science, including acceptance of the dissertation, within 5½ years (16 quarters) from the time of their admission to graduate status at UCLA.

**Candidate in Philosophy Degree.** Students are eligible to receive the C. Phil. degree on advancement to candidacy for the Ph.D.

**Disqualification.** A student may be terminated at the Ph.D. level if the Ph.D. examination committees, in combination with the Graduate Studies Committee of the Department, make the decision that he or she failed the examination sequence and is not allowed to continue for the Ph.D. in Political Science at UCLA.

**Appeals.** Students may appeal termination by presenting a written appeal to the Graduate Studies Committee of the Department.

**Graduate Courses**

**General 203A-203B-C203C. Introduction to Political Inquiry.**

203A. Problems of Scientific Inquiry and Normative Discourse. Mr. Nixon

203B. Major Conceptual Frameworks and Approaches to Political Science. Course 203A or its equivalent will be taken prior to 203B.

C203C. Quantitative Research Methods in Political Science. May be concurrently scheduled with Political Science C197C. An introduction to the analysis of political data. The relationships among theory, concepts, measurements, and inference will be stressed. The nature of measurement will be discussed and there will be an introduction to scaling, index construction, and the measurement of political variables. The student will become familiar with such ideas as: variables, relationships, association and correlation, controls and causal ordering. Students will be introduced to basic techniques of data collection and analysis. They will also engage in computer-aided interpretation of political data.

C204. Quantitative Applications. A survey of quantitative research techniques and their application to the study of political phenomena. May be concurrently scheduled with Political Science C102.

Mr. Marvick, Mr. Petrocik, Mr. Brown

211. Political Theory. An analysis of the central problems of political inquiry and their relation to political philosophy.

*For concurrently scheduled courses ("C" prefix) suitably separate activities and/or standards for performance and evaluation will be applied for graduates and undergraduates.
212. International Relations. An examination of contemporary theories and methodologies in international relations, with applications to contemporary international politics. Mr. Zoppi

213. American Foreign Policy. An examination of major contemporary problems. Mr. Stein

214A-214B. Survey Courses in American Politics. Students taking MA or Ph.D. examinations in the Politics field will ordinarily have completed these courses before the examination.

214A. Political Parties and the Electoral Process. Mr. Brown, Mr. Marvick, Mr. Petrock

214B. American Political Institutions. Mr. Orren, Ms. Skowronnek, Mr. Snowiss

215A-215B. Comparative Government. Prerequisites: course 215A or consent of instructor is prerequisite. Approaches to the study of comparative politics and problems of comparative political analysis. Mr. Brown, Mr. Cattell, Mr. Rogowski, Mr. Sisson

215C. Public Law. A systematic analysis of the scope and nature of public law, with particular attention given to its materials and methods as illustrated in concepts and doctrines drawn from various of its subject fields. May be concurrently scheduled with Political Science C197F.

215D. 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 Political Science C197F.

216A. Approaches to Organizational Analysis. Analysis of several of the major conceptual alternatives for the study of organizations, with emphasis given to public administrative organizations. Among the topics covered are structural-functional and systemic approaches, organizational decision-making, rational-actor models, 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 Political Science C197F.

216B. The Administrative System. A behavioral analysis of the processes of public administrative structures in the American political system. Emphasis on the possibilities for and limits on rational decision-making and program innovation on the problems of maintaining public responsibility. May be concurrently scheduled with Political Science C197A.

216C. State. The Administrative System. A behavioral analysis of the processes of public administrative structures in the American political system. Emphasis on the possibilities for and limits on rational decision-making and program innovation on the problems of maintaining public responsibility. May be concurrently scheduled with Political Science C197A.

Substantive Courses

C221. Selected Texts in Political Theory. A critical examination of major texts in political theory with particular attention to institutional theories. Mr. Petrock

C222. Selected Topics in Political Theory. A critical examination of a major problem in political theory. May be concurrently scheduled with Political Science C197A Sec. 1.

C224A-224K. Studies in Politics.

C224A. Politics and Economy. An analysis of the theoretical and practical relationships between economic organization and governmental institutions. Study will include the development and political implications of the market system, banking and finance, corporate enterprise, and political economy. Mr. Cattell

C224B. Political Organizations. A critical evaluation of the literature concerned with the backgrounds of public men, and with the screening and sponsoring mechanisms affecting their careers and political perspectives. May be concurrently scheduled with Political Science C197F.

C224C. Politics and Society. The application of selected classical and contemporary sociological theories to politics. May be concurrently scheduled with Political Science C197C.

C224D. Group Theories of Politics. Critical appraisal of "group theory" approaches to the study of political decision-making, with special attention to empirical research problems and findings. Mr. Orren, Ms. Skowronnek

C224E. Legislative Behavior. The analysis of the major approaches to the study of representative institutions, with special emphasis upon the assumptions, concepts, methods, and theoretical implications associated with each approach. May be concurrently scheduled with Political Science C197C.

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 Political Science C197C.

C224G. Political Psychology. (Same as Psychology M228.) Prerequisites: course 140 or 141, or 214A, or Psychology 220A, or consent of instructor. A survey of psychological approaches to political analysis; topics include personality, small group analysis, experimental social-psychology, and cognitive psychology. May be concurrently scheduled with Political Science C197F.

C224H. Mass Attitudes and Behavior. Prerequisite: course 141 or 214A or consent of instructor. An analysis of the political behavior of mass attitudes and mass behavior in large populations. May be concurrently scheduled with Political Science C197F.

C224I. Personnel and Human Relations. An analysis of the policies, the processes, organizations, and interrelationships involved in manning the public services.

C224J. The Federal Public Program. Public budgeting processes within a political and organizational 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 Political Science C197F.

C224K. Political and Administrative Aspects of Planning. A study of the political constraints on and support for effective planning. 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. May be concurrently scheduled with Political Science C197F.

C225A. The Foundations of Representative Government. An analysis of the factors affecting the development and functions of representative institutions in the United States, Europe, and selected political systems of Africa, Asia, and Latin America. Comparative Government or Political Science field credit.

C225B. 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.

C227. The Politics of the World. A study of the politics of the world. The course focuses on both judicial and non-judicial materials emphasizing historical as well as contemporary cases and modes of analysis. Mr. Marvick, either 226A or consent of instructor.

C228A. The Constitution. An analysis of the development of constitutional law during selected periods of American history, such as Founding, the Marshall and Taney eras, and the New Deal. The focus will be on both judicial and non-judicial materials. Mr. Fried

C228B. 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. The focus will be on both judicial and non-judicial materials. Mr. Fried

C228C. The Bill of Rights and the States. An examination of the problems surrounding the application to the states of Amendments 1-9. May be concurrently scheduled with Political Science C197E.

C228D. Current Problems in Public Law. A discussion of selected contemporary problems in jurisprudence, the judicial process, judicial behavior, and legal controls on social conduct. May be concurrently scheduled with Political Science C197E.

C231A. Contemporary Problems in United States Foreign Policy. An intensive analysis of the policy-forming process and the conduct of selected contemporary problems in foreign policy. Political and institutional factors affecting foreign policies will be stressed along with the analysis of policy options. May be concurrently scheduled with Political Science C197E.

C231B. Politics and Strategies of Modern War. Discussion, one hour; seminar, three hours. This course analyzes various national security problems in both their military-technical and political dimensions. It seeks to develop in some depth an understanding of problems likely to be raised in Political Science 138A, which, however, is not a prerequisite. May be concurrently scheduled with course C197B.

C231C. International Law and Organization. This course emphasizes the role of law and organization in the conduct of contemporary international politics. International organization is considered as an integral process within the contemporary international legal system whose characteristics are explored in depth.

C231D. International Relations Theory. An introduction to contemporary problems in international relations theory. May be concurrently scheduled with Political Science C197B.

C232A. The Federal Program. An introduction to the study of comparative politics. International organization is considered as an integral process within the contemporary international legal system whose characteristics are explored in depth.
Graduate Seminars
Prerequisite for all graduate seminars: advance consent of instructors.
C250A-C250L. Seminars in Regional and Area Political Studies.
C250A. Latin-American Studies. Discussion, one hour; seminar, three hours. May be concurrently scheduled with course C197D. Mr. Gonzalez
C250B. Russian and Slavic Studies. May be concurrently scheduled with Political Science C197C.
Mr. Cattell, Mr. Kolkowicz, Mr. Korbonski
C250C. Chinese and East Asian Studies. May be concurrently scheduled with Political Science C197D. Mr. Bauml
C250D. Japanese and Western Pacific Studies. May be concurrently scheduled with Political Science C197D. Mr. Baerwald
C250E. Seminar in African Studies. May be concurrently scheduled with Political Science C197D. Mr. Coleman, Mr. Lotchie, Mr. Sklar
C250F. Middle Eastern Studies. May be concurrently scheduled with Political Science C197D. Mr. Kerr
C250G. Commonwealth Studies.
C250H. Seminar in Western European Studies. Discussion, one hour; seminar, three hours. May be concurrently scheduled with course C197D. Mr. Rogowski
C250J. Southeast Asian Studies. May be concurrently scheduled with Political Science C197D. Mr. Kerr
C250K. North African Studies. Mr. Kerr
C250L. South Asian Studies. May be concurrently scheduled with C197D. Mr. Sisson
C252. Seminar in Public Law. May be concurrently scheduled with Political Science C197E.
C253. Seminar in International Relations. May be concurrently scheduled with Political Science C197B.
C254. Seminar in Public Administration. May be concurrently scheduled with Political Science C197F.
C254A-256B. Seminar in Comparative Government. Prerequisite: course 256A is prerequisite to 256B.
C257. Seminar in Political Theory. A multiple-term course. Grade to be given only upon completion of 257A and 257B. Mr. Ashcraft
C258. Seminar in Political and Electoral Problems. Prerequisite: two graduate courses in Politics.
C252. Seminar in Municipal Government. May be concurrently scheduled with Political Science C197F. Mr. Briggs
C271. Seminar in Political Change. An interdisciplinary seminar directed toward the analysis of political change. To be offered by members of the Department of Political Science. May be concurrently scheduled with Political Science C197D.
C280A-280B. Advanced Practicum in Administrative Research. Prerequisite: At least five courses (20 units) at the graduate and upper division level in political science and consent of instructor. An advanced laboratory/seminar in applied research over a two-quarter period and a government agency operational and service delivery problems. The seminar will provide an integrated case-study approach to task-force studies dealing with such problems as: legislative and policy issues in mandated and nonmandated public functions; program and management organization; budget and finance performance measures; information systems; evaluation of outcomes; political impact analysis; and related problems in administrative decision-making.
485. Teaching Political Science. A workshop in teaching techniques, including evaluation of each student's own performance as a Teaching Assistant. Normally to be taken by all new Teaching Assistants in the first quarter of their assistantship, but may be taken by students only in a quarter in which they are Teaching Assistants; cannot be used to fulfill M.A. or Ph.D. course requirements. Graded S/U.
501. Cooperative Program. (1/2 to 2 courses) Prerequisites: Approval of UCLA Graduate Adviser and Graduate Dean. Approval of 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. To be graded S/U.

Individual Study and Research
596. Directed Individual Study or Research. (1/2 to 1 course) A letter grade (A, B, C, D, or F) will be assigned by the professor supervising the study or research. May apply toward the minimum course requirement for the master's degree, and it ordinarily may be used for this requirement only once.
597. Preparation for the Comprehensive Examination for the Master's Degree or the Qualifying Examinations for the Ph.D. (1/2 to 2 courses) This course is ordinarily taken only during the quarter in which the student is being examined. A grade of S/U will be assigned by the Department on the basis of the student's performance in the examination(s).
598. Research for and Preparation of the Master's Thesis. (1/2 to 2 courses) A grade of S/U will be assigned by the professor supervising the master's thesis. (This course will rarely be taken in the Department because the students normally receive their master's degree under the Comprehensive Examination Plan.)
599. Research for and Preparation of the Doctoral Dissertation. (1/2 to 2 courses) A grade of S/U will be assigned by the professor supervising the dissertation. There is no restriction on the number of times an individual UCG student may enroll in any of the 590 series courses.

Psychiatry and Biobehavioral Sciences
(Office of Education, B7-349 NPI)
T. George Bidder, M.D., Professor of Psychiatry in Residence.
Nicholas G. Blurtin-Jones, D.Phil., Professor of Education and Behavioral Sciences.
Norman Q. Brill, M.D., Emeritus Professor of Psychiatry.
W. Iann Brown, M.D., Professor of Pathology and Psychiatry.
Nathaniel A. Buchwald, Ph.D., Professor of Biobehavioral Sciences and Anatomy in Residence.
Dennis P. Cantwell, M.D., Professor of Psychiatry.
Ching-Piao Chien, M.D., Professor of Psychiatry in Residence.
Kenneth M. Colby, M.D., Professor of Psychiatry.
Alexander Comfort, M.B., D.Sc., Adjunct Professor of Psychiatry.
Robert H. Coombs, Ph.D., Adjunct Professor of Biobehavioral Sciences (Sociology).
Norman Cousins, B.A., Adjunct Professor of Medical Humanities.
Barbara F. Crandall, M.D., Professor of Pediatrics, and Psychiatry in Residence.
Joseph W. Cullen, Ph.D., Adjunct Professor of Biobehavioral Sciences (Public Health).
Jean S. deVellis, Ph.D., Professor of Anatomy and Biobehavioral Sciences.
Willidric J. Dixon, Ph.D., Professor of Biobehavioral Sciences.
Robert B. Edgerton, Ph.D., Professor of Biobehavioral Sciences and Anthropology in Residence.
Bernice T. Edidson, Ph.D., Professor of Biobehavioral Sciences (Medical Psychology) in Residence.

Samuel Eidson, Ph.D., Professor of Biobehavioral Sciences and Chemical Biology in Residence.
Barbara Fish, M.D., Professor of Psychiatry.
Andrew Frary, M.D., Professor of Biobehavioral Sciences (Biological Chemistry) in Residence.
Steven R. Forness, Ed.D., Professor of Biobehavioral Sciences (Special Education) in Residence.
Joan M. Foster, M.D., Professor of Psychiatry in Residence.
Roslyn Gaines, Ph.D., Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
Gary C. Galbraith, Ph.D., Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
Ronald G. Gallimore, Ph.D., Professor of Biobehavioral Sciences (Psychology) in Residence.
Joan Garcia, Ph.D., Professor of Psychology and Biobehavioral Sciences.
Walter R. Goldschmidt, Ph.D., Professor of Anthropology and Biobehavioral Sciences.
Roderic Gorny, M.D., Adjunct Professor of Psychiatry.
Milton Greenblatt, M.D., Professor of Psychiatry, Executive Vice-Chair of the Department, Director of the Neuropsychiatric Institute Hospital and Clinics. Donald Guthrie, Ph.D., Professor of Biobehavioral Sciences in Residence.
John Hanley, M.D., Professor of Psychiatry in Residence.
Frank Hayes, M.D., Professor of Psychiatry in Residence.
Christoph M. Heinicke, Ph.D., Adjunct Professor of Biobehavioral Sciences (Medical Psychology).
Frank M. Hewitt, Ph.D., Professor of Education and Biobehavioral Sciences.
Jean C. Holroyd, Ph.D., Adjunct Professor of Biobehavioral Sciences (Medical Psychology).
Chester D. Hull, Ph.D., Professor of Biobehavioral Sciences (Neuropsychology) in Residence.
Lisey E. Jarvik, Ph.D., M.D., Professor of Psychiatry.
Murray E. Jarvik, M.D., Ph.D., Professor of Psychiatry and Pharmacology.
Harry J. Janson, Ph.D., Professor of Biobehavioral Sciences and Psychology in Residence.
John G. Kennedy, Ph.D., Professor of Anthropology and Biobehavioral Sciences in Residence.
Hayato Kihara, Ph.D., Adjunct Professor of Biobehavioral Sciences (Biological Chemistry).
Arthur King, M.D., Professor of Psychiatry in Residence.
Lewis L. Langness, Ph.D., Professor of Biobehavioral Sciences and Anthropology in Residence.
Robert A. Liberman, M.D., Professor of Psychiatry in Residence.
Horace W. Magoun, Ph.D., Emeritus Professor of Anatomy and Biobehavioral Sciences.
Judd Mandell, M.D., Professor of Psychiatry.
James T. Mills, Ph.D., Professor of Biobehavioral Sciences (Medical Psychology).
David S. Maxwell, Ph.D., Professor of Anatomy and Biobehavioral Sciences.
Philip R.A. May, M.D., Professor of Psychiatry in Residence.
Michael T. McGuire, M.D., Professor of Psychiatry.
Ivan N. Mensh, Ph.D., Professor of Biobehavioral Sciences in Residence.
Milton H. Miller, M.D., Professor of Psychiatry.
Larmes, D.W., Adjunct Professor of Biobehavioral Science (Social Work).
Kazuo Nihira, Ph.D., Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
Ernest P. Noble, M.D., Ph.D., Professor of Psychiatry.
William H. Oldendorf, M.D., Professor of Neurology and Psychiatry in Residence.
Eugene A. Ornitz, M.D., Professor of Psychiatry in Residence.
Robert O. Pasnau, M.D., Professor of Psychiatry in Residence.
Morley J. Paulson, Ph.D., Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
Michel Philipart, M.D., Adjunct Professor of Psychiatry.
Dennis A. Pointer, Ph.D., Professor of Public Health and Mental Health Administration.
PSYCHIATRY AND BIOBEHAVIORAL SCIENCES / 265

George J. Popjak, M.D., Professor of Psychiatry and Biological Chemistry.
Douglas R. Price-Williams, Ph.D., Professor of Biobehavioral Sciences and Anthropology in Residence.
Richard H. Rahe, M.D., Adjunct Professor of Psychiatry.
Fredrick C. Redlich, M.D., Professor of Psychiatry in Residence.
Edward R. Richo, M.D., Professor of Psychiatry in Residence.
Alexander C. Rosen, Ph.D., Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
Robert T. Rubin, M.D., Professor of Psychiatry in Residence.
Paul Satz, Ph.D., Professor of Biobehavioral Sciences (Neuropsychology) in Residence.
Richard J. Schain, M.D., Adjunct Professor of Pediatrics, Neurology and Psychiatry.
Arnold B. Scheibel, M.D., Professor of Anatomy and Psychiatry.
Donald A. Schwartz, M.D., Adjunct Professor of Psychiatry.
Eustace A. Serafetinides, M.D., Ph.D., Professor of Psychiatry in Residence.
David Shapiro, M.D., Professor of Biobehavioral Sciences and Psychology.
Edwin S. Shneidman, Ph.D., Professor of Biobehavioral Sciences in Residence.
Arthur B. Silverstein, Ph.D., Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
James Q. Simmons, M.D., Professor of Psychiatry in Residence.
Paul F. Sklawn, M.D., Adjunct Professor of Psychiatry.
Stefan Soylisik, M.D., Ph.D., Professor of Biobehavioral Sciences (Neuropsychology) in Residence.
Robert S. Sparks, M.D., Professor of Medicine, Pediatrics, and Psychiatry.
M. Anne Spence, Ph.D., Professor of Biobehavioral Sciences and Biostatistics in Residence.
Maurice B. Starmen, Ph.D., Professor of Anatomy and Biobehavioral Sciences in Residence.
Robert J. Stetler, M.D., Professor of Psychiatry.
Manuel Strake, M.D., Adjunct Professor of Psychiatry.
Frank F. Taiman, M.D., Emeritus Professor of Psychiatry.
Peter E. Tanguay, M.D., Professor of Psychiatry in Residence.
George Tantian, M.D., Professor of Psychiatry.
Charles W. Tidd, M.D., Emeritus Professor of Psychiatry.
J. Thomas Ungerleider, M.D., Professor of Psychiatry in Residence.
Jaime R. Villablanca, M.D., Professor of Biobehavioral Sciences (Neuropsychology) in Residence.
Richard D. Walter, M.D., Professor of Neurology and Psychiatry.
Bernice M. Wenzel, Ph.D., Professor of Physiology and Biobehavioral Sciences.
Louis Jollyon West, M.D., Professor of Psychiatry (Neurology) in Residence.
Charles D. Woody, M.D., Professor of Anatomy and Psychiatry in Residence.
Ralph E. Worden, M.D., Adjunct Professor of Psychiatry.
Joe Yamamoto, M.D., Professor of Psychiatry in Residence.
Arthur Yuwiler, Ph.D., Professor of Biobehavioral Sciences (Biological Chemistry) in Residence.
Anthony M. Adinoff, Ph.D., Associate Professor of Anatomy and Biobehavioral Sciences.
Christiane A. M. Beltaxe, Ph.D., Adjunct Associate Professor of Biobehavioral Sciences (Linguistics).
Linda J. Bronson, Ph.D., Adjunct Associate Professor of Biobehavioral Sciences (Medical Psychology).
Annette M. Brodsky, Ph.D., Adjunct Associate Professor of Biobehavioral Sciences (Medical Psychology).
Warren S. Brown, Ph.D., Associate Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
Stephen D. Bruderbaum, M.D., Associate Professor of Psychiatry and Pediatrics in Residence.
V. Charles Charuvastra, M.D., Associate Professor of Psychiatry.
Milton S. Davis, Ph.D., M.D., Adjunct Associate Professor of Biobehavioral Sciences (Medical Psychology).
Michael E. Dawson, Ph.D., Adjunct Associate Professor of Biobehavioral Sciences (Psychology).
Javier I. Escobar, M.D., Associate Professor of Psychiatry in Residence.
Frederick D. Franke, Ph.D., Associate Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
Betty Jo Freeman, Ph.D., Associate Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
Steve J. Funderbark, M.D., Associate Professor of Psychiatry in Residence.
Edward Geller, Ph.D., Associate Professor of Biobehavioral Sciences (Biological Chemistry) in Residence.
Robert H. Germer, M.D., Associate Professor of Psychiatry in Residence.
Irene T. Gerreden, Ed.D., Adjunct Associate Professor of Biobehavioral Sciences (Educational Psychology).
Frederick Gottlieb, M.D., Adjunct Associate Professor of Psychiatry.
Victor Haddox, J.D., Adjunct Associate Professor of Biobehavioral Sciences (Psychology).
Donald F. Haggerty, Ph.D., Adjunct Associate Professor of Biobehavioral Sciences (Biological Chemistry).
Angelos E. Halitas, M.D., Associate Professor of Psychiatry.
Kay R. Jamison, Ph.D., Associate Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
Joseph R. Jedrychowski, D.D.S., Associate Professor of Dentistry, Pediatrics, and Biobehavioral Sciences in Residence.
Sheldon H. Kardener, M.D., Adjunct Associate Professor of Psychiatry.
Marvin Kano, M.D., Associate Professor of Psychiatry in Residence.
Keith T. Kernan, Ph.D., Associate Professor of Biobehavioral Sciences (Anthropology) in Residence.
Lewis M. King, Ph.D., Adjunct Associate Professor of Biobehavioral Sciences (Psychology).
Malvin Lansky, M.D., Adjunct Associate Professor of Psychiatry.
Henry Lasle, M.D., Associate Professor of Psychiatry in Residence.
Michael S. Levine, Ph.D., Associate Professor of Biobehavioral Sciences (Neuroradiology) in Residence.
Edward H. Lissom, M.D., Adjunct Associate Professor of Psychiatry.
Lara B. Logren, M.D., Adjunct Associate Professor of Psychiatry.
Gayle G. Marsh, Ph.D., Adjunct Associate Professor of Biobehavioral Sciences (Medical Psychology).
Fredrick C. Ritenour, Ph.D., Adjunct Associate Professor of Biobehavioral Sciences (Medical Psychology).
Jim Mintz, Ph.D., Adjunct Associate Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
Paul R. Munford, Ph.D., Adjunct Associate Professor of Biobehavioral Sciences (Medical Psychology).
Gloria J. Powell, M.D., Associate Professor of Psychiatry.
Kig V. Roe, Ph.D., Adjunct Associate Professor of Biobehavioral Sciences (Medical Psychology).
Marian D. Sigman, Ph.D., Associate Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
Shih Y. Tsai, M.D., Adjunct Associate Professor of Psychiatry.
Alexander J. Tymchuk, Ph.D., Associate Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
Mario Valente, M.D., Adjunct Associate Professor of Psychiatry.
Theodore Van Patten, M.D., Adjunct Associate Professor of Psychiatry.
Thomas Veinman, M.D., Associate Professor of Biobehavioral Sciences and Anthropology in Residence.
William J. Winslade, Ph.D., M.D., Adjunct Associate Professor of Biobehavioral Sciences (Medical Psychology).
Gail E. Wyatt, Ph.D., Associate Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
Joel Yager, M.D., Associate Professor of Psychiatry in Residence.
Joel P. Abrahams, Ph.D., Assistant Professor of Biobehavioral Sciences (Psychology) in Residence.
Joan R. Asarnow, Ph.D., Associate Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
Robert F. Asarnow, Ph.D., Assistant Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
Nenita C. Belch, M.D., Adjunct Assistant Professor of Psychiatry.
Murray A. Brown, M.D., Adjunct Assistant Professor of Psychiatry.
Sherrel G. Butcher, Ph.D., Assistant Professor of Pharmacology and Biobehavioral Sciences.
Carolyn Carlson, M.D., Assistant Professor of Psychiatry in Residence.
Stephen B. Connor, M.D., Assistant Professor of Psychiatry.
Edward M. DeMet, Ph.D., Adjunct Assistant Professor of Biobehavioral Sciences (Medical Psychology).
Robert P. Diamond, M.D., Assistant Professor of Psychiatry.
Stephen E. Dubin, D.O., Assistant Professor of Psychiatry.
Fawzi I. Farwat, M.D., Assistant Professor of Psychiatry.
Yvonne B. Ferguson, M.D., Assistant Professor of Psychiatry.
Billy W. Floyd, M.D., Adjunct Assistant Professor of Psychiatry.
Thomas R. Garrick, M.D., Assistant Professor of Psychiatry.
Eric Halgren, Ph.D., Assistant Professor of Biobehavioral Sciences (Medical Psychology) in Residence.
Richard L. Heinrich, M.D., Adjunct Assistant Professor of Psychiatry.
Peter B. Hirsch, M.D., Assistant Professor of Psychiatry in Residence.
Eisen S. Hughes, M.D., Assistant Professor of Psychiatry in Residence.
Louis E. Jenkins, Ph.D., Assistant Professor of Biobehavioral Sciences (Medical Psychology) in Research.
Jerry A. Kasdorf, Ph.D., Adjunct Assistant Professor of Biobehavioral Sciences (Medical Psychology).
Ramzi K. Knaak, M.D., Assistant Professor of Psychiatry in Residence.
Asael M. Levin, M.D., Assistant Professor of Biobehavioral Sciences (Psychology) in Residence.
Ira M. Lesser, M.D., Assistant Professor of Psychiatry in Residence.
Keh-Ming Lin, M.D., Assistant Professor of Psychiatry in Residence.
Fred Loya, Ph.D., Assistant Professor of Biobehavioral Sciences (Medical Psychology) in Research.
Stephan R. Marder, M.D., Assistant Professor of Psychiatry in Residence.
Baranger D. Marshall, M.D., Adjunct Assistant Professor of Psychiatry.
Charles F. Olmstead, Ph.D., Assistant Professor of Biobehavioral Sciences (Physiological Psychology) in Residence.
The Master of Social Psychiatry (M.SP.)

The Master of Social Psychiatry program is not admitting new students at this time. Graduate courses are offered by the Department which students in other degree programs can take on an elective basis.

*Graduate Courses

206. Colloquium on Biobehavioral Sciences, (½ course) 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 context. 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. (Same as Neuroscience M201A-M201B-M201C.) Prerequisites: consent of instructor; admission to M201B requires completion of M201A: admission to M201C requires completion of M201A and M201B. The course is divided into three quarters. The fall quarter 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 for the fall quarter. The winter quarter focuses on research studies designed to take into account the functional behavior of animals. The spring quarter focuses on special questions of interest to students.

Mr. Eidson, Mr. McGuire

207. Hypnosis Seminar. (½ course) Prerequisites: training in psychotherapy, education in psychodynamics and psychopathology, and consent of instructor. Experiential, didactic, and guided reading and training in techniques, analysis, age regression, imagery techniques, distortion of space and time, therapeutic applications (including direct symptom removal, behavioral methods and hypnoanalysis), and tasks for self-hypnosis. Emphasis is on developing skill for application in clinical practice. Graded S/U.

Ms. Holroyd

208A-208B-208C. Clinical Neuropsychology: Assessment of Brain Damage, (½ course each) Prerequisite: graduate or postgraduate standing and consent of instructor. The aim of the course is to introduce and review neuropsychological concepts, including functional neuroanatomical systems of the brain, analytic and synthetic activities of the brain, the effects of brain damage on behavior, and the use of neuropsychological test instruments. The fall quarter focuses on fundamentals of neuropsychology and the assessment of brain damage. The second quarter reviews the effects of brain damage in children and child neuropsychological assessment. The third quarter is devoted to the neuropsychological assessment of particular patient groups, e.g., the elderly, the epilepsies and dyscontrol syndromes. Mr. Marsh, Ms. Marsh

209A-209B-209C. Behavior Therapy Practicum. (½ course 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. These include anxiety, affective, conversion, obsessive-compulsive, sexual, and eating disorders. By means of a lecture-workshop approach, trainees learn behavior analysis and assessment, personal effectiveness training, systematic and vivo desensitization, contingency contracting and management, and cognitive behavior modification.

Mr. Munford

M222. Transcultural Psychiatry. (Same as Anthropology M224F) Two hours. Prerequisites: consider the instructor. Consideration of psychiatric topics in cross-cultural perspective, such as studies of drug use, deviance, suicide, homicide, behavioral disorders, "culture specific" syndromes, non-Western moral questions of "sick" societies. This course may be repeated for credit.

Mr. Kennedy, Mr. Langness

223. MMPI Seminar. (¼ course) Prerequisite: consent of instructor. Topics covered include: 1) basic scales of the Minnesota Multiphasic Personality Inventory (MMPI) (and psychopathology in general) based on two-factor conditioning and physiological subtests, and 3) code types and their transfer and treatment indications.

Mr. McCardwell

*For concurrently scheduled courses ("C" prefix) suitably separate activities and/or standards for performance and evaluation will be applied for graduates and undergraduates.
242A. Seminar on Aging and Psychopathology. (1/4 course) Prerequisite: consent of instructor. The format will be a combination of patient interviews and case discussions. The review of the pertinent literature in gerontology and geriatrics, including psychology, sociology, clinical medicine, pharmacology, neurology, and psychiatry. The course will include a survey of psychopathology as seen among the aging population. Topics to be discussed include affective disorders and schizophrenia spectrum disorders.

Ms. Jarvik, Mr. Straker

225A. Diagnostic Evaluation of Psychopathology. (1/4 course) Prerequisite: consent of instructor. The course focuses on recent empirical and methodological advances in clinical diagnostic psychiatry. Lecture presentations and discussion will center on the major syndromes of psychopathology in adolescence and adulthood, their distinguishing symptomatology, course and outcome, and obtaining reliable judgments of a patient's current psychiatric status.

Mr. Ströber

226A-226B. Child and Adolescence Research Seminars. (1/4 course each) Prerequisite: consent of instructor. A survey of EEG and evoked potential (EP) methods and research into human mental function, with particular attention to EEG and ERPs in children with various neuropsychological disorders of adults and children.

Ms. Frankel, Mr. Tanguay

227. Electroencephalography (EEG) in Psychiatry. (1/4 course) Prerequisite: consent of instructor. A survey of EEG and evoked potential (EP) methods and research into human mental function, with particular attention to EEG and ERPs in children with various neuropsychological disorders of adults and children.

Mr. W. Brown

228. Behavioral Medicine. (1/4 course) Prerequisite: consent of instructor. Review of behavioral science knowledge and techniques relevant to the understanding of physical health and illness and of the application of this knowledge and these techniques to prevention, diagnosis, treatment and rehabilitation. Integration of behavioral and biomedical aspects of behavior.

Mr. McCreary, Mr. Munford, Mr. Shapiro

229A-229B. Family Therapy Seminar (A-West). (1/4 course each) Prerequisites: assignment to Ward A-West and consent of instructor. Course includes an overview of the types of families seen in family therapy, a discussion of various techniques and treatment approaches, and case productions to integrate the theoretical material with actual family situations.

Mr. Stock, Ms. Bass

230. Conti and Asian American Studies. (1/4 course) Prerequisite: consent of instructor. The seminar will focus on the cultural aspects relevant to the treatment of Asian Americans. The philosophical teachings of Confucius will be discussed. Similarities and differences among Asian American and relevant clinical issues will be presented. Graded S/U.

Mr. Yamamoto, Mr. Chien

231. Hispanics and Mental Health. (1/4 course) Prerequisite: consent of instructor. Course will highlight mental health issues and needs of Hispanics through seminars and case studies 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 the Spanish-speaking patient; treatment of hispanic families, couples, undocumented persons and criminal justice system clienteles.

Mr. Morales


Mr. Golden

233. Alcoholism and Drug Abuse Among Women. (Same as Public Health M203.) Prerequisite: consent of instructor. Discussion of the psychosocial aspects of alcohol use among alcohol and drug users among women. Topics will include etiology, prevention, treatment, hormonal influences, and the role of the family. Emphasis will be placed upon current theoretical perspectives and research findings.

Ms. Beckman

234A-234B-234C. Affective Disorders. (1/4 course each) Prerequisites: graduate standing and consent of instructor. Seminar will cover general topics related to the primary affective disorders (depression, manic depressive illness) including diagnosis, pharmacology, epidemiology, psychology, phenomenology, biology, and treatment.

Ms. Jamison

235. A Laboratory for Naturalistic Observations: Developing Skills and Techniques. (Same as Anthropology M292 and Education M292.) Prerequisite: instructor. Three hours. Prerequisite: consent of instructor. The skill of observing and recording behavior in natural settings will be taught, emphasizing field training and practice in observing behavior. Some of the uses of observations and their implications for research in the social sciences will also be discussed. Students will be expected to integrate observational work into their current research interests. This course may be repeated for credit.

Mr. Gallimore, Mr. Levine, Mr. Turner, Mr. Weisner

236A-236B-236C. Psychology Interns' Seminar. (1/4 course each) Prerequisite: consent of instructor. Current topics in clinical psychology. The group will select topics for discussion pertinent to the pathology, diagnostic evaluation and modalities of treatment. S/U grading.

Ms. Holroyd

CM 237. Theoretical Issues in Disorders of Language Development. Introduction to the field of language disorders of children. The course will deal 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 other cerebral pathology will be considered. Concurrently scheduled with Psychology CM135 and Linguistics CM135. Graduate students will focus on the relationship of cognition to linguistic ability while undergraduate students will consider the application of this knowledge and these techniques to prevention, diagnosis, treatment and rehabilitation. Integration of behavioral and biomedical aspects of behavior.

Ms. Needleman

238. Language Development, Cognition and Thought in Atypical Children. (1/4 course) Lecture, one hour; discussion, one-half hour. Prerequisite: consent of instructor. Specific problems in language development will be considered with particular regard to their implications for differential diagnosis. The relationship between language and cognition and the issue of thought disorders in children will be addressed.

Ms. Needleman

239. Psychopharmacology. (Same as Pharmacology M239.) Prerequisite: consent of instructor. A presentation of the effects of drugs upon behavior with special attention to psychoactive and drug seeking behavior. Physiological and biochemical mechanisms underlying such actions will be analyzed. Reports on recent relevant research will be made.

Mr. Jarvik

240A-240B-240C. Assessment and Treatment of Afro-American Families. (1/4 course each) Prerequisites: graduate standing and consent of instructor. The course aims at 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 a supervised evaluation and case management with an Afro-American child and family.

Ms. Bass, Ms. Powell, Ms. Wyatt

241A-241B-241C. Observation of Group Psychotherapy. (1/4 course each) Prerequisite: consent of instructor. Principles of adult psychotherapy will be explored through observation of an on-going group, lectures and discussion. Major theoretical emphasis will be on humanistic-group dynamic approaches.

Mr. Rosen

242A-242B-242C. Child Psychotherapy Seminar. (1/4 course each) Prerequisite: consent of instructor. During the Fall and Winter quarters, videotaped diagnostic and treatment sessions of children and their families will be reviewed. The focus will be on discussion of specific topics as: diagnostic criteria, the beginning of treatment, the overdetermined nature of the symptom, transference phenomenon related to parental conflict, individualizing of psychoanalytic reactions to past events, factors enhancing and working against relationships with child and family, and various other technical issues including the handling of terminations. During the Spring quarter, the theory and principles of psychoanalytic work with parents will be offered. Research in order to amplify clinical and theoretical issues.

Mr. Heinicke

243A-243B-243C. Mental Retardation Interdisciplinary Core Curriculum. (1/4 course each) Prerequisites: consent of instructor. A presentation of the major areas of mental retardation covering epidemiology, nosology, assessment, health care delivery systems, basic genetics, nutrition, direct care, and special deficits. Presented in an interdisciplinary format as generic issues in the discipline.

Mr. Tymchuk, Mr. Cantwell

244. Computers in Mental Retardation Research. Prerequisite: consent of instructor. An introduction to the basic nature of computer systems, with emphasis on their impact on modern 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, governmental, educational, and industrial applications including the Mental Retardation and Child Psychiatry Program.

Mr. Guthrie, Mr. Hurl

245A-245B. Psychological Assessment of the Preschool Child. Prerequisite: consent of instructor. Lecture, 1 1/2 hours; seminar, 1 hour. Prerequisites are necessary for the course, but the course will focus on the psychological assessment of the preschool child. Specific emphasis will be placed on the assessment of children with developmental disabilities and children who are generally thought to be "normal." The theoretical orientation of the course will be behavioral. The course will involve two hours per week of supervised testing. Psychiatry 245A is a prerequisite of Psychiatry 245B. S/U grading.

Ms. Freeman

246. Psychological Aspects of Mental Retardation. (Same as Psychology M246.) Prerequisite: consent of instructor. Discussion of the psychological aspects of mental retardation to include: classification, description, etiology, theory, prevention, treatment, assessment, modern and future developments, and input from other disciplines (ethics, law, religion, family systems).

Mr. Tymchuk

247A-247B-247C. Neuropsychological and Neuro-psychological Bases of Mental Retardation and Human Development. (1/4 course each) Prerequisites: consent of instructor. The course will provide a framework for discussion of issues related to modern and future developments. Faculty members or advanced students present results of their research work in the context of available literature; intense discussion occurs during and after presentation.

Mr. Levine, Mr. Buchwald

248. Research Roundnas in Mental Retardation and Mental Illness. (1/4 course each) Prerequisite: consent of instructor. The course will provide a framework for discussion of issues related to modern and future developments. Faculty members or advanced students present results of their research work in the context of available literature; intense discussion occurs during and after presentation.

Mr. de la Peña, Mr. Rosen

249A-249B. Language Disorders of Childhood. (1/4 course each) Prerequisite: consent of instructor. Course reviews language disabilities in children, their relationship to normal maturational patterns and to other aspects of behavioral development. The course will provide a framework for discussion of issues related to modern and future developments. Faculty members or advanced students present results of their research work in the context of available literature; intense discussion occurs during and after presentation.

Ms. Bialois, Mr. Brown
250. Introduction to the Principles and Techniques of Mammalian-Cell Culture. (1/4 course) Prerequisite: graduate or medical student status and consent of instructor. This course provides a background in the physiology and biochemistry of mammalian cells through lectures and selected readings in the classical field. Designed to be taken concurrently with 251. Mr. Hagerty

251. Laboratory Exercises in the Techniques of Mammalian-Cell Culture. Prerequisite: graduate or medical student status and consent of instructor. This course provides a working knowledge of the physiology and biochemistry of mammalian cells in culture through laboratory exercises involving the preparation and manipulation of differentiated and undifferentiated continuous mammalian-cell lines. Designed to be taken concurrently with Psychiatry 250. Mr. Hagerty

252. Clinical Child Psychiatry. (1/4 course) Prerequisite: consent of instructor. Weekly seminars covering the basic clinical aspects of child psychiatry. Assigned readings are presented by students and used as a basis for discussion of a particular topic. Topics covered include interviewing of parents and children, diagnosis in child psychiatry, and the clinical child psychiatric syndrome. Mr. Cantwell

253. Seminar: Child Development. (1/4 course) Prerequisite: consent of instructor. The seminar is divided into three sections: theories of development, systems of child development, and aspects of child development. Presentation of assigned readings by the student plays a major role in each of the seminar sessions. Mr. Cantwell

M254. Counseling Families of Handicapped Children. (Graduate credit) Prerequisite: consent of instructor. Techniques and issues in counseling families through evaluation, feedback, and treatment. Social and psychological stresses on family unit, professional reactions, communication and issues of grief counseling, placement, and developmental crises. Ms. Gottlieb

256. Basic Clinical Child Psychopathology. (1/4 course) Prerequisite: consent of instructor. Weekly seminars covering the basic clinical aspects of child psychopathology. Readings will be provided for a basis of discussion on topics including interviewing of parents and children, diagnosis, and related syndromes. Mr. Cantwell

M257B-257C. Diagnostics and Therapeutics of Language Disabilities. (4 course each) Prerequisite: consent of instructor. This course is directed toward the language specialist seeking training in the developmental disabilities of language. The course includes an introduction to linguistic and therapeutic approaches. Linguistic disabilities are placed within the framework of total behavior. The clinical practicum includes individual case supervision, a review of relevant research topics, and clinical research projects. Students are required to complete a clinical research project in psycho- and neurolinguistics. Ms. Baltaxe

259. Legal and Ethical Issues in Developmental Disabilities. (1/4 course) Prerequisite: consent of instructor. Discussion of current legal issues in mental retardation-related disabilities, philosophies, ethics, ethical codes, issues, how to resolve them, video-tape, discussion of cases. Mr. Tymchuk

M261. Seminar on Law, Medicine and Human Values. (1 course) Prerequisite: Same as Law M253. Formerly numbered M261A-261B.) Prerequisite: consent of instructor. The seminar will deal with legal, philosophical, and psychological issues arising in the context of the doctor-patient relationship. Emphasis will be placed upon an analysis of the value conflicts underlying and manifested in medical practices and legal policies. Course material will be taken from legal, medical, and philosophical literature, legislation, case law, and medical case histories. Mr. Winslade

M262. Law and Psychiatry. (1/4 course) (Same as Law M235.) Prerequisite: consent of instructor. Introduction to the ethical and legal implications of the orientation, premises, functioning, and potential contributions of psychiatry. Review of the practical and theoretical aspects of collaboration between law and psychiatry. Mr. Winslade

264. Biofeedback: Theory, Research, and Clinical Application. (1/4 course) Prerequisite: consent of instructor. Introduction to concepts and techniques of biofeedback. Includes consent of instructor. Consideration of future and applications to various clinical problems (hypertension, headache, pain and anxiety, sexual dysfunction, cardiac arrhythmias, neuromuscular disorders, etc.). Training in the use of biofeedback devices. Consideration of research and clinical issues. Mr. Shapiro

255. Mind and Brain in Evolution. (1/4 course) Prerequisite: consent of instructor. This course reviews the fossil evidence of the origin of the brain and the implications of that evidence for the evolution of mind and intelligence. Quantitative approaches are emphasized. Although some implications for cognitive psychology and individual differences are considered, the evolutionary analysis is "above the species level." Mr. Jerison

256. Psychophysiological Research. Prerequisite: consent of instructor. Advanced seminar and discussion of ongoing laboratory research. Issues include consideration of research design and data analysis. Current topics are biofeedback, conditioning, and behavioral control of automatic functions, regulation of physiological and subjective reactions to stress and pain, and the evaluation of clinical biofeedback methods. Mr. Shapiro

257. Ethology of Motivation and Conditioning. Basic facts and concepts of motivation and learning in animals will be presented in the framework of ethological and neurophysiological approach. Classical and instrumental conditioning processes will be discussed with particular attention to the motivational variables. Mr. Soltysik

M272. Psychological Anthropology. (Same as Anthropology M244Q) Lecture, three hours. Prerequisite: consent of instructor. The course will deal with questions relating to symbolic and unconscious processes as they are related to culture. Particular topics will change from quarter to quarter and the course can be repeated for credit.

M273. Growth Control, Transformation, and Malignancy in Mammalian Cells in Culture. (1/4 course) Evaluation of currently available cultured mammalian-cell types as experimental models to study growth control in normal, nonmalignant cells in vivo and to analyze the cytosocial, biochemical and cytophysiological differences between normal and transformed and/or malignant cells in culture. Mr. Haggerty

274. Neurophysiology and Behavioral Correlates. (1/4 course) Prerequisite: graduate standing and consent of instructor. The course will provide an analysis of strategies and approaches used to study behavior of mammalian organisms. Special emphasis will be placed on concepts of experimental design, measurement, and recording techniques in behaving animals and how such developments relate to classical concepts of brain function. Mr. Hull, Mr. Levine

M275A-275B. Sociobiology Seminars. (1 course each) Prerequisite: consent of instructor. This 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 rather than a psychological perspective. In-progress grading. Mr. McGuire

276. Consultation to Sex Education Programs in the Elementary School. (1/4 course) Prerequisite: graduate standing and consent of instructor. This seminar will focus on issues of consultation program development and evaluation of sex education for elementary school children and parents. It will offer participants the opportunity to observe behavior of and interact with normal children within the school setting. Ms. Meyer, Ms. Wyatt

277. From Research to Practice: Biobehavioral Contributions. (1/4 course) Prerequisite: consent of instructor. An overview of biobehavioral research as it is currently translated into therapeutic and preventive practice across disciplines. S/U grading. Mr. Serafetinides

278. Clinical Psychopharmacology Research. Prerequisite: consent of instructor. Directed research experience at the graduate level. Research skills will be taught in the practical setting of ongoing psychopharmacological research projects. Discussion of ongoing psychopharmacology research projects and of proposed new projects focusing on practical problems, design, methodology, procedures and instrumentation. Mr. May

M279A-279B-279C. Seminar: Selected Topics in Human Psychology. (Same as Education M281B-281B-281C and Anthropology M229A-229B-229C) Ethologists now use successful animal behavior methodology to study human behavior. When this approach is applied to behavior and its control, it will cover one level of analysis: describing and recording behavior; causation; development; especially longitudinal studies; adaptation; evolutional origins.

M280. Alcohol and Drug Abuse. (1 course) (Same as Public Health M292) Prerequisite: consent of instructor. Alternative models of alcohol and other drug addictions will be examined and implications assessed for public policy regarding their control. Prevention efforts and findings from California and national surveys will be considered, with primary emphasis upon alcohol use and abuse. Ms. Beckman

281. Behavioral Therapy in an Educational Setting. (1/4 course) Prerequisite: consent of instructor. This course will provide an experiential classroom working with exceptional children. Theoretical background will be furnished through a once-weekly lecture.

Ms. Richey

282. Schizophrenia: A Developmental Perspective. (1/4 course) Prerequisite: consent of instructor. The course will review research on the transmission of schizophrenia. Emphasis will be placed on a critical appraisal of the research strategies used to date, the relative contributions of environmental and genetic factors in the etiology of schizophrenia in humans. An emphasis will be placed on studies of children at risk for schizophrenia. Mr. Asarlow

283. Theories of Childhood Psychosis. (1/4 course) Prerequisite: consent of instructor. The aim of the course is to present the biological and neuropsychological theories of the etiology of childhood psychosis. Mr. Tanguay

M285A-285B-285C. Advanced Family Therapy. (1 course each) Prerequisite: consent of instructor. Therapeutic and training in family therapy. Historical foundations, and indications and contraindications for family therapy and diagnosis. Observations and demonstrations will be included. Students are encouraged to bring videotapes of their family therapy cases for discussion. Ms. Giedion

286. Behavioral Analysis of Autism. (1/4 course) (Formerly numbered 468.) Prerequisite: consent of instructor. Seminar on the role of operant techniques in the assessment, treatment and understanding problems of autism and mental retardation. Mr. Frankel, Ms. Freeman

287. Psychopharmacology Seminar. (1/4 course) Prerequisite: consent of instructor. A discussion of ongoing research in the area of psychopharmacology as it relates to drug-taking and other drug-related habits. Topics include initiation, maintenance, and cessation of habits. Basic mechanisms will be stressed. Psychological procedures used in habit development and control, particularly coping methodology, will be discussed. Mr. Jarvik
288. The Psychologist as an Expert Witness. (1/4 course) Prerequisite: consent of instructor. The course will examine critical issues regarding the role of psychologists in the adversary system. Issues discussed will be criminal responsibility, competency, and other issues where law and psychology overlap. Mr. McCreary

290. Quantitative Analysis of Ethnographic Data. Prerequisite: graduate standing. The course will provide 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 application of univariate and multivariate statistical methods for analysis of ethnographic data. Mr. Nhira

298. Current Topics in the Biobehavioral Sciences. (1 to 4 courses) Prerequisite: consent of instructor. Current issues in the biobehavioral sciences will be offered on a selective basis depending upon instructor interest and topical relevance of problems. See Schedule of Classes for topics and instructors. May be repeated for credit.

402. Childhood Psychosis Journal Club. (1/4 course) Prerequisite: consent of instructor. Discussion of basic and applied research issues related to childhood psychoses by a series of speakers. Readings will be suggested by the speaker. Mr. Nihira

403. Individual Case Supervision. (1 to 1 course) Prerequisites: consent of instructor and Department Chair. One-to-one supervision of individual therapy cases. Includes analyses of patient data, supervision of ongoing treatment, informal didactic discussion on personality theory, and applications to patient management. Consent is based on a written proposal to be structured by Instructor and student prior to enrollment. Additional informal and proposal form are available in the Office of Education, 87-349 NPI.

404. Group Therapy. (1/4 course) Prerequisite: consent of instructor. Section 1: Gestalt. Experiential and didactic seminar in Gestalt therapy and other humanistic group models. Case consultations are included when relevant. Section 2: Dynamic Experience. This group experience has as its primary goal the attainment of significant usable insight by the trainee into his/her personality and attitudes so that his/her emotional conflicts will not interfere with his/her functioning as an effective group participant. Insight into the processes involved in how groups affect people and people affect groups — to help groups function more efficiently. Mr. Yager

413. Community Meeting (2-West). (1/4 course) Prerequisites: assignment to Ward 2-West and consent of instructor. Will provide insight into an individual experience in leading a large group of all patients and staff. Leadership is by rotation. A half-hour process didactic session follows. Mr. Pynoos

414. Emergency Treatment Attending Rounds. (1/4 course) Prerequisites: assignment to Emergency Treatment Unit and consent of instructor. Cases seen in the emergency room during the preceding night are reviewed by a consultant and the Emergency Treatment staff. Assessment techniques, methods of intervention, and alternate modes of treatment are explored. Mr. Slawson

416. Treatment Planning Meetings. (1/4 course) Prerequisite: consent of instructor. The course focuses on treatment and management problems posed by inpatients. Clinical psychopathology, treatment plans and interdisciplinary skills are discussed. The emphasis is on formulating accurate diagnostic assessments and planning effective treatment programs utilizing the therapeutic methods of the hospital (somatic therapies, behavioral techniques, family therapy, group process, individual and dyadic treatment, etc.).

Section 1: 2-West Mr. Pynoos
Section 2: 2-South Mr. Gerner
Section 3: A-South Ms. Ferguson
Section 4: A-West Ms. Carlson

424. Ward Milieu Meeting. (1/4 course) Prerequisites: consent of instructor. Milieu meeting courses are designed to explore experientially and didactically the multiple aspects of group process on a psychotic inpatient ward.

Section 1: A-South Ms. Ferguson
Section 2: A-West Ms. Carlson
Section 3: 2-West Mr. Pynoos

425. Child Pre-Admission, Admission and Disposition Conference. (1/4 course) Prerequisite: consent of instructor. Pre-admission to the study of child and family prior to inpatient admission. Course deals with 1) interview techniques, 2) suitability for admission, and 3) goals for hospitalization. Admission and disposition includes presentation of problem cases, usually with combined physical and intellectual defects, for interdisciplinary problem solving.

Section 1: A-South Ms. Ferguson
Section 2: A-West Ms. Carlson
Section 3: 4-West Ms. Petty
Section 5: 6-West Ms. Miller

428. Psychology Interns' Psychosomatic Liaison Case Conference. Prerequisite: consent of instructor. Psychologists in the Psychiatric Interns' Psychosomatic Liaison Conference are asked to present cases and discuss them in light of their experience and to present their interpretations of particular cases. Mr. Gottlieb

445. Family Therapy Seminar for Clinicians. (1/4 course) Prerequisites: consent of instructor. The seminar is designed to provide an in-depth discussion of family therapy. Alternative models may be reviewed during the year. Videotape is used extensively. Case supervision will be available. Participants must be treating one or more families. Mr. Tynan

446. Structural Family Therapy. (1/4 course) Prerequisites: prior clinical responsibility and treatment experience with individuals or families and consent of instructor. Conceptual and practical issues of family development and treatment are presented in the form of case studies. Mr. Gottlieb

471. Child Psychiatry Grand Rounds. Prerequisite: consent of instructor. Each month one clinical subdivision of the Department of Psychiatry presents a major clinical problem. Senior faculty discussants preside. The presenting trainees are expected to cover the pertinent literature and to assemble the critical elements of information on the case. Mr. Gottlieb

477A-477B. Advanced Family Therapy Seminar for Clinicians. (1/4 course each) Prerequisite: consent of instructor. Alternative and derivative models of structural family therapy are critically reviewed by the seminar group: e.g., family sculpting, network therapy, various communication models, issues of therapy, etc. Problem cases may be presented by the enrollees, including ethical dilemmas in family therapy. The seminar is required of first-year fellows and is an elective for experienced clinicians. Mr. Gottlieb

479. Genetics Seminar. Prerequisites: consent of instructor. One-week clinical teaching session on the patients seen in the preceding Genetics Clinic. An in-depth discussion on the genetics of each disorder follows. Ms. Crandall and the Genetics Staff

480. Analysis of Human Chromosome Studies. (1/4 course) Prerequisite: consent of instructor. Chromosome karyotypes prepared in the cytogenetics laboratory during the preceding week are reviewed and discussed with reference to clinical findings. The teaching includes the interpretation of abnormal karyotypes and the technical aspects of routine and special chromosome stains. Mr. Sparkes

481. Chromatography Review. Prerequisites: pre-medical course or biochemistry and consent of instructor. A weekly session in which amino acid chromatography was presented during the preceding week is presented. This session concentrates on teaching the interpretation of abnormal chromatograms in conjunction with the technical aspects of the tests used. Mr. Cederbaum

482A-482B-482C. Psychology Intern's Group Process. (1/4 course each) Prerequisite: consent of instructor. The purpose of this course is to teach the students about group processes and dynamics. The course involves the use of classroom teaching experience whereby students study their own group interactions in order to examine group process variables such as: styles of leadership, verbal and nonverbal methods of communication, the development of trust, self-disclosure, and the effects on group process of stereotypes about ethnic and masculine-feminine characteristics of people. S/U grading. Ms. Holroyd
Psychology

(Office, 1283 Franz Hall)

Bruce L. Baker, Ph.D., Professor of Psychology.
Peter M. Bentler, Ph.D., Professor of Psychology.
Robert A. Bjork, Ph.D., Professor of Psychology.
William E. Brown, Jr., Ph.D., Professor of Psychology (Vice Chair of Graduate Affairs).
Larry L. Butcher, Ph.D., Professor of Psychology.
Edward C. Carter, Ph.D., Professor of Psychology.
James C. Coleman, Ph.D., Professor of Psychology and Education.
Barry E. Collins, Ph.D., Professor of Psychology.
Andrew L. Comrey, Ph.D., Professor of Psychology.
Gaylord D. Ellison, Ph.D., Professor of Psychology.
Seymour Feldman, Ph.D., Professor of Psychology (Chair of the Department).
Morton P. Friedman, Ph.D., Professor of Psychology (Vice Chair of Undergraduate Affairs).
John Garcia, Ph.D., Professor of Psychology and Psychiatry.
Harold B. Gerard, Ph.D., Professor of Psychology.
Michael J. Goldstein, Ph.D., Professor of Psychology.
Pamela J. Greenfield, Ph.D., Professor of Psychology.
Barbara A. Henker, Ph.D., Professor of Psychology.
Nancy M. Henley, Ph.D., Professor of Psychology and Director of Women's Studies Program.
Eric W. Holman, Ph.D., Professor of Psychology.
John P. Houston, Ph.D., Professor of Psychology.
Marion Jacobs, Ph.D., Adjunct Professor of Psychology.
William E. Jeffrey, Ph.D., Professor of Psychology.
Franklin B. Krauss, Ph.D., Professor of Psychology.
John C. Liebeskind, Ph.D., Professor of Psychology.
Omar Lopez, Ph.D., Assistant Professor of Psychology.
Millard C. Madsen, Ph.D., Professor of Psychology.
Irving Mattzman, Ph.D., Professor of Psychology.
Albert Mehrabian, Ph.D., Professor of Psychology.
Charley Y. Nakamura, Ph.D., Professor of Psychology.
Donald Novin, Ph.D., Professor of Psychology.
Amado M. Padilla, Ph.D., Professor of Psychology.
Allen Parducci, Ph.D., Professor of Psychology.
Bertram H. Raven, Ph.D., Professor of Psychology.
David O. Sears, Ph.D., Professor of Psychology and Political Science.
Joseph C. Sheehan, Ph.D., Professor of Psychology.
Gerald H. Shure, Ph.D., Professor of Psychology.
Stanley Sue, Ph.D., Professor of Psychology.
James Thomas, Ph.D., Professor of Psychology.
Bernard Weiner, Ph.D., Professor of Psychology.
J. Arthur Woodward, Ph.D., Professor of Psychology.
Richard Centers, Ph.D., Emeritus Professor of Psychology.
S. Carolyn Fisher, Ph.D., Emeritus Professor of Psychology.
Joseph A. Gangerelli, Ph.D., Emeritus Professor of Psychology.
Milton E. Hahn, Ph.D., Emeritus Professor of Psychology.
F. Henry Jones, Ph.D., Emeritus Professor of Psychology.
George F. J. Lehner, Ph.D., Emeritus Professor of Psychology.
Donald E. Lindsay, Ph.D., Sc.D., Emeritus Professor of Psychology and Physiology.
Jessie L. Ruhman, Ed.D., Emeritus Professor of Psychology.
Eliot H. Rodnick, Ph.D., Emeritus Professor of Psychology.
John P. Seward, Ph.D., Emeritus Professor of Psychology.
Marion A. Wenger, Ph.D., Emeritus Professor of Psychology.
Howard S. Adelman, Ph.D., Associate Professor of Psychology and Lecturer in Education.
Arthur P. Arnold, Ph.D., Associate Professor of Psychology.
Richard P. Bartol, Ph.D., Associate Professor of Psychology.
Jackson Beatty, Ph.D., Associate Professor of Psychology.
Elizabeth L. Bjork, Ph.D., Associate Professor of Psychology.
Patrice L. French, Ph.D., Associate Professor of Psychology.
Jacqueline F. Goodchilds, Ph.D., Adjunct Associate Professor of Psychology and Associate Research Psychologist.
Gerald M. Goodman, Ph.D., Associate Professor of Psychology.
Constance L. Hamm, Ph.D., Associate Professor of Psychology.
Donald G. MacKay, Ph.D., Associate Professor of Psychology.
Dennis J. McGinty, Ph.D., Adjunct Associate Professor of Psychology and Associate Research Analyst.
George E. Mount, Ph.D., Associate Professor of Psychology.
Hector F. Myers, Ph.D., Associate Professor of Psychology.
L. Anne Peplau, Ph.D., Associate Professor of Psychology.
Sheilley E. Taylor, Ph.D., Associate Professor of Psychology.
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Eran Zaidel, Ph.D., Associate Professor of Psychology.
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Felipe Castro, Ph.D., Assistant Professor of Psychology.
Andrew Christensen, Ph.D., Assistant Professor of Psychology.
Hattford H. Fairchild, Ph.D., Assistant Professor of Psychology.
Ralph E. Geiselman, Ph.D., Assistant Professor of Psychology.
Barbara Hayes-Roth, Ph.D., Adjunct Assistant Professor of Psychology.
Vickie M. Mosby, Ph.D., Assistant Professor of Psychology.
Sigrid R. McPherson, Ph.D., Adjunct Professor of Psychology and Medical Psychology and Assistant Research Psychologist.
Barbara N. Piper, Ph.D., Assistant Professor of Psychology.
D. Dean Richards, Ph.D., Assistant Professor of Psychology.
Perry W. Thordyke, Ph.D., Adjunct Assistant Professor of Psychology.

Joseph A. Alkire, Ph.D., Associate Clinical Professor of Psychology.
Joseph A. Angelo, Ph.D., Associate Clinical Professor of Psychology.
Marcelle F. Aronson, Ph.D., Assistant Research Psychologist in Psychology and Engineering.
Matthew W. Buttlieger, Ph.D., Clinical Professor of Psychology.
Douglas R. Burmore, M.A., Lecturer in Psychology.
Jeri A. Doane, Assistant Research Psychologist and Adjunct Assistant Professor of Psychology.
Mary-Lynn Doscher, Ph.D., Assistant Research Psychologist.
Gary Faltico, Ph.D., Associate Clinical Professor of Psychology.
Norma D. Feshbach, Ph.D., Professor of Education and Psychology.
Ronald Fast, Ph.D., Visiting Lecturer in Psychology.
John T. Friar, Ph.D., Assistant Clinical Professor of Psychology.
Louis F. Friedman, Ph.D., Lecturer in Psychology.
Pamela C. Freundt, Ph.D., Lecturer in Psychology.
Rosslyn Gaines, Ph.D., Professor of Medical Psychology and Psychology in Residence.
Kenneth Gerber, Ph.D., Assistant Clinical Professor of Psychology.
Beverly Golden, Ph.D., Associate Clinical Professor of Psychology.
Thomas C. Greening, Ph.D., Clinical Professor of Psychology.
Robert Gunn, Ph.D., Associate Clinical Professor of Psychology.
William S. Hansen, Ph.D., Assistant Professor of Psychology in Residence.
Judith Halama, Ph.D., Assistant Clinical Professor of Psychology.
Morris K. Holland, Ph.D., Adjunct Lecturer in Psychology.
Catharina T. Hoppenbrouwers, Ph.D., Associate Research Psychologist.
John P. Houlihan, Ph.D., Lecturer in Psychology.
George J. Huba, Jr., Ph.D., Lecturer in Psychology and Assistant Research Psychologist.
Harrington V. Ingham, M.D., Senior Physician Diplomate in Student Health Service and Associate Clinical Professor of Psychiatry and Psychology.
Harry J. Jerison, Ph.D., Professor of Medical Psychology and Psychology in Residence.
Paula B. Johnson, Ph.D., Assistant Research Psychologist.
Renee L. Kaplan, Ph.D., Associate Clinical Professor of Psychology.
George G. Katz, Ph.D., Associate Clinical Professor of Psychology.
Ronald Kendis, Ph.D., Visiting Lecturer in Psychology.
Adam T. Kohler, Ph.D., Assistant Clinical Professor of Psychology.
John R. Levine, Ph.D., Associate Clinical Professor of Psychology.
John H. Lyman, Ph.D., Professor of Engineering and Psychology.
Gerardo Marin, Ph.D., Assistant Research Psychologist.
Dennis McGinty, Ph.D., Adjunct Associate Professor of Psychology.
Jim Miller, Ph.D., Adjunct Lecturer in Psychology.
Wilbur E. Morley, Ph.D., Lecturer in Psychology.
Herbert A. Moskowitz, Ph.D., Associate Research Psychologist.
Leslie Navran, Ph.D., Clinical Professor of Psychology.
Michael D. Newcomb, Ph.D., Assistant Research Psychologist.
Robert A. Niemann, Ph.D., Assistant Research Engineer.
Philip Oderberg, Ph.D., Clinical Professor of Psychology.
Ruben Orive, Ph.D., Visiting Lecturer in Psychology.
Kenneth R. Pfeiffer, Ph.D., Lecturer in Psychology and Engineering.
Kenneth S. Pope, Ph.D., Adjunct Lecturer in Psychology.
Frank Risch, Ph.D., Clinical Professor of Psychology.
Bruce D. Rubenstein, Ph.D., Associate Clinical Professor of Psychology.
Graduate Program

The Department offers the Ph.D. degree, and the student 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, all students are required to obtain thorough grounding in research methodology and psychological theory. Major specialized training is available in the areas of psychology listed below under Major Fields or Subdisciplines.

Admission Requirements

Admission to the Ph.D. program normally requires an undergraduate degree in psychology. However, students from other areas (particularly from the mathematical, physical, biological, and social sciences) may be admitted if their interests and abilities are compatible with the Department's graduate program. Students are admitted to the program, during Fall Quarter only and on a full-time basis only. Applicants must mail the following documents directly to the Psychology Department by December 30 to be considered for admission the following Fall:

a. The departmental Application for Admission to the Doctoral Program. This can be obtained from 1285 Franz Hall.

b. Three letters of recommendation.

c. One official transcript from each college attended.

d. Scores from the Graduate Record Examination (GRE) Aptitude Test and the Advanced Test in Psychology. The Advanced Test scores should be no older than three years. There is no penalty incurred by students retaking the GRE.

e. An official score report of the Miller Analogies Test. Foreign students or U.S. students currently overseas are exempt from this requirement.

Students who are being considered as finalists to the Clinical program may be required to meet with the Clinical faculty for an interview. Exemptions from this requirement are made by the Clinical Admissions Director on a case-by-case basis.

A departmental brochure describing the graduate program in Psychology may be obtained from 1285 Franz Hall. Incoming students are expected to have had (1) a course in statistics (UCLA equivalent: Psychology 41); (2) two courses from among learning (Psychology 110), physiological (Psychology 115), and perception (Psychology 120); and (3) two courses from among the following alternatives: (a) personality (Psychology 125) or abnormal (Psychology 127); (b) developmental (Psychology 130); and (c) social (Psychology 135). Students who have not had training in these areas will be asked to remedy deficiencies by taking appropriate coursework or examinations. In addition, it is recommended that students have adequate preparation in mathematics, physics, chemistry, and the biological and social sciences, at least to the extent of a quarter's work at the college level in each. Continuation in the Ph.D. program is contingent upon satisfactorily clearing undergraduate deficiencies by the end of the fourth quarter in residence.

Advising

Each student applies, and is accepted into, one of the departmental areas (described below).

Students are assigned individual faculty advisors with whom they are required to meet each quarter, to receive study list approval.

Students are evaluated quarterly while satisfying Core Program requirements, a period of time expected to span over four quarters. The evaluations are conducted by the Graduate Evaluation Committee.

Major Fields or Subdisciplines

Students may major in Clinical, Cognitive, Developmental, Learning and Behavior, Measurement and Psychometrics, Personality, Physiological, or Social Psychology. With the exception of Clinical, students can minor in any of the areas listed above, as well as in Industrial. Students may petition for individualized minors or a minor in Experimental Psychopathology. Training is also available in Community Psychology.

Foreign Language Requirement

Competence in one of the following foreign languages is required of students in the area of Measurement and Psychometrics: French, German, Italian, Spanish, or Russian. In other areas, students' faculty advisors also have the right to require one or more foreign languages. Students may petition to substitute a series of three or more quarter courses in another department for one of the languages, provided that these courses impart a relevant research skill.

Course Requirements

General Course Requirements. All students, regardless of area, must fulfill the following requirements:

Students must complete the Core Program within the first four quarters in residence. The Core Program includes four core courses, Psychology 250AB and 251AB (and C, if an additional quarter is needed to complete the course).

Requirements for the M.A. degree are nine graduate courses (36 units), including 250AB, 251AB (Research project must be complete), and three of the four required core courses. Two 596 courses (8 units total) may be applied. Courses in the 400 series may not be applied. All undergraduate deficiencies must be cleared.

By the end of the second year, students must complete at least one individual research course (596) and at least three second-year graduate courses, including one quantitative course chosen from the following: 238, 274A, 249, 252, 253, 254, 255, 256, 257, 258, 259, 287.

During the third year, students must enroll in a minimum of three graduate level courses, plus one quarter of 596. At least one quarter of 596 or 599 should be taken during the fourth year and each remaining year in the graduate program.

Major Area Course Requirements. Each area requires certain courses of students majoring in that area. These requirements are as follows:

- Clinical: 270ABC; 271ABC, at least two courses in the 272 series, the area's 2-quarter assessment course, and at least two other advanced clinical courses outside the 272 series.
- Cognitive: 260AB, plus two courses chosen from 261, 262, 263, and 264.
- Developmental: 240; one course chosen from 220A, 235, and 286; one course chosen from 208, 261, 262, 263, 264 or three modules of 205; three courses chosen from 241, 242A, 242B, 242E, 243AB, or 244. In addition to the quantitative courses listed under second year requirements above, Developmental majors must take an additional quantitative course selected from the same list.
- Learning and Behavior: 200AB, plus two courses from 204C, 204D, 208, 210, 281, 293, and 294.
- Psychological: 249, 252, 253, 254, 255, and other measurement courses which are regularly offered. Personality: 232, 235, 239, 278, and one course chosen from 233 or 234. Personality majors may not take an additional quantitative course selected from the same list. Learning and Behavior: 200AB, plus two courses from 204C, 204D, 208, 210, 281, 293, and 294.
- Social: 220AB, 223 or 224, and three social seminars taught by three different faculty members.

Minor Area Course Requirements. The student 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 which is administered by the major area and which examines in breadth the student's knowledge of the major field. The second part is an individualized examination which examines in depth the student's knowledge of his or her area of specialization within the major field. The third part is the Oral Qualifying Examination. All Ph.D. requirements listed above must be completed before this portion can be taken.

The specific requirements of the various areas are as follows:

Clinical: The standardized examination takes the form of written and oral examinations administered at the end of the first and second years, respectively.

Cognitive and Learning Behavior: The standardized and individualized sections are combined into one examination, based on an approved program of study. The student either takes an 8-hour written examination or writes a paper. In either case, an oral examination may be required.

Developmental: The standardized section is based on an approved program of study. The student has the option of taking a 3-hour written examination or writing three essays.

Measurement/Psychometrics and Social: The standardized examination is a 3-hour written examination which is based on a reading list provided by the area, or alternatively (in the measurement area) on a reading list proposed by the student and approved by the area.

Personality: For the standardized section, the student may either write three essays or take a 3-hour examination based on reading and question lists provided by the area.

Physiological: The standardized requirement may be met in any one of three ways: (1) by written examination based on a question list and or reading list provided by the area (a higher level of proficiency is expected if a question list is provided than if only the reading list is provided); (2) by essays on three well-separated topics in the area; or (3) by an approved program of study; evaluation is either by a 3-hour written examination or by essays (usually three).

Practicum and Internship Requirements for Clinical Students

(a) At least six quarters of approved supervised internship practical (Psychology 401 — 12 to 15 hours/week). A concentrated summer practicum can be used to meet a portion of this requirement. (During the second and third years, the practicum experiences would thus generally total a minimum of 432-576 hours per year, in addition to research experiences with clinical populations.)

(b) 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. This can be taken in the fourth or fifth year, or after most of the research for the Ph.D. is completed. In exceptional circumstances, the well-prepared student may begin the internship in the third year. The prerequisites for the internship assignment are the satisfactory completion of Psychology 401, the departmental Comprehensive Qualifying Examinations, and the minor requirements. The second half-time, as well as the full-time internship assignment, should normally be taken after the doctoral dissertation prospectus has been approved.

Doctoral Committees. In addition to the requirements imposed by the Graduate Council, the three members of the doctoral committee who are from the Psychology Department must represent at least two different areas.

Final Oral Examination Following Completion of the Dissertation. The Final Oral Examination is required of all candidates for the Ph.D. degree.

Time to Degree. Full-time students in Clinical Psychology are expected to complete the Ph.D. program in 18 quarters. All other students are expected to complete the degree within 15 quarters. The dissertation must be filed within three years following the completion of the Oral Qualifying Examination. Students who do not meet this requirement must take the Qualifying Examination over again.

Candidate in Philosophy Degree. Students are eligible to receive the C.Phil. degree upon advancement to candidacy for the Ph.D.

Disqualification and Appeal of Disqualification. Any student who receives two grades of B+ or one grade of C+ or F is subject to termination. Area committees may also recommend termination because of problems such as unsatisfactory performance in coursework or on qualifying examinations. In the case of Clinical students, termination may be recommended because of unsatisfactory professional skills or aptitudes.

A recommendation for disqualification is open for appeal to the Chair of the Department. Students who have not completed all requirements for the Ph.D. degree by the end of seven calendar years after admission to the program are subject to dismissal. This rule is enforced by the Graduate Affairs Committee.

Fellowships, Scholarships, Assistantships and Stipends. A number of teaching and research assistantships, departmental traineeships, and University fellowships are available. Financial aid and work-study awards are also available.

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. Supported by the National Institute of Mental Health, the SSMHRC provides an interdisciplinary research environment for scholars, students, and professionals interested in Hispanic mental health. The SSMHRC through its Clearinghouse Division publishes monographs, occasional papers, and the Hispanic Journal of Behavioral Sciences. It also maintains a computer-based bibliography to facilitate access to the literature in this field. The SSMHRC also supports students as research assistants. Research projects currently under way include
studies on acculturation and ethnicity, psychological assessment, health, bilingualism, community mental health, social psychology, socialization practices, and the role of the family.

*Graduate Courses

200A. Animal Learning and Behavior. This course will focus on basic principles and characteristics of learning and behavior, including Pavlovian conditioning, instrumental learning and species specific behavior. The Learning and Behavior Staff

200B. Human Learning and Behavior. Topics to be covered include human learning and conditioning and the application of learning principles in psychology and behavior therapy. Mr. Arnold

204A-204B. Seminar In Critical Problems In Learning. Formerly numbered 204C-204D. May be taken independently and in any order. Critical problems will be drawn from such as the following: 204A. Psychophysics of Attention and Learning. The study of research and theories concerned with the psychophysiology of attention and learning primarily in humans. Concepts and areas covered include the orienting reflex, dominant focus, classical conditioning and their implications for the psychophysiology of psychopathology and psychotherapy. Mr. Mautz

204B. Theories of Learning. Prerequisite: Psycholology 200A or equivalent. Critical discussion of the major theories in learning and their current status. Mr. Butcher

205A-205B. Physiological Correlates of Behavior. Prerequisites: courses 115 or equivalent and consent of instructor. 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. The Physiological Staff

206. Psychophysiology of Brain Function. Modern concepts of the functional organization of the brain with particular emphasis on the normal and pathological phenomena and behavior. Recent advances 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. Mr. Beatty

207A-207B-207C. Seminar in Physiological Psychology. Prerequisite: course 115 or equivalent. Mr. Butcher, Mr. Ellison, Mr. Krause

*208. Seminar In Comparative Psychology. M. Arnold

*210. Comparative Psychobiology. Prerequisites: course 115 or equivalent and consent of instructor. A survey of the determinants of species-specific behavior including genetic influences and learning. Mr. Arnold

212. Evaluation of Research Literature in Physiological Psychology. (4 course) Prerequisite: course 205 or consent of instructor. Papers of current interest will be presented by members of the seminar and their significance and methodological soundness will be evaluated and criticized in depth. Course may be repeated for credit. Physiological Staff

218A-218B. 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 the concepts, theories, and major problems in social psychology. The Social Staff

221. Seminar In Attitude Formation and Change. Prerequisite: courses 220, 227, or consent of instructor. A critical review of research on social psychological processes and the influence of social factors on human behavior. Mr. Gerard

222A-222B. Seminar in Group Behavior. Prerequisite: courses 220, 227, or consent of instructor. Special topics in interpersonal relations and group dynamic. Power control, structure and organization, group functioning. Mr. Kelley, Mr. Raven

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 Psychology C136B. Ms. Gutke

224. Experimental Methods in Social Psychology. Prerequisite: courses 220A, 206B, 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. Prerequisite: courses 220A, 206B, or consent of instructor. May be repeated for credit with consent of instructor. The Social Staff

227. Health Psychology. Lecture, two hours; discussion, one hour. Prerequisite: Undergraduate degree or training in psychology. Health Psychology explores psychological and social factors involved in the etiology of illness, 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 society. Mr. Thor

*228. Seminar in Political Psychology. (Same as Political Science M224G.) Prerequisite: course 220A or consent of instructor. Examination of political behavior, political socialization, personality and politics, racial conflict, and the analysis of public opinion on these issues. Mr. Sear

*229A. Issues in the Social Development of the Minority Child. Prerequisites: consent of instructor and Graduate Standing. A critical evaluation and integration of research in the social psychological literature. The course will focus on the socialization of cognitive and personality style, with the goal of empirically clarifying the issues raised in this area of developmental study. Dr. Hew 

232. Experimental Research on Human Sexual Behavior. Prerequisite: Graduate Standing. This course has been designed to teach students how to carry out research on human sexual behavior. The contents will 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 in the laboratory, and theoretical approaches. The format will be discussion oriented, with emphasis placed on operationalizing predictions concerning human sexual functioning. Mr. Abramson

*233. Seminar in Environmental Psychology. Prerequisite: courses 230A, 230B and 220A. Critical review of work in environmental psychology designed to identify basic dimensions for the analysis of man-environment relationships. The framework of analysis uses human emotional responses to environments and the interpretation of variables linking individual physiological traits to a variety of approach-avoidance behaviors. Individual differences and drug induced states as these relate to the emotional response dimensions are emphasized. The course is intended for individuals interested in the relationship between human behavior and the environment. Mr. Mehrabian

235. Personality. A survey of cognitive, analytic, and learning theories and approaches to the study of personality. Emphasis will be on the intensive exploration of selected concepts and related research. The Personality Staff

236. Seminar In Mental Measurements. M.229. 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. Focusing on causes of outcomes in achievement, power, and affiliation domains also are stressed. B. Weiner

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 basic research relevant to both clinical and research work with children. Ms. Greenfield, Mr. Jeffre

242A-242E. Seminar In Development Psychology. Prerequisites: course 240 or equivalent and consent of instructor. These seminars may be taken in any order or they may be repeated for credit, 

242A. Perceptual Development. Ms. Rader

242B. Cognitive Development. Ms. Greenfield, Mr. Jeffre

242C. Socialization. Ms. Madsen

242E. Cognitive Factors In Learning Disorder. Mr. Adelman

*243A.*243B. Seminar In Practical and Social Issues In Developmental Psychology. Prerequisites: course 240 or equivalent and consent of instructor. Concerns socialization processes in human development and implications for social-political, educational, research issues, values and societal change. Credit and grade to be given only upon completion of 243B. Mr. Mehrabian

244. Critical Problems In Developmental Psychology. Prerequisite: course 240 or equivalent, and consent of instructor. The course will be concerned with current problems and will vary from time to time depending upon the interest of the class and instructor. May be repeated for credit with consent of instructor.

*245A. Personality Development and Motivation In Education. (Same as Education M217G.) Personality development and educational conditions which bring motivational processes in children such as aggression, creativity, sex differences, empathy, research and personality theory bearing on motivational problems in school settings and curricu-

*246. Psychological Aspects Of Mental Retardation. (Same as Psychiatry M246.) Prerequisite: consent of instructor. Discussion of the psychological aspects of mental retardation to include: classification, description, etiology, theory, prevention, treatment, assessment, modern and future developments, and input from other disciplines (ethics, law, religion, welfare systems).


247A. Acquisition and analysis of data, on-line analysis of behavior and control of variables. Inverse content areas of psychology, e.g., perception, social, clinical, personality, and physiological.

Mr. Carter

247B. Prerequisite: course 247A or consent of instructor. Topics in human problem solving, information processing and computer applications. Focus is on problems arising in computer simulation of behavior. Each student will undertake a substantial project of his own.

Mr. Carter

248. Evaluation Research. Prerequisites: courses 225A, 225B and 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. Woodward, Mr. Wickens

250B. Advanced Psychological Statistics. Advanced experimental design and planning of investigations. Mr. Woodward, Mr. Wickens

251A-251B-251C. Research Methods. Discussion. Students will design and conduct original research under the supervision of the instructor in charge. It is anticipated that many students will complete their project in two quarters. Normally three quarters will be allowed. 251A: S/U grading only.

252. Multivariate Analysis. Prerequisites: courses 250A and 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


254. Seminar In Psychological Scaling. Theory of measurement, law of comparative judgment, methods of unidimensional scaling, multidimensional scaling and related topics of current interest. Mr. Holman

255. Quantitative Aspects of Assessment. Fundamental assumptions and equations common to all current problems in assessment. Mr. Woodward

256. Seminar In Critical Problems in Psychological Measurement. Critical examination of issues in the major approaches to psychological measurement; relation is 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 methods in multivariate analysis. Causal modeling: theory-testing via the analysis of moment structures. Measurement models such as confirmatory, higher-order, and structured-means factory analysis. The structural-equation modeling path and simultaneous equation models. Parameter estimation, hypothesis testing and other statistical issues. Computer implementation. Applications. Mr. Benter

258. Special Problems In Psychological Statistics. Prerequisites: course 250A and 250B or consent of instructor. Special problems in psychological statistics and data analysis will be examined. Mr. Wickens

*259. Quantitative Methods In Cognitive Psychology. Prerequisites: course 250A and 250B or consent of instructor. This course will consider a number of nonstatistical mathematical methods and techniques commonly used in cognitive psychology. Topics to be covered include Markov chains, other stochastic processes, queuing 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 only.

*261. Perception. Prerequisite: course 250A or 250B, or consent of instructor. Concepts, theories, and research in the study of perception. Considers the senses; i.e. vision, hearing, touch, kinesthesis, taste, or smell as they do. What is the nature of perceptual systems? How do these systems process information? Mr. Thomas, Ms. Rader

262. Human Learning and Memory. Prerequisite: course 250A or 250B, or consent of instructor. Contemporary theory and research in human verbal learning and memory; verbal and non-verbal learning and memory. Mr. Bjork

263. Psycholinguistics. Prerequisite: course 260A or 260B, or consent of instructor. Contemporary theory and research in psycholinguistics; coding and decoding, psycholinguistic parameters of language learning, speech recognition and perception. Ms. French

*264. Judgment and Decision Processes. Prerequisite: course 260A or 260B, or consent of instructor. Cognitive theory and research in judgment and decision processes: psychophysical scaling, contextual effects on rating scales, models for the analysis of value decisions. Mr. Parducci

*265. Thinking. Prerequisite: course 260. Contemporary theory and research in thinking, problem solving, inference, semantic memory, internal representation of knowledge, imagery, concepts. Mr. MacKay

266A-266E. Seminar In Human Information Processing. Prerequisites: course 260A and 260B or consent of instructor. Topics will vary with the interests of the students; may be taken in any order 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. Ms. Rader

*269. Seminar In Cognitive Psychology. Prerequisites: course 260A and 260B or consent of instructor. A discussion of problems in Cognitive Psychology that encompass more than a single subfield of the area. May be repeated for credit.

*270A-270B-270C. Foundations of Clinical Psychology. Prerequisites: concurrent enrollment in Psychology 271A-271B-271C. Open only to graduate students in Clinical Psychology.

270A. Analysis of phenomenological, theoretical and research issues regarding the etiology and mediating mechanisms in neurotic, affective, schizophrenic spectrum, and other personality disturbances. The Clinical Staff

270B. Principles and methods of psychological assessment. The Clinical Staff

270C. Principles and methods of psychological intervention in individuals, families and community settings. The Clinical Staff

271A-271B-271C. Clinical Psychological Methods. (1/2 course each) Prerequisites: concurrent enrollment in Psychology 270A-270B-270C. Procedures in clinical psychology as applied in clinical and community settings. This course provides supervised exposure to the psychological attributes of psychopathology and the procedures for psychological assessment, research and research with clinical populations. Experience will be closely coordinated with the course content in Psychology 270A-270B-270C. The Clinical Staff

272A-272F. Advanced Clinical Psychological Methods. Prerequisite: concurrent enrollment in course 401 or 451, except with consent of instructor. May be taken independently and in any order.

*272A. Behavior Modification with Children. Prerequisites: course 271A-271B-271C or permission of instructor. This will be one course in the sequence of clinical intervention and assessment offerings for 2nd and 3rd year clinical students. It will cover behavior modification research and practice in clinic, school, institution and home settings. There will be 3 short, 1 long paper(s) and accompanying class notes. (And some field experience.) Mr. Baker

*272B. Psychotherapy with Adults. Mr. Thomas

*272C. Clinical Interventions for Psychological Problems of Children. Ms. Rader

272D. Family Therapy and Family Dynamics. Mrs. McPherson

272E. Special Problems. The Clinical Staff

272F. Advanced Clinical Psychological Methods: Behavior Modification with Adults. Prerequisites: Gradate Standing in clinical psychology; second year; 2nd or 3rd year students. Focus on current cognitive behavior modification principles and techniques. Major conceptual issues will be analyzed, and specific techniques will be demonstrated and practiced by students to cover a range of adult problems such as depression, stress and anxiety, anger management, assertion problems. Ms. Hammen, Ms. Mays

273. Interpersonal Communication Seminar. Prerequisite: course 262 or consent of instructor. Each student will develop a design for studying help-orientied interchange in community and clinical settings. Initial focus will be measuring interpersonal, personal, style and training effects. Mr. Goodman

274A-274B. Group Therapy Dynamics. Mr. Sheehan

M275. Family Process: Psychological and Social Perspectives on the Family. (Same as Social Welfare M275.) This course reviews various theoretical perspectives applicable to the analysis of family structure and dynamics. Critical issues in the application of family constucts to clinical problems will receive particular attention. Mr. Cohen, Mr. Goldstein

276. Clinical Approaches to Children with Learning and Related Behavior Problems. (Formerly numbered 276A-276B) Lecture, three hours; discussion, one hour: Prerequisite: 225A or 225B and admission to a doctoral program. The focus is on theoretical and research issues and problems related to purposes of and practices involved in assessment and correction approaches for children with learning and behavior problems. Practicum experiences are offered to illustrate course content and provide opportunities to improve research and clinical competencies. Mr. Adelson

277. Advanced Clinical Assessment. The course will cover 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 Neurosis. Mr. Feshbach

279. Seminar In Research In Psychopathology. Mr. Rodnick

*281. Seminar In Behavior Therapy. Mr. Lovass

282. Interpersonal Forms Analysis of Human Interaction Structures. Conceptual and experimental studies of mechanisms involved in the psychological attributes of particular forms of psychotherapy and everyday interaction; questions, silences, advice, interpretation, self-disclosure, and reflection. Lab work will be performed in conjunction with lecture and seminar sessions. Mr. Goodman

283. Psychopathology. A survey of the dominant psychological attributes of particular forms of psychopathology, including an analysis of the status of various theories concerned with the etiology and mediating mechanisms of personality, neurosis, the schizophrenic spectrum and affective disturbances. Mr. Rodnick

*284. Seminar In Clinical Psychology and Communication. Mr. Sheehan

285. Issues and Concepts of Clinical Psychology. Special issues and alternatives in current practice. Emphasis on assessment and intervention, with consideration of historical, theoretical and research bases for current trends. Open to graduate students not majoring in clinical psychology. Mr. Sheehan

287. Critical Problems in Clinical Research Methodology. Prerequisites: courses 250A, 250B. Special problems of measurement and design in clinical research will be examined. Mr. Christensen
Professional Courses

300. Practicum in the Teaching of Psychology. Prerequisite: upper division Psychology major and consent of instructor. Training and supervised practice in advanced undergraduate instruction in the teaching of Psychology. Students will serve as junior teaching assistants, assist in the preparation of materials and the development of innovative programs. This course may be repeated for credit.

351. Research in Psychology. Prerequisites: Sophomore Pre-Psychology or Psychology Major Standing and consent of instructor. Practical applications of psychology through research. Students attend a one hour weekly seminar and intern in an approved research setting for seven hours a week. For further information consult the Psychology Advising Office, 1531 F. Hall. P/NP grading only. May be repeated once for credit.

351. Research in Psychology. Prerequisites: Sophomore Pre-Psychology or Psychology Major Standing and consent of instructor. Practical applications of psychology through research. Students attend a one hour weekly seminar and intern in an approved research setting for seven hours a week. For further information consult the Psychology Advising Office, 1531 F. Hall. P/NP grading only. May be repeated once for credit. 

401. Field Work in Clinical Psychology. (1 or 2 courses) Prerequisites: courses 271A-271B-271C. Students on practicum assignments are required to register for course each quarter. Exception with consent of Clinical Psychology Program Director.

402. Field Work in Speech Pathology. (1 or 2 courses) Prerequisite: consent of instructor. Practical work in hospitals and clinics in diagnostic testing and psychotherapy with speech disorders.

410A-410B-410C. Clinical Teaching and Supervision. Prerequisite: completed Ph.D. comprehensive exam. Advanced to candidacy, or preparation for dissertation research actively underway. Permission of instructor and the Clinic Steering Committee. Study and practice of the knowledge, concepts and theories on teaching and supervision of applied clinical psychology. (2 quarters) 

420A-420B. Health Psychology Practicum. (1 course each) Prerequisite: Graduate Standing. 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, 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 class to research observation and/or clinical work in the field.

Ms. Taylor

425. Health Psychology Lecture Series. Clinicians and researchers in health psychology from the Los Angeles area will present their research, programs, and/or clinical work as part of a training program in health psychology. May be repeated for credit. S/U grading.

426. History of Psychology. Philosophical and historical context of contemporary psychology. Major trends from the 19th century to contemporary issues will be considered. Mr. Maltzman

290. History of Psychology. Philosophical and historical context of contemporary psychology. Major trends from the 19th century to contemporary issues will be considered. Mr. Maltzman

288. Sankr In Research In Personality (Yi, Zhou, Sheehan). Prerequisite: consent of instructor. 

290. History of Psychology. Philosophical and historical context of contemporary psychology. Major trends from the 19th century to contemporary issues will be considered. Mr. Maltzman

451. Internship In Clinical Psychology. (1 or 2 courses) Prerequisites: courses 401, 425. Open only to students who have passed departmental qualifying examination. May be repeated for credit. 

501. Cooperative Program. (1 course) Prerequisite: approval of UCLA Graduate Advisor and Graduate Dean. Approval of host campus Instructor, Department Chairman and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. To be graded S/U.

Individual Study and Research

596. Directed Individual Research and Study In Psychology. (1 to 3 courses) One course required during second year of graduate study. One course in 596 or 598 required during each succeeding year of graduate study. (Terminal M.A. candidates are excused from these requirements.) 

597. Individual Studies. (1 to 3 courses) Intended primarily for preparation for Ph.D. qualifying examinations. May be repeated once for credit as prerequisite for taking qualifying examinations.

599. Research on Dissertation. (1 to 3 courses) Prerequisite: Satisfactory performance in qualifying examinations. One course required during each year following passing of qualifying examinations.

Public Health

(Office, 16-035 School of Public Health)

Abdelmonen A. Afifi, Ph.D., Professor of Biostatistics and Biometrics.

Roslyn B. Alfin-Slater, Ph.D., Professor of Nutrition and Biological Chemistry.

Lawrence A. Ash, Ph.D., Professor of Public Health (Office of the Dean). 

Judith Blake, Ph.D., Fred H. Bloty Professor of Population Policy and Sociology.

Leslie Breslow, M.D., M.P.H., Professor of Public Health.

Potter Chang, Ph.D., Professor of Biostatistics.

Virginia A. Clark, Ph.D., Professor of Biostatistics and Biometrics.

Irvin Cushner, M.D., M.P.H., Professor of Obstetrics and Gynecology and Public Health.

Roger Detels, M.D., M.S., Professor of Epidemiology (Dean of the School). 

Oliver Dunn, Ph.D., Professor of Biostatistics and Biometrics.

Johnathan Fielding, M.D., Professor of Pediatrics and Public Health.


Shehendu B. Kari, Dr.P.H., Professor of Public Health.

Alfred H. Katz, M.A., D.S.W., Professor of Public Health and Social Welfare.

John Kraus, Ph.D., Professor of Epidemiology and Southern Occupational Health Center.

Robert A. Mah, Ph.D., Professor of Environmental Health Sciences.

Frank J. Massey, Jr., Ph.D., Professor of Biostatistics.


Dennis J. Poirier, Ph.D., Professor of Public Health and Psychiatry.

Edward L. Rada, Ph.D., Professor of Economics in Public Health.

Milton I. Roemer, M.D., M.P.H., Professor of Public Health.

John F. Schacher, Ph.D., Professor of Public Health in Residence.

Stuart O. Schweitzer, Ph.D., Professor of Public Health.

William Snoshick, Ph.D., Professor of Public Health.

Marilen E. Swendsen, Ph.D., Professor of Nutrition and Biological Chemistry.

Paul H. Torrens, M.D., M.P.H., Professor of Public Health.

Daniel M. Wilner, Ph.D., Professor of Public Health.

Telford H. Work, M.D., M.P.H., D.T.M.&H., Professor of Infectious and Tropical Diseases and Microbiology and Immunology.

Ruth Boak, Ph.D., M.D., Professor of Microbiology and Immunology. Pediatrics and Public Health Emeritus.

John M. Chapman, M.D., M.P.H., Professor of Environmental Health.

Gladys A. Emeron, Ph.D., Professor of Nutrition Emeritus.

C. E. Hopkins, Ph.D., M.P.H., Professor of Public Health Emeritus.

Raymond J. Jeean, Ph.D., Professor of Management and Public Health Emeritus.

Edward B. Johns, Ed.D., Professor of Health Education Emeritus.

Florence J. McGucken, M.S., Lecturer in Nutrition Retired.

Ralph W. McKee, Ph.D., Professor of Biological Chemistry and Public Health Emeritus.

Frances R. Tallman, M.D., Professor of Psychiatry and Public Health Emeritus.

Emil Berkanov, Ph.D., Associate Professor of Public Health.

Linda B. Bourque, Ph.D., Associate Professor of Public Health.

Albert Chang, M.D., M.P.H., Associate Professor of Public Health.

Shan Cretin, M.P.H., Ph.D., Associate Professor of Public Health.

Michael Criqui, M.D., Ph.D., Associate Professor of Public Health and Medicine.

Climas Davos, Ph.D., Associate Professor of Environmental Health Sciences.

Ralph Franks, M.P.H., D.P.H., Associate Professor of Epidemiology.

John Fraweus, M.S., Ph.D., Acting Associate Professor of Public Health.

Michael S. Goldstein, Ph.D., Associate Professor of Public Health and Sociology.

Sheldon Greenfield, M.D., Associate Professor of Medicine and Public Health.

Isabella F. Hunt, D.P.H., Assoc. Professor of Nutrition.

Mohammad G. Mustafa, Ph.D., Associate Professor of Environmental Health Sciences and Medicine.

Charlotte G. Neumann, M.D., M.P.H., Associate Professor of Public Health and Pediatrics.

Susan Scribner, Ph.D., Associate Professor of Public Health and Anthropology.
School of Public Health

Public Health is a broad, multidisciplinary field of study directed toward understanding and control of factors affecting the health of populations. The mission of the School of Public Health is to develop and teach the application of the sciences to the solution of community health problems. The concerns of public health cut across national boundaries and include the functions of both voluntary and governmental agencies, of research and teaching institutions, and of health care facilities.

There are many areas of emphasis in the field, and five may be singled out: (1) nature, extent and distribution of disease; (2) quantitative methods of description and analysis; (3) environmental hazards, their identification and control both in technologically advanced and in developing regions of the world; (4) the organization and delivery of high quality health care to all members of society; (5) basic biological and psycho-social processes that affect the health and well-being of populations. Because of the multidisciplinary concerns of Public Health, programs are available for students whose academic preparation has been in one or another of the various physical, biological or social science areas; for example, bacteriology, medicine, nursing, dentistry, veterinary medicine, optometry, pharmacy, engineering, mathematics, statistics, sociology, psychology, economics, political science, etc.

Through organized programs in the School of Public Health, students entering the field may prepare themselves for careers in such basic specialties as epidemiology, biostatistics, nutritional science, environmental health sciences, and maternal and child health in both domestic and international settings. They may also prepare themselves for the challenges in the promotion of community well-being such as in the operation of hospitals, health maintenance in industry, health education of the public, organization of medical care, furthering the role of behavioral sciences in public health, and community health administration.

School of Public Health Divisions

The divisions, rooms and telephone numbers in the School of Public Health are: Behavioral Sciences and Health Education, Room 26-051, (213) 825-5379; Biostatistics, Room 51-254, (213) 825-5312; Environmental and Nutritional Sciences, Room 56-070, (213) 825-9334; Epidemiology, Room 71-254, (213) 825-8579; Health Services, Room 31-269, (213) 825-2594; Population, Family and International Health, Room 36-071, (213) 825-4053.

Application Information for All Degrees Within Public Health, Including Biostatistics

Applications. Application forms and the Public Health Announcement can be obtained by writing to the Office of Student Affairs, School of Public Health, UCLA, Los Angeles, California 90024. Both the School of Public Health Application for Admission to Graduate Studies and the UCLA Combined Application for Graduate Admission/Fellowship and Financial Aid must be completed. Three letters of recommendation are required, two from former professors and one from current employer (if no employer, three former professors) before an application is considered complete. It is the applicant's responsibility to ensure that the application file is complete.

Application Deadline for the School of Public Health for Fall 1983. Although the published deadline for graduate applications is December 30, 1982 for Fall 1983 admission, the School will also review applications received until February 15, 1983. Early application is recommended, however, to expedite review of both applications and funding requests.

Admission Requirements. Applicants must meet the University minimum 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, Family and International Health, prior field experience is not required as a condition of admission, although a background of public health experience may be considered as a factor in the evaluation of applicants. In addition, the applicant must be accepted by and accommodated in the Division of the Department of Public Health in which he/she wishes to study. Students who need help to decide upon a Division should speak either to the School of Public Health counselor or to the staff in the Office of Student Affairs.

Applicants to the School of Public Health must perform satisfactorily on a recent GRE, MCAT or DAT aptitude test. 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. No screening examination is required for admission; however, specified courses are required by Biostatistics and Environmental and Nutritional Sciences Divisions (see below). If an applicant's undergraduate coursework has been deficient in breadth of fundamental training and fails to provide a proper foundation for advanced work in the Department, it will be necessary for the student to take specified undergraduate courses after admission.

Information for Applicants at the Master's Level

Applicants must be:
1. Holders of a professional doctoral degree in medicine, dentistry, nursing, optometry, pharmacy, or veterinary medicine (with or without a prior bachelor's degree) from an accredited school.
2. Physicians at UCLA in the General Preventive Medicine Residency.
3. Qualified students in the Latin American or African Studies articulated degree programs or in the schools of Dentistry, Law, Management or Medicine.
4. Holders of a bachelor's degree from an accredited institution. Preparation in the sciences basic to Public Health must be adequate. Such sciences include various combinations of: (a) life sciences; (b) physical sciences and mathematics; (c) social sciences; (d) behavioral sciences. Applicants are not expected to be prepared in all four of these fields, but a background in a suitable combination of these sciences is required.

PLEASE NOTE:
1. Students whose field of concentration is to be in the area of Environmental Health Science or Nutritional Science should have a bachelor's degree in biological or chemical sciences or an appropriate field with coursework including: three quarters of general chemistry including quantitative analysis and three quarters of organic and/or biochemistry; mathematics through calculus; three quarters of biological sciences (for nutrition only; this must include one quarter of bacteriology or microbiology); three quarters of physics.
2. 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. Preliminary selection of applicants is made by program faculty who then advise the Division of the final selection. Prior to enrollment, students must demonstrate a basic competency in accounting either by taking an introductory accounting course or by passing a waiver examination administered by the program.
3. Applicants interested in the Population, Family and International Health Program must have some prior experiences in the health field (paid or volunteer).
4. For admission to the Master of Science in Biostatistics Program, the student must have completed the bachelor's degree with a major in mathematics or computer science or a field of application of biostatistics. Undergraduate preparation for the program should include Mathematics 31A-B, 32A-B, 33A-B (second year calculus) or the equivalent.

Information for Applicants at the Doctoral Level

Admission Requirements for the Dr.P.H. and the Ph.D. in Public Health. In addition to the University minimum requirements, the Department requires (1) at least a 3.0 junior-senior undergraduate grade point average, at least a 3.5 grade point average in graduate studies or demonstrated superiority in graduate work, and at least a B in each of the mandatory CORE courses of the School; (2) a positive recommendation by a Division of the School (Department of Public Health); (3) approval by the Doctoral Admissions Subcommittee; (4) approval by the Department Chair;
and (5) for the Dr.P.H., completion of the M.P.H. degree in Public Health or an appropriately related field. (If the master's degree is in a field other than Public Health, the applicant must have taken the equivalent of the mandatory M.P.H. courses or include them in his/her course of study after admission.) (6) for the Ph.D., in Public Health, completion of the M.S. in Public Health or an appropriately related field (students with an M.P.H. will need to satisfy the requirements of the School's M.S. in Public Health before admission to candidacy). Admission Requirements for the Ph.D. in Biostatistics. Qualifications for admission to the Ph.D. program in Biostatistics are those currently specified by the Graduate Division. Normally, students receive an M.S. in Biostatistics at UCLA before admission to the Ph.D. program. Students who enter the Ph.D. program from other master's programs are required to pass a written Comprehensive Examination within one year of their admission. This examination is comparable to the M.S. Comprehensive Examination.

Major Fields or Subdisciplines

Master's Level
Master of Public Health

The School of Public Health offers the Master of Public Health degree in the following areas of concentration:

- Health Education
- Biostatistics
- Environmental Health Science — (with emphasis in water quality; environmental management; air quality; environmental epidemiology; environmental sciences and engineering; occupational health and safety (industrial hygiene); or environmental toxicology)
- Epidemiology — (with emphasis in chronic diseases or infectious and tropical diseases)
- Health Services Organization — (available, in general, only to students with a prior doctoral degree. Exceptions may be granted by the Division Head with the approval of the Assistant Dean of Academic Affairs.)
- Health Services Management — (with emphasis in health facility management; finance and accounting; or health information systems)
- Nutritional Science — (with emphasis in public health community nutrition and nutritional biochemistry)
- Population, Family and International Health — (with emphasis in population; family health and family planning; reproductive and women's health; family health, including maternal and child health; genetic counseling; international health, including nutrition.

Doctoral Level
Doctor of Public Health

The School of Public Health offers the Doctor of Public Health degree in these areas of concentration:

- Behavioral Science and Health Education Biostatistics
- Environmental Health Science
- Epidemiology
- Health Services
- Nutritional Sciences
- Population, Family and International Health

Ph.D. in Public Health

The School of Public Health offers the Doctor of Philosophy in Public Health degree in these areas of concentration:

- Behavioral Sciences and Health Education
- Environmental Health Science
- Epidemiology
- Health Services
- Nutritional Science

Ph.D. in Biostatistics

The School of Public Health offers a Ph.D. in Biostatistics.

Advising

Masters' Candidates

An adviser is appointed for each beginning master's student by the (Division) Head of the respective Division. The student and the adviser together agree upon a study list for each academic quarter and any subsequent alterations must be approved both by the adviser and the Assistant Dean of Academic Affairs before submission to the Graduate Division. The student is expected to meet with his/her adviser each quarter. The student and the adviser together agree upon a study list for each academic quarter and any subsequent alterations must be approved both by the adviser and the Assistant Dean of Academic Affairs before submission to the Graduate Division. The student is expected to meet with his/her adviser each quarter. A departmental Guidance Committee is established when the student has completed approximately half of the program for the master's degree. Members of the departmental Guidance Committee are nominated by the Division Head after consultation with the adviser and the student and are approved by the Department Chair.

Doctoral Candidates

Doctor of Public Health. An academic adviser is assigned to each new student by the Head of the Division. The student and the adviser together agree upon a study list for each academic quarter; any subsequent alterations must be approved both by the student's adviser and the Assistant Dean of Academic Affairs for continuance or dismissal. If a student wishes to change advisers, he/she must file a petition which must be approved by the "new" adviser, the Division Head, and the Assistant Dean for Academic Affairs.

Within the first three quarters of study, the student files Doctoral Form 1, "Petition for Establishment of Three Member Guidance Committee and Study in Major and Minor Fields for the Dr.P.H." The Guidance Committee comprises three members including the student's adviser in the major field and the adviser in the minor field. On this form, the student lists courses to be taken for the minor which must be approved by the student's adviser, the Division Head, and the Department Chair.

Ph.D. in Public Health. An academic adviser is assigned to each new student by the Head of the Division. The student and the adviser together agree upon a study list for each academic quarter; any subsequent alterations must be approved both by the adviser and the Assistant Dean of Academic Affairs before it is submitted to the Graduate Division. Advisers may be changed after the first quarter by mutual consent of both the student and new adviser via a blue petition countersigned by the Division Head and the Assistant Dean of Academic Affairs.

Within the first three quarters of study, the student files Doctoral Form 1, "Petition for Establishment of Three Member Guidance Committee and Study in Major and Cognate Field for the Ph.D." The Guidance Committee consists of three members including the student's adviser in the major field and the adviser in the minor field. Courses to be taken for the cognate field are listed on this form, which must be approved by the student's adviser, the Head of the Division, and the Chair of the Department.

Ph.D. in Biostatistics. A faculty adviser is appointed for each beginning doctoral student by the Division Head. The adviser meets with the student each quarter to discuss the student's academic progress. When the student advances to candidacy, the Chair of the dissertation committee becomes the adviser.
Degree Requirements

General Master's Level Degree Information

The M.P.H. is a professional degree in the field of public health. The student is expected to focus on public health practice and to acquire a broad knowledge related to professional skills.

Screening Examinations. No screening examinations are required except in the Behavioral Sciences and Health Education Division. In this area, a student who does not have an M.P.H. or an M.S.P.H. must pass a screening examination held no earlier than after three quarters in residence and after satisfying course requirements. The purpose of the examination is to evaluate evidence of a student's potential for successful work at the doctoral level. Only one reexamination after failure is allowed.

Time to Degree. From graduate admission to award of the degree (depending upon the area of specialization), normal progress is from three to seven quarters. Upper limit for completion of all requirements is seven quarters of enrollment, including quarters enrolled in previous graduate study at a University of California campus prior to admission to the School of Public Health. Maximum time allowable from enrollment to graduation, including leaves of absence is five years.

Disqualification. Students must maintain a 3.0 grade point average or they will be subject to dismissal. If a student's grade point average falls below this, it must be raised to 3.0 by the end of the following quarter. Also, a student will be terminated if he/she fails to complete the required coursework in seven quarters of enrollment.

Appeals. Appeals can be made by the student utilizing the standard blue petition form. The petition must be approved by the adviser, the Division Head, the Assistant Dean of Academic Affairs, the Chair of the Department, and the Dean of the Graduate Division.

500 Series Course Limitations

<table>
<thead>
<tr>
<th>Course Unit</th>
<th>Type of Credit</th>
<th>Value Limit</th>
<th>Grading</th>
<th>Repeated</th>
<th>Minimum</th>
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<td>Letter</td>
<td>No Limit</td>
<td>4 units</td>
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<tr>
<td>597 2-8</td>
<td>S/U</td>
<td>No Limit</td>
<td>None</td>
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<tr>
<td>598 2-8</td>
<td>S/U</td>
<td>No Limit</td>
<td>4 units</td>
<td>(no credit allowed)</td>
<td>toward the minimum 5-semester course requirement</td>
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Master of Public Health Degree

Course Requirements

Award of the M.P.H. degree requires a minimum number of acceptable courses as specified by each program. The minimum number of courses required is 11 in an approved program, but frequently a student is required to take more than this minimum depending on his/her background and field of study. This minimum may be reduced to 10 for students with suitable previous graduate studies in health fields (such as physicians) if appropriate for the field of study. At least five courses toward the M.P.H. must be graduate level (200, 400, and 500 series).

Unless previously taken, mandatory School CORE courses for the M.P.H. degree are currently ¾ credits courses. 14 units of credit and must be taken during the first year of study.

1. Introduction to Biostatistics (Public Health 100A or 101A or 103, depending upon area of specialization and/or degree program). (NOTE: Public Health 103 is designed as a terminal course for those who do not intend to take any other biostatistics courses.)

2. Principles of Epidemiology (Public Health 112). Epidemiology majors substitute Epidemiology I (PH 114). (Prerequisite: PH 110, Introduction to Medical Science or PH 111, Human Disease and Public Health or equivalent.)

3. Health Services Organization (Public Health 130).

4. Introduction to Environmental Health (Public Health 155) or PH 150 for students with suitable scientific background or students specializing in environmental health.

The individual CORE course (not units) can be waived if the student has taken a similar course elsewhere and can pass the waiver examination for that course.

The remaining courses (at least 7½ courses, 30 units of credit) are determined by the student's choice of an area of specialization as described below, and include the requirements of one course in the 400 series. Field training in an approved public health program of up to 10 weeks is required of candidates who have not had prior relevant field experience.

Thesis or Comprehensive Examination Plan

Comprehensive Examination Plan. Both a schoolwide comprehensive examination over material encompassed by the CORE courses and an examination in the student's major field (Division) are required. A student who fails either section may be reexamined no more than once. The schoolwide CORE course Comprehensive Examination is administered twice each academic year, usually the first Saturdays in May and November. The examination in the major field is administered by the student's Division. Students in the Environmental Health area undertake cumulative examinations on current Environmental Health topics in addition to the above examinations. An examination will be offered once every quarter. Out of a total of six attempts, the student must pass three cumulative examinations.

Thesis Plan. The thesis option is only available in the Division of Behavioral Sciences and Health Education. In this Division, students wishing to prepare a thesis rather than take an examination in the major field may do so if they have successfully completed PH 181 and PH 281, and if permission has been obtained by petition. Upon approval, a thesis committee is established after a student has been in residence three quarters. The thesis committee, comprising a minimum of three faculty members (two of whom must be from within the student's department), is recommended by the Department Chair after consultation with the student and the student's adviser and is appointed by the Dean of the Graduate Division. The committee approves plans for the thesis prior to the student's petition for advancement to candidacy. The completed thesis must be acceptable to the committee and a copy must be submitted to the Graduate Division.

Areas of Specialization

Areas of specialization offered in the M.P.H. degree program and typical course plans, in addition to mandatory courses, are listed below.

Behavioral Sciences and Health Education

Usually Required Courses. Public Health 182 and 183 (two quarter sequence), 482 (8 units of Field Work Practicum) and five courses (20 units) in consultation with the faculty adviser of which at least three (12 units) must be chosen from among: PH 280, 181 and 281 (two quarter sequence), 282, 287, 288, 480, 481, 483 and 484. Individual and experimental courses will not count among the required course units. Additional courses in consultation with the faculty adviser may be elected from among those offered by divisions within the Department or other Schools/Colleges at UCLA.

Biostatistics

Usually Required Courses: PH 100A-D, or 101A-B, 100C, 100D; 200: 401E or 401F; 3 from the following: 403, 404, 405, 406, 402A, 402B. PH 402B will satisfy the requirements for field training.

Recommended Courses. Public Health 211A, 211B, Management 113A, 113B.

Electives. Courses in Public Health, Biomathematics, or Mathematics.

Environmental Health Sciences

Recommended Courses. Public Health 251 or 252, 253B, 254, 281A, 454.


Units from the courses listed above sum to approximately 52. At approximately five of these courses must be graduate courses (200, 400, and 500 series). Thus, approximately 20 units are to be completed by specialty courses and electives for a 2-year program assuming a minimum of 12 units per quarter. It should be noted that the divisional core also satisfies the requirement for taking the registered sanitarian's examination.

After or simultaneous with fulfillment of the core divisional and schoolwide requirements, students take courses with emphasis in the core divisional and schoolwide requirements, electives for a 2-year program assuming a minimum of 12 units per quarter. Thus, the student must pass the waiver examination.

In addition to the School- and program-required Comprehensive Examinations, Master of Public Health students in Environmental Health are required to take cumulative examinations on current Environmental Health topics. An examination will be offered once every quarter. Out of a total of six attempts, the student must pass three cumulative examinations.

Epidemiology

Chronic Diseases. Usually Required Courses. Public Health 100B, 210, 211A, 211B, 400 (for predoctoral students), 596 (for postdoctoral students), 212H, 216A-B; 218A-B; 220A-B; 222 (must be taken each quarter). Doctoral students holding a doctorate in an appropriate biomedical science may petition for waiver of Public Health 400.

Report. Candidates must submit a report on a project related to Infectious and Tropical Diseases. The report may not be submitted prior to the completion of PH 400, Field Studies in Epidemiology, for predoctoral students or PH 596, Directed Individual Study, for postdoctoral students who qualify for waiver of PH 400. PH 400 must be taken after completion of PH 211B. PH 596, for postdoctoral students, may be taken concurrently with PH 211B; minimum enrollment in 2 units of PH 596 is required for report grade.

Infectious and Tropical Diseases. Usually Required Courses. Public Health 100B, 210, 211A, 400 (for predoctoral students), 596 (for postdoctoral students) 212H, 216A-B; 218A-B; 220A-B; 222 (must be taken each quarter). Doctoral students holding a doctorate in an appropriate biomedical science may petition for waiver of Public Health 400.

Report. Candidates must submit a report on a project related to Infectious and Tropical Diseases. The report may not be submitted prior to the completion of PH 400, Field Studies in Epidemiology, for predoctoral students or PH 596, Directed Individual Study, for postdoctoral students who qualify for waiver of PH 400. PH 400 must be taken after completion of PH 211B. PH 596, for postdoctoral students, may be taken concurrently with PH 211B; minimum enrollment in 2 units of PH 596 is required for report grade.

Health Services


Recommended Courses. Public Health 134, 231, 443E.

Electives. Elective courses are selected by the student in consultation with the faculty adviser.

Residency. Following the first three quarters of study, students are placed in health service management residencies throughout the Los Angeles area for a period of 9 months.

Health Services Organization. An MPH is available as a 1-year program for students with prior doctoral level degrees. Recommended courses are determined based on an individual basis by the student and the adviser. No summer internship is required.

Health Information Systems. Organization of data for planning design, and implementation of health systems. Usually required courses. Requirements are individually determined but generally include work with computer systems. A summer internship is required.

Nutritional Sciences

Usually Required Courses. Public Health 163 (if waiver examination is passed, course requirement may be fulfilled through elective courses approved by the adviser), 165 or 261A, 260E-F; 261A or 165, 262 or 263 (may be repeated for credit), 400, 460, 461, 483.

Recommended Courses. Public Health 162, 264E, 462.


If the courses listed above, at least five graduate level courses (200, 400, 500) and at least one seminar course (262, 283) are required.

A minimum of 56 units is required by the Division for the M.P.H. degree. It is expected that after the first quarter, students will take a seminar each quarter, except for the quarter wherein PH 400 and PH 463 are taken.

Population, Family and International Health

Usually Required Courses. Students are required to complete at least four courses (16 units) offered by the Division, plus Public Health 125, 400, 596.

Electives. Elective courses are selected by the student in consultation with the 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 44 units.

Programs in Conjunction with Other Schools and Departments at UCLA which Lead to the M.P.H.

Following are descriptions of combined programs of study leading to the M.P.H. degree:

Articulated Degree Program: Public Health (M.P.H.) and African Area Studies (M.A.)

The School of Public Health and the Interdepartmental Degree Program in African Area Studies have arranged a program to permit a student to work sequentially for the master's degree in African Area Studies (M.A.) and a master's degree in Public Health (M.P.H.). By planning a major field emphasis in Public Health while working toward the M.A. degree 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 working for these two degrees should be aware that this is not a concurrent degree program. The articulated degree program operates in a sequential manner. The normal pattern of graduate study for a student working in this articulated degree program will begin with admission to the M.A. program in African Area Studies. While enrolled in this program, a student will consult with faculty members in the School of Public Health and, on their advice, take a specified series of courses in the field of Public Health. This coursework will enable students to establish a solid basis upon which they may build their academic credibility for subsequent application to the M.P.H. degree.

Admission to the M.A. in African Area Studies does not automatically confer admission into the M.P.H. program since each of these degree programs retains complete jurisdiction over its own admissions. Admission to the M.P.H. program will normally occur in the following manner. While continuing in the M.A. in African Area Studies, the student will file a petition for a change of major to Public Health. This will ordinarily occur during the quarter in which the student anticipates completion of the M.A. degree. If this petition is approved by the School of Public Health, the student will enter the M.P.H. program the following quarter.
Students should be aware that 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. may not also be counted toward the M.P.H.

Students interested in this articulated program should write to Ms. Joy Williams, Assistant Graduate Adviser, M.A. Program in African Area Studies, African Studies Center, UCLA, Los Angeles, CA 90024, or to the Office of Student Affairs, School of Public Health, UCLA, Los Angeles, CA 90024.

Articulated Degree Program: Public Health (M.P.H.) and Latin American Studies (M.A.)
The School of Public Health and the Latin American Studies Interdepartmental Degree 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 Program to apply to the Graduate Adviser of the Latin American Studies Program for admission to the Graduate School of Management. All inquiries about application to the M.P.H./M.B.A. program should be addressed to the UCLA Graduate School of Management, M.B.A. Admissions, Los Angeles, CA 90024.

Preventive Medicine Residency Program
A residency in General Preventive Medicine is available to physicians. The first year of the residency is comprised of formal studies for the Master of Public Health in either Epidemiology or Health Services, and application must be made simultaneously for both the residency and admission to the School of Public Health for the M.P.H. Admission to the residency should be made to: Director, Preventive Medicine Residency Program, School of Public Health, UCLA, Los Angeles, CA 90024.

Physician applicants are generally admitted to the second and third year of the residency only after completion of M.P.H. studies at an accredited school of public health. The second and third year are individually organized for each resident's particular interests, under the specific direction of a faculty member. Admission to the M.P.H. program is contingent upon acceptance by the School of Public Health.

Upon admission to either the Latin American Studies Program, the Public Health Program, or both, students must consult the Graduate Adviser in both programs. Typically, students take courses in both programs from the beginning. A given course may not be used for credit toward more than one degree, but the content of courses can help students meet breadth or specialty requirements, thus reducing the time needed to complete both degrees. A comprehensive research project in a topic relevant to both areas is required to meet the requirements for both degrees.

Potential applicants should contact the Graduate Adviser, Latin American Studies, Latin American Center, UCLA, and/or the Public Health/Latin American Studies Articulated Degree Program Adviser in the School of Public Health.

Concurrent Degree Program: Management (M.B.A.) and Public Health (M.P.H.)
The School of Public Health, Division of Health Services, in cooperation with the Graduate School of Management, offers a course of study concentration leading to the award of the M.P.H. and M.B.A. degrees concurrently. Students interested in this joint program must apply and be admitted to both the Division of Health Services in the School of Public Health and the Graduate School of Management. All inquiries about application to the M.P.H./M.B.A. program should be addressed to the UCLA Graduate School of Management, M.B.A. Admissions, Los Angeles, CA 90024.

The preparation of a major written examination or thesis is required of all students receiving the M.S. degree. A thesis is usually submitted within the Department is required.

The preparation of a major written examination or thesis is required of all students receiving the M.S. degree. A thesis is usually submitted within the Department is required.

Master of Science in Public Health
The Master of Science program provides research orientation within the general field of public health. It is intended to prepare students in depth in a specialty area in public health and includes the preparation of a thesis or major written report.

Course Requirements
Award of the M.S. degree requires a minimum number of acceptable courses as specified by each program. The minimum number of courses required is nine (9), at least five of which must be graduate level courses in the 200 or 500 series. Unless previously taken, mandatory courses for the M.S. degree are three courses, 12 units of credit.
1. Introduction to Biostatistics (Public Health 100A).
2. Introduction to Biostatistics (Public Health 100B).
3. Principles of Epidemiology (Public Health 112). Epidemiology majors substitute Epidemiology I (Public Health 114). (Prerequisite: PH 110, Introduction to Medical Science or PH 111, Human Disease and Public Health or equivalent.)

Any individual CORE course (not units) can be waived if the student has taken a similar course elsewhere and can pass the waiver examination.

The remaining courses (at least six courses, 24 units of credit) are determined by the student's choice of an area of specialization (described below), and include the requirement of two research methodology courses.

Thesis or Comprehensive Examination Plan
Either the Thesis Plan or the Comprehensive Examination Plan may be selected by students in the Division of Behavioral Sciences and Health Education and the Division of Health Services. For students in the Divisions of Environmental and Nutritional Sciences and Epidemiology, a thesis is usually required. Under exceptional circumstances, students may petition to substitute a comprehensive examination and written report.

Thesis Plan. A thesis committee is established after a student has been in residence for three quarters. The thesis committee, composed of a minimum of three faculty members, is recommended by the Department Chair after consultation with the student and the student's adviser and is appointed by the Dean of the Graduate Division. The committee approves plans for the thesis prior to the student's filing for advancement to candidacy. At least two of the faculty members must be from within the Department. No member outside the Department is required.

The thesis must be acceptable to the thesis committee and a copy must be submitted to the Graduate Division.

Comprehensive Examination Plan. If the Comprehensive Examination option is approved for the student, a comprehensive examination committee composed of a minimum of three faculty members, is appointed by the Chair of the Department on the recommendation of the Division Head. There must be a written Comprehensive Examination on the student's major area of study. A student who fails may be reexamined no more than once. The preparation of a major written research report is required. This must be approved by a 2-member committee which may overlap the comprehensive examination committee.

Areas of Specialization
Areas of specialization offered in the M.S. degree program, and typical course plans, in addition to mandatory courses, are listed below.
Behavioral Sciences and Health Education


Electives. Six units (four courses) of electives, chosen in consultation with an adviser, at least one of which must be chosen from the 283 series and at least two of which must be chosen from among the following: Public Health M283E, M283F, M283G, PH 282, PH 284, 285, 483.

Environmental Health Science

Usually Required Courses. Public Health 150, 153, 154, 250, 253A, 255 and 256 (may be repeated for credit), 261A, 450, 598 (maximum of one course will count toward minimum total course requirement), Biological Chemistry 101A or equivalent, 101B or equivalent.


Units from the courses listed above sum to approximately 13 courses (52 quarter units). At least five of these courses must be graduate level (200 and 500) and at least one course of seminars (255 and 256) must be taken. In addition, students must complete a laboratory project plus thesis.

After or simultaneous with fulfillment of the core divisional and schoolwide requirements, students may take courses in one of the following areas after counseling and with continued guidance of the faculty adviser: water quality, management; air quality, environmental epidemiology; environmental sciences and engineering; occupational health and safety (industrial hygiene); or environmental toxicology. Students specializing in the epidemiology track should substitute PH 114 and 211A (prerequisites for advanced epidemiology courses) for PH 112 (see M.S. Course Requirements). PH 110 or PH 111 will need to be taken concurrently with PH 114 unless a student passes the waiver examination.

In addition to the completion of the master's thesis, M.S. students in environmental health are required to take cumulative examinations on current environmental health topics. These examinations will be offered once every quarter. Out of a total of six attempts, the student must pass three cumulative examinations.

Epidemiology

Chronic Diseases. Usually Required Courses. Public Health 210, 211A-B; 221 plus 16 units as follows: one full course in demography, one full course in Biostatistics, one full course in data management, and one full course in Topic Specific Epidemiology (PH 212E, 212G, 212I, 213, 215A-B; or 225).

Recommended Courses. Public Health 130 for students planning to enter the Dr.P.H. program or with the intention of practicing epidemiology in a health department; Public Health 410A, 410B.

Electives. Relevant courses in public health and biomedical sciences.

Infectious and Tropical Diseases. Usually Required Courses. Public Health 210, 211A-B; 212H, 216A-B; 219; 220A-B; and 222 (must be taken each quarter).

Recommended Courses. Public Health 130 for students planning to enter the Dr.P.H. program or with the intention of practicing epidemiology in a health department.

Electives. Public Health 214, 219, and relevant courses in public health and biomedical sciences.

Health Services


Electives. Worked out with adviser—chosen from recommended courses and others.

Field Work. A summer field placement of a minimum of 10 weeks is required following the first three quarters of study. The equivalent of 18 full courses is required for completion of the M.S. degree.

Nutritional Science

Usually Required Courses. Biological Chemistry 101A or 201A, 101B or 201B, Public Health 260E-H; 261A-B; 262 and 596 (may be repeated for credit).

Recommended Courses. Public Health 162, 165, 264E-F.

Electives. Physiology 100, Public Health 100C, 181, Biology M134, 177, Biological Chemistry M261.

Of the courses listed above, five must be at the graduate level (200 and 500), and at least one course of seminars (228) is required. Students must complete a thesis. A minimum of 52 units is required by the Division for the M.S.P.H. degree. It is expected that after the first quarter students will take a seminar each quarter.

Master of Science in Biostatistics

Course Requirements

The M.S. degree in Biostatistics requires a minimum of nine graduate and upper division courses, of which at least five are graduate courses (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 offered in the M.S. in Biostatistics degree program and typical course plans are listed below.

Biostatistics

Unless previously taken, the following courses must be included in the degree program: Public Health 101A, 101B, 100C, 200A, 200B, 200C; any two courses from M201E, 201F, 201G, 201H, 201J, 201K, 201M; 204E, 402A, 402B; Mathematics 150A, 150B, 150C or Mathematics 152A, 152B.

Other courses in biostatistics or mathematical statistics, or in related areas such as biology, physiology, public health, management, or mathematics are selected with the adviser's consent.

Master's Report: A written report under the direction of a member of the Biostatistics faculty is required.

Comprehensive Examination: A written comprehensive examination covering the above course material is required.

Statistical Health Data Management

Unless previously taken, the following courses must be included in the degree program: Engineering 10C, Public Health 101A, 101B, 100C, 200A, 200B, 200C; 403; 203A, 203B; 404 or 405; Mathematics 150A, 150B, 150C or Mathematics 152A, 152B. One public health course in a division other than Biostatistics is to be selected with the 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 the adviser's consent.

Master's Report: A written report under the direction of a member of the Biostatistics faculty is required.

Comprehensive Examination: A written comprehensive examination covering the above course material is required.
Thesis or Comprehensive Examination Plan

Thesis Plan. The thesis plan is not used.

Comprehensive Examination Plan. The comprehensive examination committee is appointed by the Head of the Biostatistics Division. The written Comprehensive Examination is on the major field only. It is taken during the Spring Quarter of the academic year of the student's Public Health 200A-C sequence. A student who fails the examination is allowed to repeat it only once; the time of reexamination is specified by the Division. A student who does not take the reexamination at the specified time forfeits the right to reexamination.

General Doctoral Level Degree Information

Foreign Language Requirement

Ph.D. in Biostatistics and Dr.P.H.

A foreign language is not a requirement for either the Ph.D. in Biostatistics or the Dr.P.H. degree, but conversational Spanish is recommended for Nutritional Science students.

Ph.D. in Public Health

One foreign language relevant to the student's major field and approved by the Guidance Committee is required, using a method acceptable to the Graduate Division (usually Educational Testing Service (ETS) examination given on campus, with a minimum score of 500). This requirement must be met before the qualifying examination. If a student's native language is not English, English may be used to fulfill the foreign language requirement.

Teaching Experience

Teaching experience is recommended but not required for doctoral degrees.

Screening Examinations

No screening examinations are required except in Behavioral Sciences and Health Education. In that field, if a student does not have a prior M.S.P.H., he/she must pass a screening examination held no earlier than after three quarters in residence and after satisfying course requirements. Only one reexamination after failure is allowed.

Time to Degree

Dr. P.H. and Ph.D. in Public Health

Normally, students will not be admitted to the doctoral program until after they have completed a master's degree. If the student has not completed all requirements for the master's degree by the time of admission to the doctoral program, the master's degree must be completed prior to taking the Written Qualifying Examination, no later than the sixth quarter in residence. If the student has completed a master's degree program, the written and oral examinations should be completed by the sixth quarter in residence.

Maximum time allowable from enrollment in the graduate program in the School of Public Health and completion of the degree, including leaves of absence, is 20 quarters or 8 years. This limitation includes quarters enrolled in previous graduate study at a University of California campus prior to admission to a doctoral degree program.

Ph.D. in Biostatistics

From admission to the doctoral program to the Written and Oral Qualifying Examinations and advancement to candidacy usually takes nine quarters or less. From advancement to candidacy to the Final Oral Examination usually requires three quarters. Usually 12 quarters are required from graduate admission to award of the degree.

Maximum allowable time for the attainment of the degree is 20 quarters of enrollment or eight years. This limitation includes quarters enrolled in previous graduate study at a University of California campus prior to admission to the doctoral degree program and leaves of absence. However, the approved normative time-to-degree is 15 quarters (five years) and this time limit must be observed in regard to the Incandidacy Fee Offset Grant Program.

Disqualification

The following are conditions which lead to termination:

(a) Failure to maintain a 3.0 grade point average in two consecutive quarters since admission to the doctoral program.

(b) Failure of any written Qualifying Examination in the major or minor fields more than once or failure of either oral examination more than once.

(c) Exceeding enrollment time limits.

Appeals

The student may appeal the decision to the Head of his or her Division who will forward the appeal to the Dean of Students or the Chair of the Department.

Doctor of Public Health

Degree Information

The Doctor of Public Health is the highest professional degree for the public health specialist. The student is expected to focus on public health practice and to acquire broad knowledge related to professional skills. The minor field can be used to provide some of this breadth. The dissertation is of an applied, practical, problem-solving nature and must demonstrate the candidate's ability for independent investigation.

Course Requirements

The course requirements covered by the Written Examinations depend upon the Division and the field which the student enters, and the study list is chosen in consultation with the Guidance Committee and the adviser in the minor field.

The minor field may be in one of the Divisions of the Department of Public Health or in another department. A minimum of four graduate courses (16 units) in the minor field is required. A listing of required courses is given below under Areas of Specialization.

Written and Oral Qualifying Examinations

Before advancement to candidacy, the student must pass written examinations in the major and minor fields and the Oral Qualifying Examination. The Written Qualifying Examination in the major field is prepared and administered by the Guidance Committee or by the faculty of the Division. The conduct of the Written Qualifying Examination in the minor field is the responsibility of the representative from the minor field or the Guidance Committee.

One reexamination after failure is allowable; more than one would be granted only in unusual circumstances.

When a student is ready to take the Oral Qualifying Examination following successful completion of the written examination, a doctoral committee is nominated by the Chair of the Department after consultation with the student, the adviser, and the Division Head, and is appointed by the Dean of the Graduate Division. This normally takes place after the student has made a tentative decision on a dissertation topic. The student should prepare a prospectus of the proposed dissertation research; this should include an appropriate bibliography and preliminary data, if available. This should be submitted to the doctoral committee members at least one month prior to the examination.

The Oral Qualifying Examination may include, but is not necessarily restricted to, questions on the proposed dissertation work. The Oral Qualifying Examination is open only to the members of the doctoral committee and the student. Upon majority vote of the doctoral committee, the Oral Qualifying Examination may be repeated only once.

Doctoral Committee

The doctoral committee consists of at least five (5) faculty members who hold professional appointments. Three (3) of the five (5) must hold appointments in Public Health, two (2) must be outside members who hold no appointment in Public Health; one (1) of these must be from the minor field.

The doctoral committee administers the Oral Qualifying Examination after the student has successfully completed the written examination.
Final Oral Examination
A Final Oral Examination is required of all candidates. All members of the doctoral committee must be present for the examination and must read, approve and certify the dissertation. A student will not be considered to have passed the Final Oral Examination with more than one "not passed" vote by the committee. Reexamination after failure is determined on an individual basis.

Areas of Specialization
Areas of specialization offered in the Dr.P.H. degree program and typical course plans, in addition to courses required for the master's degree, are listed below.

Behavioral Sciences and Health Education
Recommended Courses for the Major. Public Health 100B, plus at least two advanced statistics courses and at least four advanced courses from among a list of courses designed and offered by the Division. Students may be required to take 8 units of seminar in Behavioral Sciences and Health Education (PH 286).

Typical Minor Field. A minimum of four graduate courses (16 units) from one of the following: Biostatistics; Environmental Health Science; Epidemiology; Health Services; Population, Family and International Health; or four upper division and graduate courses from one of the following: Anthropology; Economics; Education; Psychology; Sociology.

Electives. Electives are chosen in consultation with adviser.

Biostatistics
Recommended Courses for the Major. Public Health 200B-C; 204E-F; M205A-C; 206A-B; two courses from among the following: 201J, M201E-H; T; two advanced topic courses in Biostatistics; Mathematics, 152A-B; or 150A-C. All enrolled doctoral students are encouraged to participate in the Biostatistics Consulting Laboratory for one quarter each year.

Typical Minor Field. Behavioral Sciences, Epidemiology, Health Services, or other with approval of adviser.

Electives. Electives to be selected in consultation with adviser from the following: Mathematics, Biomathematics, survey research methods, operations research, computer data processing, and other appropriate areas.

Environmental Health Science
Recommended Courses for the Major. Courses determined in consultation with adviser.

Minor Field. One minor field relating to environmental health sciences, with approval of adviser. This may be a recognized field within the School of Public Health, such as epidemiology or health services, or within other departments or schools, such as engineering and applied science, management or architecture and urban planning.

Epidemiology
Recommended Courses for the Major. 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 application of epidemiology to health planning, management and policy; laboratory or clinical studies in medical, health or biological sciences.

Typical Minor Fields. Appropriate public health areas from divisions within the School of Public Health or other department with related interests, e.g., Biostatistics, Biology, Microbiology and Immunology, Neurosciences, and other related fields.

Health Services
Recommended Courses for the Major. From 48 to 72 quarter units beyond the master's degree are required. About one-third are to be in the substantive area of structure and functioning of health services, one-third in skills and tools required for health services management and policy analysis, and one-third in elective courses to meet individual needs and interests. In addition, if the master's degree did not include it, the student must spend three to nine months in a supervised residency or practicum experience in one or more health-related organizations. The practicum is usually begun after satisfactory completion of the Written Qualifying Examination.

Typical Minor Fields. Appropriate public health areas, economics, political science, sociology, management, and other related fields.

Nutritional Science
Recommended Courses for the Major. Public Health 260E, 260F, 260G, 260H, 261A, 262 and 263 (may be repeated for credit), 400, 460, 461, 463, 596.

One minor field relating to nutritional sciences, with approval of adviser. This may be a recognized field within the School of Public Health, such as behavioral sciences, epidemiology or health services, or within other departments or schools, such as education, psychology or economics.

Additional Requirements. Additional courses in public health fields, biological sciences, and biostatistics. In the dissertation, emphasis will be community health-oriented.

Population, Family and International Health
Recommended Courses for the Major. 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 shall be in the Population, Family and International Health Division, including the Divisional Doctoral Seminar. Of the balance, at least 12 units must be in other Divisions of the School of Public Health. The remaining 16 units must be from other departments at UCLA.

Typical Minor Field. One minor field related to population studies, family health or international health, aggregating to 18 units. This may be a recognized field within the School of Public Health, or within other departments or schools.

Ph.D. in Public Health
Degree Information
The Ph.D. is the highest research degree in public health for the student who desires in-depth knowledge in the area of Public Health. Depth of knowledge and research skills are stressed. The minor field must be cognate to the major field. The dissertation must demonstrate the candidate's ability in independent scholarly investigation.

Course Requirements
The course requirements depend upon the Division and field which the student enters, and the study list is chosen in consultation with the Guidance Committee and the adviser in the minor field.

The minor field must be in a field cognate to the major field in Public Health. A strong minor is required, with a minimum of four full graduate courses (16 units) or equivalent from a department that grants a Ph.D. (The Division of Health Services and Behavioral Sciences and Health Education require five full graduate courses (20 units). Biostatistics may be considered cognate to a major in Public Health.

Written and Oral Qualifying Examinations
Before advancement to candidacy, the student must pass Written Qualifying Examinations in the major and the minor fields, a foreign language examination, and the Oral Qualifying Examination. The written examination in the major field is prepared and administered by the Guidance Committee or by the faculty of the Division. The conduct of the written examination in the minor field is the responsibility of the representative from the minor field or the Guidance Committee. One reexamination after failure is allowable; more than one would be granted only in unusual circumstances.

When the student has successfully completed the written examination and is ready to take the Oral Qualifying Examination, a doctoral committee is nominated by the Chair of the Department, and appointed by the Dean of the Graduate Division after consultation with the student, the adviser, and the Division Head. This normally takes place after the student has made a tentative decision on a dissertation.
The student should prepare a prospectus of the proposed dissertation research which includes appropriate bibliography and preliminary data, if available. This should be submitted to the doctoral committee members at least one month prior to the oral examination.

The Oral Qualifying Examination may include, but is not necessarily restricted to, questions on the proposed dissertation work. The Oral Qualifying Examination is open only to the members of the doctoral committee and the student. Upon majority vote of the doctoral committee, the Oral Qualifying Examination may be repeated once.

Doctoral Committee
The doctoral committee consists of at least five faculty members who hold professorial appointments. Three of the five must hold appointments in Public Health, two must be "outside" members who hold no appointment in Public Health, one of these must be from the minor field. At least two members of the doctoral committee (one from Public Health and one from another department) must hold the Ph.D.

The doctoral committee administers the Oral Qualifying Examination after the student has successfully completed the written examination, advises the student on his/her course of study and reviews the dissertation.

Final Oral Examination
The Final Oral Examination is required of all candidates. All members of the doctoral committee must be present for the examination and read, approve, and certify the dissertation. A student will not be considered to have passed the Final Oral Examination with more than one "not passed" vote by the committee. Reexamination after failure is determined on an individual basis.

Ph.D. in Biostatistics
Degree Information
Course Requirements
There are no specific course requirements. However, the student's 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, physiology, psychology, zoology, or public health. Enrolled doctoral students are encouraged to participate in the Biostatistics Consulting Laboratory for one quarter each year. Recommendation for the degree is based on the attainments of the candidate rather than on the completion of specified courses.

Written and Oral Qualifying Examinations
Written examinations in Biostatistics, Mathematical Statistics, and in the student's selected third field, are taken before advancement to candidacy. The Biostatistics examination is prepared by the faculty in Biostatistics, the mathematical statistics examination by the faculty of the Mathematics Department, and the third field examination by a qualified person in that field at UCLA.

The Oral Qualifying Examination is taken before advancement to candidacy. Any examination which is failed may be repeated once. The time of reexamination is specified by the Division in the case of the written examinations or by the student's committee in the case of the oral examination. A student who does not take the examination at the designated time forfeits his right to a reexamination.

Doctoral Committee
The doctoral committee consists of at least five faculty members who hold professorial appointments. Three of the five must hold appointments in the major field, Biostatistics, two must be "outside" members who hold no appointment in the major department, Public Health.

The doctoral committee administers the Oral Qualifying Examination after the student has successfully completed the Written Qualifying Examinations. The oral examination is usually a defense of the dissertation proposal.

Final Oral Examination
A Final Oral Examination is required of all candidates. All members of the doctoral committee examine the candidate during the required Final Oral Examination and read, approve, and certify the dissertation. A student will not be considered to have passed the Final Oral Examination with more than one "not passed" vote by the committee. Reexamination after failure is determined on an individual basis.

A copy of the dissertation must be submitted to the Graduate Division and to the Division of Biostatistics.

Graduate Courses

200A. Biostatistics. Lecture, three hours; discussion, one hour. Prerequisites: course 100C, Mathematics 32B, 152B or equivalent. With consent of instructor certain prerequisites may be taken concurrently or waived. Quantitative methods in public health, medicine and biological sciences: statistical theory and application to problems in design and analysis of medical experiments and surveys.

200B-200C. Biostatistics. (1 course each) Lecture, three hours; discussion, one hour. Prerequisites: course 100C, Mathematics 32B, 152B or equivalent. With consent of instructor certain prerequisites may be taken concurrently or waived. Quantitative methods in public health, medicine and biological sciences: statistical theory and application to problems in design and analysis of medical experiments and surveys.

201E. Special Topics: Statistical Methods for Categorical Data. (Same as Biomathematics M231.) Lecture, three hours; discussion, one hour. Prerequisites: course 100B or 101B, Mathematics 150C or 152B, one hour consent of instructor. Techniques for the analysis of categorical data; discussion and illustration of their applications and limitations.

201F. Special Topics: Distribution Free Methods. (Formerly numbered 268B.) 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.

202. Special Topics: Statistical Simulation Techniques. Lecture, three hours; discussion, one hour. Prerequisites: Mathematics 150C or 152B, a course in computer programming, course 100C, and 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. Prerequisites: Mathematics 150C or 152B or course 100D. Theory and methods for sampling finite populations and estimating population characteristics.

201L. Special Topics: Supplemental Topics. Lecture, three hours; discussion, one hour. Prerequisites: course 100C and consent of instructor. Topics in Biostatistics not covered in other courses.

201K. Survival Analysis. (Same as Biomathematics M291.) Lecture, three hours; discussion, one hour. Prerequisites: Mathematics 150C or 152B, or consent of instructor. Statistical methods for the analysis of survival data.

201L. Advanced Demography. Lecture, three hours; laboratory, two hours. Prerequisites: consent of instructor. Calculation of estimates of stable population parameters. Application of stable population concepts to the estimation of fertility rates in absence of vital registration data. Consequences of changes in vital rates. Implications for policy.

201M. Introduction to Statistical Methods for Biological Assays. Lecture, four hours; discussion, one hour. Prerequisites: course 100C and Mathematics 150C or 152B. Topics include standard 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.

203A. Data Base Management Systems. Lecture, three hours; laboratory, two hours. Prerequisites: course 100A, Mathematics 1A; course 112 or 130, Eng 10; or course 403; and consent of instructor. Data and data base models applied to medical and public health studies; design of data bases for 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, two hours. Prerequisites: course 203A and 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 maintenance of a computer system for managing health data.

204E. Seminar in Biostatistics. (1 course each) Discussion, two hours. Prerequisites: course 200B, two courses from 201E-201J series, and consent of instructor. Students present and discuss current developments in methodology and problems in applications of Biostatistics.

204F. Advanced Seminar in Biostatistics. (1 course) Discussion, two hours. Prerequisites: course 200C and consent of instructor. Students and faculty present and discuss course 102 or other Biostatistics courses. May be repeated for credit. Offered on a S/U grade basis only.
212H. Epidemiology of Arthropod-borne Diseases. Lecture, four hours. Prerequisites: course 211B and Graduate Standing. Epidemiologic aspects of disease carried by arthropods, emphasizing life cycle and ecology of vectors as related to epidemiology of viral, bacterial, protozoal, and helminthic diseases.

Mr. Barr

212I. Epidemiology of Injuries. (½ course) Lecture, one hour; discussion, one hour. Prerequisites: courses 110 or 111, 100A, 112, 114, 155 or equivalent, and consent of instructor. Etiologic models of non-intentional injury, homicide, and suicide; concepts and models in injury etiology; risk factors in injury production; magnitude and impact of injuries on society. Evaluation of preventive strategies in injury prevention.

Mr. Kraus

215J. Occupational Epidemiology. Lecture, two hours; discussion, two hours. Prerequisites: course 211A or equivalent and consent of instructor. Methodological considerations, approaches and limitations in epidemiological studies of occupational groups and environments.

Mr. Kraus

213. Environmental Epidemiology. Lecture and discussion, four hours. Prerequisites: Chemistry 21, Physics 3C or equivalent, courses 100B, 112, Graduate Standing and consent of instructor. Methodologic problems of the theory, methods and application of the epidemiology of major hazards to environmental exposure.

Mr. Spivey

214. Infectious and Tropical Disease Epidemiology. Lecture, three hours; discussion, three hours. Prerequisites: courses 211B, 112, 115, 114 or equivalent, and 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.

Mr. Work

215A. Epidemiology of Cancer. Lecture and discussion, four hours. Prerequisites: courses 100A, 112, and consent of instructor. Etiologic concepts and methods. Pathogenesis, diagnosis and classification of neoplastic diseases. Epidemiologic principles and methods as applied to cancer.

Mr. Mack

215B. Epidemiology of Cancer. Lecture and discussion, four hours. Prerequisites: course 215A and consent of instructor. Environmental carcinogens; epidemiologic and specific principles of the distribution, exposure to and occurrence of neoplastic diseases.

Mr. Work

216B. Viral Diseases of Man. Lecture, four hours; laboratory, six hours. Prerequisites: courses 112, Microbiology 101 and 103 or equivalent, and consent of instructor. Geographic pathology and behavior of viruses affecting man. Comprehensive overview of systematics, morphology, biology, host-parasite relationships, public health problems and control of viral neoplasms in man and animals. May be taken concurrently with 220B.

Mr. Ash

219. Arthropods of Medical Importance. Lecture, two hours; laboratory, six hours. Prerequisites: Biology 105 or 107 or equivalent; Biology 181 or equivalent; Microbiology 101 or equivalent. Biology and identification of insects and public health importance involved in transmission and causation of human diseases.

Mr. Barr

220A. Helminthic Diseases of Man. Lecture, four hours. Prerequisites: Microbiology 101 or equivalent or Biology 105 or equivalent, and consent of instructor. Material presented in current research areas in helminthic epidemiology, biology, host-parasite relationships, public health problems and control of the nematodes, trematodes and cestodes parasitic in man and animals. May be taken concurrently with 220B.

Mr. Ash

220B. Helminthic Diseases of Man. (½ course) Laboratory, four hours. Prerequisites: course 220A (may be taken concurrently). 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. (½ course) Discussion, two hours. Prerequisites: course 211A or equivalent and consent of instructor. Review of topics in epidemiological methodology. Problems of study design, data collection and analysis. May be repeated for credit. Offered on a S/U grade basis.

222. Seminar in Epidemiology: Infectious and Tropical Diseases. (½ course) Discussion, two hours. Prerequisites: course 211A or equivalent and consent of instructor. Review of topics in epidemiological methodology. Material presented in current research areas in epidemiologic pathology and quantitative methods. Topics selected from biologic models, epidemiologic models, problems in inference, model evaluation, field use, analysis and interpretation of data collection. Topics to be covered include measures of disease occurrence and criteria of causality; reliability and validity concerns; proper design, analysis, interpretation of experiments, and cohort and case-control studies.

Mr. Mack

226. Genetic Epidemiology. (1/2 course) Lecture, two hours. Prerequisites: course 112, 100A, one upper division biology course, or equivalent, and 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.

227. Public Health Research Using Available Data. (1/2 course) Lecture, one hour; discussion, one hour. Prerequisites: course 100A, 110 or 111, 112, and 410A or 403 or 217 or 405, or equivalent, and consent of instructor: Presentations and discussions of the availability, concepts, content and usefulness of already collected data in public health research. Major emphasis will be on public data such as National Center for Health Statistics surveys, vital statistics, census, etc.

228. Advanced Seminar in Epidemiology. (1/2 course) Discussion, two hours. Prerequisites: course 211B and consent of instructor: Students and faculty present and discuss current research in Epidemiology. May be repeated for credit. Offered on a S/U grade basis.

231. Regulation of Health Care in the United States. Lecture, three hours; discussion, one hour. Prerequisites: course 130 plus one course in health care management, health planning, political science, economics or health law or equivalent; and consent of instructor: Description and analysis of health care regulation by Federal and State governments. Covers regulatory theory and arguments for more competition. Specific topics include federal certification, quality assurance, certificate of need, rate setting, and regulation of physicians and technology.

232. Governmental Health Services and Trends. Lecture, four hours. Prerequisites: course 130, two additional upper division social or behavioral sciences courses, and 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.

233. Health Policy Analysis. Lecture, two hours; discussion, one hour. Prerequisites: three courses in social sciences, course 130 or equivalent and 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 in health.

234A-234B. Clinical Epidemiology. (1/2 course each) Prerequisites: prior or concurrent enrollment in courses 100A, 112, 136A and consent of instructor: Introduction to special issues in clinical Health Services Research. Focus on research design and analysis of data. Offered on In-Progress grading basis.

235. Law, Social Change and Health Service Policy. Lecture, four hours. Prerequisites: course 130, two upper division hours. Prerequisites: three courses in social sciences, course 130 or equivalent and consent of instructor: Legal issues affecting policy formulation for environmental, preventive and curative health service programs are examined.

236. Quality Assessment and Assurance Lecture, one and one-half hours; discussion, one and one-half hours; conference, one hour. Prerequisites: courses 100A, 112, 130 and one additional course in health services or epidemiology, or equivalent, and consent of instructor: Fundamental issues in quality assessment, quality assurance, and the measurement of health status.

237A-237B. Special Topics in Health Services Research Methodology. Lecture, one hour; discussion, three hours. Prerequisites: courses 100A, 100B, 100C, 130, or equivalent and consent of instructor: Independent study in health services research methodology focusing on statistical and other quantitative methods in health services research. Students and faculty critique adequacy of study designs, appropriateness of analyses, and degree to which conclusions are supported by data. Offered on a S/U grade basis.

Ms. Cretin, Mr. Shonick

238. Microeconomic Theory of the Health Sector. Lecture, four hours. Prerequisites: Economics 1, 2, course 100A or equivalent; 232, and 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. Lecture, four hours. Prerequisites: courses 130, 139, 152, and consent of instructor: Long-term care of the chronically ill elderly is examined from a perspective of political and sociodemographic trends; this includes 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. Lecture, four hours. Prerequisites: two courses in health administration, two upper division courses in social sciences, economics, or political science; consent of instructor: Analysis of crucial issues in health care: manpower policy, economic support, health facilities, patterns of health service 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: course 181 or equivalent and consent of instructor: The role of research in health planning and policy formulation. Services, systems, regulations, and degree to which conclusions are supported by data.

247. Research Topics in Environmental Health. Seminar, four hours. Prerequisites: courses 130, 238, 446 or equivalent, and consent of instructor: 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. Fielding

248. Small Area Planning for Resources for Personal Health Service. Lecture, three hours; laboratory, two hours. Prerequisites: courses 130, 134, or equivalent and consent of instructor: General planning theory and methods, experience with planning for personal health care resources for small geographic areas. Determining needs and estimating required utilization levels and health care resources. Survey of elements of different disciplines used in area-wide health planning. Laboratory projects and exercises designed to implement studies of health planning theory and methods.

Mr. Shonick

250. Advanced Environmental Health. Lecture, three hours; discussion, one hour. Prerequisites: course 112, 130 and consent of instructor: Theoretical considerations and supporting data involved in scientific establishment and justification of environmental health standards and requirements, with particular reference to related health policy. Mr. Shonick

251. Chemical Behavior of Aquatic Systems. Lecture, three hours. Prerequisites: Chemistry 11A, Mathematics 3A, course 150, and consent of instructor: Chemistry of ocean waters, rivers, ground waters and their role in the environment. In-depth analysis of current aquatic system 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. Fielding

252. Microbiology of Water Quality. Lecture, three hours. Prerequisites: course 152 and consent of instructor: Basic concepts of eutrophication, indicator organisms, aquatic microbes; assessment of biological treatment practices in water reuse and purifiers. Mr. Mah

253A. Environmental Toxicology. Lecture, three hours; discussion, one hour. Prerequisites: Chemistry 152, Biological Chemistry 101A-101B, and consent of instructor: Essentials of toxicology, dose response, physical, chemical, or biological agents, and to what degree do these agents adversely affect man and environmental quality. Mr. Mustafa

253B. Environmental Toxicology: Trace Contaminants. Lecture, three hours; discussion, one hour. Prerequisites: course 253A. Essentials of toxicology in relation to trace contaminants.

254. Environmental Decision Systems Analysis. Lecture, four hours; discussion, one hour. Prerequisites: courses 154, 250, Mathematics 3C or equivalent, and consent of instructor: Techniques and models of systems analysis and application to general system problems as applied to comprehensive study, planning, evaluation, and management of environmental decision systems. Experimentation with relevant computer programs.

Mr. Deves

255. Seminar in Environmental Health Sciences. (1/4 course) Lecture, two hours. Prerequisites: Biological Chemistry 101A-101B or equivalent, and consent of instructor: Emphasis on current biological, physical, and chemical sciences relating to environmental health and planning. Offer of review of research literature may be repeated for credit.

Mr. Mah

260E. Advanced Nutrition: Vitamins. Lecture, three hours; discussion, one hour. Prerequisites: Biological Chemistry 101A-101B or equivalent, and consent of instructor: Comprehensive treatment of vitamin nutrition and metabolic-nutrient interactions.

Mr. Swendsen

260F. Advanced Nutrition: Proteins. Lecture, three hours; discussion, one hour. Prerequisites: Biological Chemistry 101A-101B or equivalent, and consent of instructor: Comprehensive treatment of protein nutrition and metabolic-nutrient interactions.

Mr. Swendsen

260G. Advanced Nutrition: Lipids. Lecture, three hours; discussion, one hour. Prerequisites: Biological Chemistry 101A-101B or equivalent, and consent of instructor: Comprehensive treatment of lipid nutrition and metabolic-nutrient interactions.

Mr. Allin-Slater


Mr. Carlisle

261A. Laboratory Instrumentation and Methods. Lecture, two hours; laboratory, six hours. Prerequisites: Chemistry 25 or Biological Chemistry 101A (may be taken concurrently), course 105, and consent of instructor: Biochemical techniques and instrumentation used in environmental and nutritional sciences, including: absorption, atomic absorption and fluorescence spectroscopy, gas chromatography, HPLC, electrophoresis, radioisotopes, and centrifugation.

Mr. Eichert

261B. Advanced Laboratory Techniques in Nutritional Science. Lecture, one hour; laboratory, six hours. Prerequisites: course 261A and consent of instructor: Current biochemical methods emphasizing analytical topics and review of research literature. May be repeated for credit.

Mr. Eichert

262. Seminar in Nutrition. (1/4 course) Lecture, two hours. Prerequisites: courses 162, 167, and one course in 250 series. Review of current literature in nutritional science. Emphasis on methodology and data evaluation. May be repeated for credit.

Mr. Swendsend

263. Seminar in Public Health Nutrition. (1/4 course) Lecture, two hours. Prerequisites: course 162, 167, and one nutrition course in 200 or 400 series. Review of literature in selected areas of public health nutrition. May be repeated for credit.
284E. Clinical Nutrition Problems. (1/2 course) Lecture, two hours. Prerequisites: Biological Chemis-
try 101 or 201, or one or more 200 level Nutrition courses. Nutrition and nutrient-metabolic interactions in various disease states such as gastro-intestinal disorders and human nutrition. Mr. Swendsen, Ms. Afifi-Slater, Mr. Kopple
284F. Clinical Nutrition Problems, (1/2 course) Lecture, two hours. Prerequisites: Biological Chemistry 101 or 201, or one or more 200 level Nutrition courses. Nutrition and nutrient-metabolic interactions in various disease states such as cardiovascular disease, diabetes and obesity. Mr. Swendsen, Ms. Afifi-Slater, Mr. Kopple
270. Maternal and Child Nutrition. Lecture, four hours. Prerequisites: courses 112, 120, or equivalent, and consent of instructor. Nutrition of mothers, infants and children in countries at various levels of socio-economic development; measures for prevention and treatment of malnutrition, and the relationship between nutrition and mental development; impact of ecological, socio-economic and cultural factors on nutrition, nutrition education and services. Ms. Jelliffe, Ms. Neumann
271. Medical Anthropology. Four hours. Prerequisites: courses 110, 112, one upper division course in psychology, sociology, or anthropology, or equivalent, and consent of instructor. Cross-cultural aspects of human behavior as they relate to perception, treatment, incidence and prevention of illness and disease. Ms. Scrimshaw
272. Seminar on Current Issues in Maternal and Child Health. (1/2 course) Discussion, two hours. Prerequisites: courses 112, 120, or 141, New lecture syllabus and approaches in selected health and social problems of families, women of childbearing age and children including early development, day care and genetic counseling. Mr. Katz, Ms. Neumann
273. Qualitative Research Methodology. Discussion, three hours; laboratory, one hour. Prerequisites: courses 100A, 110, 130, 181 or equivalent, and consent of instructor. Intensive seminar, field course in qualitative research methodology. Emphasis placed on using qualitative methods and techniques in research and evaluation related to health care. Ms. Scrimshaw
M274A-M274B. Population Policy and Fertility (1 course each) (Same as Sociology M274A-B.) Lecture, three hours; discussion, one hour. Prerequisites: courses 102, 112, 173 or equivalent, Graduate Standing, and consent of instructor. Analysis of research concerning population policy with special emphasis on human fertility. M274A is prerequisite for M274B. Ms. Blake
M274C. Seminar in Population Policy and Fertility. (Same as Sociology M274C.) Discussion, one hour; seminar with student field reports. Courses M274A-M274B or equivalent, Graduate Standing, and 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
275. Human Lactation: Biological and Public Health Significance. (1/2 course) Lecture, two hours. Prerequisites: courses 112, 270 or equivalent, and consent of instructor. Biological and ecological aspects of human lactation in industrialized and developing countries. Mr. Jelliffe
280. Change Determinants in Health Related Behaviors. Lecture, four hours. Prerequisites: course 182, three courses from Psychology 110, 115, 172, Sociology 152, 154, or equivalent, and consent of instructor. Unified behavioral science approach to natural determinants of change, as foundation for planned change in health-related behavior at community, organizational, or individual levels. Ms. Blake
281. Advanced Social Research Methods In Health. Lecture, two hours; laboratory, two hours. Prerequisites: courses 100B, 181, or equivalent, and consent of instructor. Problems of health survey design and data collection; measurement issues in data analysis and interpretation; use of computer for analysis of large-scale survey data using various statistical techniques.
282. Communications in Health Promotion and Education. Lecture, two hours; discussion, two hours. Prerequisites: courses 182, 183, or equivalent, and consent of instructor. The course focuses on design, implementation, and evaluation of interpersonal communication in health-related and the biological sciences. Equal emphasis is on communication theories, models, and empirical research literature and on specific applications in health programs and case studies. Mr. Washington
283E. Social Epidemiology I. Lecture, two hours; discussion, one hour. Prerequisites: course 112, 183, 3 courses in psychology, sociology or anthropology, or equivalent, and consent of instructor. Sociological examination of the concepts "health" and "illness" and role of various health professionals especially physicians. Attention given to meaning of professionalization and professional-client relationships within a range of organizational settings and disease and illness. Mr. Goldstein
283F. Sociocultural Aspects of Health and Illness: Health Professions. (Same as Sociology M249A.) Lecture, three hours. Prerequisites: course 182, three courses in psychology, sociology, or anthropology, or equivalent, and consent of instructor. Sociocultural factors affecting differential patterns of health behavior, illness behavior, and sick role behavior. Mr. Serkin
283H. Social Epidemiology II. Lecture, two hours; discussion, one hour. Prerequisites: course 112, 183, 3 courses in psychology, sociology or anthropology, or equivalent, and consent of instructor. Sociocultural factors affecting differential patterns of health behavior, illness behavior, and sick role behavior. Mr. Serkin
284. Ecology of Mental Health. Lecture and discussion, two hours; reading and preparation of a serious research paper, four hours. Prerequisites: courses 100A, 112, 183, or equivalent, and consent of instructor. Analysis of occurrence and distribution of mental disorders, and relationships to social structure. Problems of classification, definition, measurement in socio-psychiatric epidemiology, socio-cultural and social-psychological factors in mental disorders. Mr. Goldstein
285. Community Problems in Mental Disorders. Lecture, three hours. Prerequisites: course 182, three upper division or graduate courses in psychology or sociology or equivalent, and consent of instructor. In-tensive examination 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. (1/2 course) Lecture, two hours. Prerequisites: courses M283E, M283F, M283G or equivalent, and consent of instructor. Recent significant contributions of behavioral sciences to our understanding of health and illness, with selected and varying topics each quarter. May be repeated for credit. Ms. Clark
287. Community Organization in the Health Field. Lecture, two hours; discussion, one hour; Field Work, eight hours. Prerequisites: courses 182, 183, at least two courses in sociology or anthropology, or equivalent, and consent of instructor. Theory and practice of putting together health programs, including analysis of relevant factors in physical and social environment and development of community-based intervention strategies to improve health and health services. Ms. Brown
288. Current Problems in Health Education. Lecture, one hour; discussion, three hours; other, term paper. Prerequisites: courses 183, 280, and consent of instructor. Current problems and findings in health education content areas--nutrition, mental health, consumer health, safety, communicable and chronic diseases. Mr. Washington
289. Issues in Program Evaluation. Discussion, three hours; Reading and Research Paper, one hour. Prerequisites: course 281, a course in social sciences, or equivalent and consent of instructor. Advanced seminar which will explore the problems of planning and implementing evaluation research in the context of local demonstration projects. Mr. Berkovnic
290. Seminar in Community Health Education. (1/2 course) Discussion, two hours. Prerequisites: courses 288 and 481. In-depth analysis of health education concepts as they relate to the professional practitioner. Mr. Washington
291. Advanced Topics In Health Survey Research Methods. Lecture, two hours; discussion, two hours; other, one hour. Prerequisites: course 281, or equivalent, and consent of instructor. Special topics in health survey research methods. Design of special public health surveys and survey research applications, techniques for dealing with data; diaries and memory aids; measurement error including response bias, social desirability, response validity; telephone interviewing; obtaining data on sensitive topics; ethics and confidentiality of survey research design. Ms. Beckman
M292. Alcohol and Drug Abuse: Social Policy Perspectives. (1/2 course) Prerequisite: consent of instructor. Alternative models of alcohol and other drug addictions will be examined and implications for treatment will be discussed. Prevention efforts and findings from California and national surveys will be considered, with primary emphasis upon alcohol use and abuse. Ms. Beckman
M293. Alcoholism and Drug Abuse Among Women. (Same as Psychiatry and Biobehavioral Sciences M233.) Seminar, four hours. Prerequisites: consent of instructor. Discussion of the psychoaffective aspects of abuse of alcohol and other drugs among women. Topics will include etiology, prevention, treatment, hormonal influences, and the role of the family. Emphasis will be placed upon current theoretical perspectives and research findings. Ms. Beckman
400. Field Studies in Public Health. (1/2 or 1 course) Prerequisite: consent of instructor. Field ob-
servations and research designed to promote community organized solutions for health promotion or medical care. Enrolled students must file field placement and program training documentation on form obtainable from Student Affairs Office. Not applicable to M.S. degree requirements for the M.S. degree. Only four units applicable to minimum total of 44 units required for the M.P.H. degree.
401E. Statistical Methods in Medical Studies. (1/2 course) Lecture, two hours. Prerequisites: courses 100C or 100D or Mathematics 152B or equivalent and graduate standing in Public Health or related field. Design and analysis of biomedical studies. For non division majors, may be taken on a Satisfactory (S) / Unsatisfactory (U) grade basis. Ms. Clark
401F. Statistical Methods of Longitudinal Data. (1/2 course) Lecture, two hours. Prerequisites: courses 112, 100C or 100D or Mathematics 152B or equivalent, and consent of instructor. Design and analysis of longitudinal or panel studies. For non-division majors, may be taken on a Satisfactory (S) / Unsatisfactory (U) grade basis. Ms. Clark
402A. Principles of Biostatistical Consulting. (1/2 course) Lecture, one hour; discussion, one hour. Prerequisites: courses 100B or 101B and Math 150B or 152B or equivalent and consent of instructor. Role of statistician and client. Review of actual statistician-client interactions and case studies. Mr. Guthrie and Ms. Clark
400B. Biostatistical Consulting. Discussion, two hours; laboratory, two hours. Prerequisites: courses 100C, 402A, or consent of instructor. Principles and practices of biostatistical consulting. May be repeated for credit.

403. Computer Management of Health Data. Lecture, three hours; discussion, one hour. Prerequisites: courses 100A, 112 and 130, Mathematics 1A, and Engineering 10, or equivalent, and consent of instructor. Concepts of health data management, design and maintenance of large data base 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.

Ms. Chern

404. Principles of Sampling. Lecture, three hours; discussion, one hour. Prerequisites: courses 100B, 112, or equivalent and 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. Mr. Cumberland

405. Demographic Materials and Methods. Lecture, three hours; laboratory, two hours. Prerequisites: courses 100A, 112 and 130, Mathematics 1A, and Engineering 10, or equivalent, and consent of instructor. Sources of demographic information; description of human populations; calculation and interpretation of statistics used to measure and describe population growth, structure, geographic 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, and consent of instructor. The use of multiple regression, principal components, factor analysis, discriminant function analysis, logistic regression, and canonical correlation in biomedical data analysis. For non science majors, may be taken on a Satisfactory (S)/Unsatisfactory (U) grade basis.

Ms. Clark, or A. A. Affifi

410A. Management of Epidemiologic Data. (½ course) Lecture, two hours. Prerequisites: courses 100A, 112 (one may be taken concurrently with 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. Cretin

410B. Management of Epidemiologic Data. (½ course) Lecture, two hours. Prerequisites: course 100A or equivalent and consent of instructor. Development of special purpose programming and compiler languages for epidemiologic problems. Data management in large scale statistics in (U) grade basis.

Ms. Cretin

411. Research Resources in Epidemiology. (½ course) Lecture, one hour; discussion, one hour. Prerequisites: courses 100B, 211B, and 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.

Mr. Spivey

412. Administration of Preventive and Medical Clinics. (½ course) Lecture, one hour; discussion, one hour; other, field trips. Prerequisites: courses 112, 130 or equivalent, and consent of instructor. Delivery of preventive and ambulatory health services in the clinic. Epidemiologic, administrative, and financial aspects of communicable disease, substance abuse, mental health, prenatal care, family planning, cardiovascular disease, presymptomatic screening, venereal disease, and degenerative disease and treatment.

Mr. Tennant

413. Preventive Medicine in Public Health Practice. Lecture, two hours; discussion, two hours. Prerequisites: Graduate Standing, courses 100A, 110, 112, 130 or equivalent and consent of instructor. Development, current status and potential of preventive medicine in public health practice, focus on risk indicator approach (exercise, alcohol, stress, etc.) with consideration of program settings, delivery problems and issues.

Mr. Breslow, Mr. Fielding

430. Management of Medical Care Organizations and Programs. Lecture, four hours. Prerequisites: course 131 and consent of instructor. Application of organizational, economic and behavioral science concepts to understanding structure and functions of health care facilities and programs.

Mr. Pointer

431. Processes in Health Service Organizations. Lecture, one hour; laboratory, three hours. Prerequisites: course 430 and consent of instructor. Managerial skills and behaviors applied to components of organizations at several levels: individual, interpersonal, group, inter-group, system, and inter-organization. Unique features of health service organizations are stressed as applications are presented.

Mr. Pointer, Mr. Ross

432. Integrative Seminar in Health Services Management. Seminar, four hours. Prerequisites: courses 100A, 112, 130, or equivalent, and 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 and Staff

433D. Advanced Hospital Financial Management Simulation. Lecture, one hour; discussion, one hour; laboratory, two hours. Prerequisites: courses 130, 141, 436, 433, or equivalent and consent of instructor. Financial aspects of hospital management decisions in a changing environment examined through computer simulation, with particular attention to economic projections, demand patterns, investment programs, and health care regulations.

Mr. Coyne

433E. Advanced Hospital Financial Management Seminar. Seminar, four hours. Prerequisites: courses 130, 131, 141, 436, or equivalent and 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

434A. Information Processing for Health Plans. Lecture, four hours. Prerequisites: courses 100A or 101A, 134, and consent of instructor. Information theory presented as framework for understanding data analysis. Computer used to implement data analysis research presented previously in information systems concepts.

Mr. Coyne

448B. Applied Methodology in Health Planning. Lecture, three hours; field work, four hours. Prerequisites: courses 130 or equivalent, 448B, 444A, and consent of instructor. Demonstrating methodology of health planning by involving students in formulation of actual health plan for existing agency in Los Angeles area.

Mr. Torrens

445A-445B. Practicum in Health Planning and Policy, Field placement. Prerequisites: courses 100A, 100B, 130 (may be taken concurrently), 233, 248, or equivalent, and consent of instructor. Required of all MSPH Health Planning and Policy students. Preparation for and subsequent analysis of 10-week field placement during summer between first and second year. Offered on a Progress, S/U grade basis.

Mr. Cameron

446. Financing Health Care. Lecture, four hours. Prerequisites: Economics 1, 2 or equivalent, course 130, and consent of instructor. Patterns of financing by consumers, third-party intermediaries; trends in health service use; expenditures, national health insurance, and international comparisons of health financing. Mr. Schwitter
447D. Management of Health Maintenance Organizations. Lecture, three hours. Prerequisites: courses 130, 134, or equivalent, and consent of instructor. Alternative approaches to fee-for-service for paying, providing, or arranging for delivery of health care services, and relating these approaches to the national health policy. Mr. Wasserman

447E. Health Insurance Principles and Programs. Lecture, four hours. Prerequisites: courses 130, 232, and additional course in health services, or equivalent and consent of instructor. Examination of health insurance, cost analysis, and commercial assumptions underlying private health insurance. Comparison with government-sponsored health insurance. Analysis of diversity of voluntary medical care insurance plans under different approaches and with varying scope of coverage and benefits and their implications for public and private medical care developments. Mr. Shonick

447F. Health of Americans: Trends and Issues. Lecture, four hours. Prerequisites: Graduate Standing and courses 100A, 110, 112, 130, or equivalent, and consent of instructor. Analysis of major trends in health, including cost, financing, role of government, care services, and relating these approaches to the private health. Insurance. Comparison with government-sponsored health insurance. Examination of social, political, and economic factors affecting public and private health services. Mr. Breslow

448. Evaluation of Health Services and Programs. Lecture, two hours; discussion, one hour; laboratory, one hour. Prerequisites: courses 100A, 130, 139 or equivalent, and consent of instructor. Analysis of methods for assessing the quality and value of personal health services and programs in various social contexts. Principles of decision analysis. Emphasis on measurement of outcomes of health service systems. Mr. Hopkins

449. Health Policy Issues for Dental Professionals. (½ course) (Same as Dentistry M422.) Lecture, two hours. Prerequisites: courses 103, 112, 130, or equivalent, and consent of instructor. Current public health policy issues in dental health including financing, role of government, and quality assurance. Mr. Schoen

450. Environmental Measurements. Lecture, two hours; laboratory, four hours. Prerequisites: courses 153 or 251A, 250. Instrumental methods for laboratory and field applications to assess quantity of environmental pollutants in air, food, and water, and to assess degree of exposure to such factors as noise and radiation. Ms. Valentine, Mr. Mah

451. Water Quality and Health. Lecture, three hours; discussion, one hour. Prerequisites: course 150, 250, 150A, or equivalent. An introduction to Water Quality with coverage of hydrology, water chemistry, and various chemical contaminants that may affect human health. Various treatment methods and health implications discussed. Ms. Valentine

452. Environmental Policy Decision-Making. Lecture, four hours; discussion, one hour. Prerequisite: course 254. Foundations, principles, and modeling of environmental policy-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

453. Environmental Hygiene Practices. (½ course) Lecture, two hours. Prerequisites: courses 112, 150, 154 and 450. Field principles and practices of environmental sanitation as applicable to the sanitary engineer. Topics include theory, code enforcement, and inspection procedures for applicable environmental topics areas. Ms. Musher

460. Principles of Public Health Nutrition. Lecture, three hours; class projects, four hours. Prerequisites: courses 100A, 130 (may be taken concurrently), 162 or equivalent and consent of instructor. Survey of methods and problems of current research in public health agencies in dealing with community nutrition of population groups. Ms. Hunt, Mrs. Murphy

461. Computer Use in Dietary Assessment. Lecture, two hours; laboratory, six hours. Prerequisites: courses 100A, 112 (may be taken concurrently), 162, 163, 460 and consent of instructor. Collection and computer analysis of nutrient intake data for the purpose of nutritional assessment and decision making. Ms. Murphy, Ms. Hunt

462. Nutritional Assessment: Laboratory Assays. (½ course) Lecture, one hour; laboratory, three hours. Prerequisites: courses 162, 165, 167, or equivalent, and one course in 260 series. Biochemical methods for evaluating nutritional status of individuals or population groups. Techniques for measuring vitamins, minerals, lipids and proteins. Ms. Swerdfeger


470A. International Health Agencies and Programs. Lecture, four hours. Prerequisites: three upper division or graduate courses in health science, social or behavioral science, and consent of instructor. Historical development and functions of international health organizations. Key problems and trends in international health and public health. Religious missions, private foundations, and other disseminating information, money and services. Mr. Neumann

470B. Advanced Issues in International Health. Lecture, two hours; discussion, six hours. Prerequisites: courses 173, 175, 270, 470A or 472 or 475. In-depth focus on major health care issues confronting recipient less-developed countries and donors of technical and financial assistance. Mr. Neumann

471A. Reproductive Health Services and Programs. Lecture, two hours; discussion, two hours. Prerequisite: course 172 or equivalent. Examination of U.S. delivery system of pregnancy care, family planning, male-specific and female-specific health care including methods, facilities, personnel and funding. Ms. Neumann

471B. Current Issues in Reproductive Health. Lecture, two hours; discussion, two hours. Prerequisite: course 471A. Critical review of current public health and socio-political problems in reproductive health. Emphasis on development of feasible solutions and strategies for achieving them. Ms. Jelliffe

472A. Maternal and Child Health in Developing Areas. Lecture, four hours. Prerequisites: courses 270, 472A or equivalent, and consent of instructor. Major health problems of mothers and children in developing areas stressing causation, management and prevention. Particular reference to adapting programs to limited resources in cross-cultural milieu. Ms. Neumann, Mr. Jelliffe

472B. Recent Developments in Maternal and Child Health in Disadvantaged Countries. (½ course) Seminar, two hours. Prerequisites: courses 170, 171, 270, 472A or equivalent and consent of instructor. Application of recent advances in the field of international maternal and child health, with special reference to developing countries. Mr. Jelliffe and the Staff

472D. Overseas Refugee Health Programs. (½ course) Lecture, one hour; discussion, one hour. Prerequisites: courses 110 or 111, 112, 270 or 472A, or equivalent and consent of instructor. Comprehensive overview of the health problems of overseas refugee situations and of programs designed to deal with these special circumstances. Mr. Jelliffe

472A. Handicapped Children: The Public Health Concern. (½ course) Lecture, two hours. Prerequisites: courses 110 or 111, 130, 170 or equivalent and consent of instructor. Etiology, prevalence, social consequences and remedial programs for the major handicaps of childhood. Emphasis on biological and social factors, current research and program developments. Mr. Katz

473D. Child Health in the United States of America. Lecture, three hours; discussion, one hour; field visits — one time (three hours). Prerequisites: courses 110, 111, 112, 130, 170 or equivalent and consent of instructor. Examination of the health problems confronting children and adolescents in the United States, and exploration of alternatives of priorities, approaches, services, and policies aimed at ameliorating these problems. Ms. Neumann, Mr. Chang

473E. Adolescent Health — Major Issues and Problems. (½ course) Lecture, two hours; field visits, two hours. Prerequisites: courses 100A, 110, 111, 170, 172 or equivalent and consent of instructor. Overview of adolescent growth and development, significant physical and psychological problems, populations at risk, individual and community, and laws affecting youth and the juvenile offender. Ms. Jelliffe and the Staff

473F. Research Seminar in Community Child Health Services. (½ course) Discussion, one hour; laboratory, one hour; field visits, two hours. Prerequisites: courses 100A or 103A, 130, 170 or 171, 181 and consent of instructor. Examination and development of evaluation strategies for existing community child health services at the local level and development of community child health services in developing countries. 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; field visits, two hours. Prerequisites: courses 110 or 111, 112, 130, 170 or equivalent, and consent of instructor, Assessment of needs, planning, and development of health and 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 170, 172 or 173, course 130 or equivalent, course 473D, and consent of instructor. Analysis of the development of 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. R. Roemer

474. Self-Care and Self-Help in Community Health. Lecture, two hours; discussion, two hours. Prerequisites: course 473D and work or internship in self-help or equivalent, and consent of instructor. Review of background, principles, concepts, programs and research concerning the emerging field of self-care in health. Ms. Katz

475. Planning and Development of Family Health Programs. Lecture, two hours; discussion, two hours. Prerequisites: courses 100A, 170, 173, 161 or 470A, 270 or equivalent. Theory, guidelines, and team exercise for planning community health family planning projects in the U.S.A. and in developing countries. Phases include: community needs identification; goal setting; budget and work plan development; funding; staffing; evaluation design; data collection; analysis; and projections. Mr. Neumann

476. International Health Work in Cross-Cultural Perspective. Lecture, two hours; discussion, two hours. Prerequisites: courses 112, 172 or equivalent, and 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. Scrimshaw

476D. Analysis of Family Health and Fertility Data. Lecture, three hours; laboratory, two hours; assignment, two hours. Special topics: courses 100A, 125 or 181, 217, or equivalent, and consent of instructor. Analysis and interpretation of large-scale data sets, case studies, and experimental data in the area of applied family health and fertility. Computer use as a tool in the analysis and management of the data necessary for interpreting and preparing research articles. Ms. Bourque

478. Anthropometric Nutritional Assessment. (½ course) Lecture, two hours. Prerequisites: courses 270 or 477 and consent of instructor. Practice in anthropometry illustrating how it is used in nutritional assessment. Data presentation and interpretation will be covered. There will be didactic sessions, readings, discussions, and student practical experience in clinical anthropometric techniques. Ms. Neumann

479. Nutrition Programs and Policies for Families in the Third World. Lecture, two hours; discussion, two hours. Prerequisites: course 472 or equivalent and 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

480. Nutrition Education and Training: Third World Considerations. (½ course) Lecture, one hour; student participation, one hour. Prerequisite: course 270 or equivalent or consent of instructor. Problems and priorities in nutrition education and training in Third World countries are reviewed, including new concepts in primary health care services, media, mass media communications and Governmental and International interventions. Ms. Jelliffe

481. Health Education in Clinical Settings. Lecture, two hours; discussion, two hours. Prerequisites: courses 130, 183, 280, 282, and consent of instructor. Analysis 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

482. Administrative Relationships in Health Education. Lecture, two hours; discussion, two hours. Prerequisites: courses 130, 183, 280, 282, and consent of instructor. Study of administration concepts; relationships and applicability to health education settings. Responsibility and authority for health education in organizations and other groups.

483. Practicum in Health Education. (1 or 2 courses) Discussion, six or eighteen hours. Prerequisites: courses 182, 183, 280, or equivalent, and consent of instructor. Study of community and group-felt needs as reflected in behavior. Analysis of data for understanding, planning, implementing, and evaluating needed-direct health education and medical care programs. Ms. Richards

484. Social Interventions for Health Promotion and Evaluation. Lecture, two hours; discussion, one hour; evaluation, one hour. Prerequisites: courses 182, 183, 280, or equivalent, and consent of instructor. Selected social intervention strategies for health promotion and health education programs. Emphasis on theories, working assumptions, methodologies, and impacts of selected strategies within the contexts of planned change in health related behaviors. Mr. Kar

485. Introduction to Program Evaluation. Lecture, two hours; discussion, two hours. Prerequisites: courses 100A, three courses in social sciences, or equivalent, and consent of instructor. An introduction to the principles of program evaluation as they are applied to public health programs in the community. Mr. Berkmanov

486. Death, Suicide and Homicide: A Public Health Perspective. Lecture, three hours; one hour (field trips, outside readings and reports). Prerequisites: courses 100A or 103, 112, 182, 183 or equivalent, consent of instructor. Identification and consent of instructor. Application of community organization methods to health problems and health education programs; including community-based needs assessment, planning and developing community-based projects and evaluation; emphasis on organizational and process skills; class fieldwork project. Mr. E. Brown

490. Professional Writing for Public Health. (½ course) Workshop, four hours. Prerequisite: consent of instructor. Practice in writing reports, grant proposals, abstracts, and article length research papers. Analyzing rhetorical and stylistic features of essays in various professional journals will help participants improve both their prose style and their editorial abilities. Offered on a Satisfactory (S)/Unsatisfactory (U) grade basis only. No degree credit allowed.

495. Teacher Preparation in Public Health. (½ course) Prerequisites: eighteen units of cognate courses in a major area of specialization, and consent of Department Chair. Not applicable on minimum course requirements for a master's degree. Offered on S/U basis only. May be repeated for credit.

501. Cooperative Program. (½ to 2 courses) Prerequisite: Approval of UCLA Graduate Advisor and Graduate Dean. Approval of host campus instructor, Department Chair and Graduate Dean. To record enrollment in courses taken under cooperative arrangements with neighboring institutions. No more than 8 units may be applied to the minimum total course requirements for a master's degree. No credit allowed toward the minimum five graduate course requirement for a master's degree. Offered on a S/U grade basis only.

Individual Study and Research

596. Directed Individual Study or Research. (½ to 2 courses) Prerequisites: Graduate Standing, consent of instructor. Individual guided studies under direct faculty supervision. May be repeated for credit; only one course (4 units) will count toward the minimum course requirements for the M.P.H. and M.S. in Public Health degrees. Offered on a letter graded basis only.

597. Preparation for Master's Comprehensive or Doctoral Qualifying Examination. (½ to 2 courses) Prerequisites: Graduate Standing, consent of instructor. May be repeated for credit. May not be used to fulfill any course requirements for the master's or doctor's degrees. Offered on a S/U grading basis.

598. Master's Thesis Research. (½ to 2 courses) Prerequisite: consent of instructor. May be repeated for credit. Only one course (4 units) will count toward the minimum total course requirement for the M.P.H. and M.S.P.H. degrees. No credit allowed toward the minimum five graduate course requirement. Offered on a S/U grading basis.

599. Doctoral Dissertation Research. (½ to 2 courses) Prerequisite: consent of instructor. May be repeated for credit. May not be used to fulfill any course requirements for a degree. Offered on a S/U grading basis.

Radiological Sciences

(Office, BL-428 Center for the Health Sciences)

Zoran L. Barbaric, M.D., Professor of Radiological Sciences

Jorge R. Barrio, Ph.D., Associate Professor of Radiological Sciences

Leslie R. Bennett, M.D., Professor of Radiological Sciences

James D. Collins, M.D., Associate Professor of Radiological Sciences

J. Duncan Craven, M.D., Adjunct Associate Professor of Radiological Sciences

Martin B. Epstein, Ph.D., Adjunct Associate Professor of Radiological Sciences

David C. Findley, Ph.D., Visiting Lecturer of Radiological Sciences

Ernest Garcia, Ph.D., Adjunct Assistant Professor of Radiological Sciences

L. Stephen Graham, Ph.D., Adjunct Professor of Radiological Sciences

Moses A. Greenfield, Ph.D., Professor of Radiological Sciences

Francis E. Holly, Ph.D., Adjunct Professor of Radiation Oncology

Martin W. Herman, Ph.D., Adjunct Professor of Radiological Sciences

Sung-Cheng Huang, D.Sc., Assistant Professor of Radiological Sciences in Residence

Edward A. Langdon, M.D., Professor of Radiation Oncology

W. N. Paul Lee, M.D., Assistant Professor of Pediatrics in Residence

Norman S. MacDonald, Ph.D., Professor of Radiological Sciences

Carol M. Newton, M.D., Ph.D., Professor of Biomatics

Amos Norman, Ph.D., Professor of Radiological Sciences and Radiation Oncology

Robert G. Parker, M.D., Professor of Radiation Oncology

Michael E. Phelps, Ph.D., Professor of Radiological Sciences

Richard F. Riley, Professor Emeritus of Radiation Oncology and Radiological Sciences

James B. Smathers, Professor of Radiation Oncology

Alan S. Tesler, Assistant Professor of Radiation Oncology

Ramesh C. Verma, M.D.; Assistant Professor of Radiological Sciences

Milo M. Webber, M.D., Professor of Radiological Sciences

Marilyn C. Wexler, M.S., Adjunct Instructor of Radiation Oncology

Jamal S. Whiting, Ph.D., Adjunct Assistant Professor of Radiological Sciences

Gabriel H. Wilson, M.D., Professor of Radiological Sciences (Chair of the Department)

James Winter, Ph.D., Assistant Professor of Radiological Sciences in Residence

Rodney H. Withers, Ph.D., Professor of Radiation Oncology

The Master of Science and Ph.D. Degrees in Medical Physics.

Admission Requirements. In addition to the University's minimum requirements, prospective candidates for admission are required to have a bachelor's degree with a major in sciences. Also, it is expected that all applicants will have had (a) one year college physics (cal-
duction to Programming/FORTRAN, Descrip-

lculus based) plus the equivalent of UCLA's 8E General Physics: Modern Physics, b) two years of college mathematics including calcul-

culus equivalent to UCLA's calculus series: 31A-31B Calculus and Analytic Geometry, 32A Dif-
fential Calculus, 32B Integral Calculus, 33A Matrices and Differential Equations, 33B In-

finite Series, (c) one year college chemistry, (d) one year college biology, and (e) at least one course in computer programming, FORTRAN, equivalent to UCLA's Engineering 10F Intro-
duction to Programming/FORTRAN. Descrip-
tion and Use of FORTRAN Programming Lan-
guage.

Scores from the Graduate Record Examina-
tion Aptitude Test, taken in the last three years, should be sent to the Department.

Three letters of recommendation are required. If the student already has a master's degree, one of the letters should be from the student's thesis adviser.

A brochure describing the program in Medical Physics may be obtained from the Division Of-

cice: Radiological Sciences, Medical Physics Division, AR-259 CHS, UCLA, Los Angeles, CA 90024.

Advising. The Graduate Adviser is Professor Amos Norman who may be contacted at the

above address. The Divisional administrative assistant also functions as an adviser regard-
ing Departmental, Graduate Division, and Uni-

versity regulations and procedures.

All entering students are assigned a faculty

adviser. Students are expected and encour-

gaged to meet with their advisers as needed

regarding their academic programs, particular-

ly at the beginning of each quarter to prepare

and approve the study list. The student usually

retains this adviser until he/she begins re-

search work for the master's degree, at which

time the chair of the thesis or dissertation com-

mittee becomes the adviser.

Evaluations of academic progress are made collectively by the faculty of the Division. Spec-

ial problems regarding graduate students are discussed during monthly faculty meetings.

These problems are brought to the attention of the Division either by the individual student, the student representative, the instructor or the adviser. If academic progress is satisfactory, oral evaluations are made; if the progress is unsatisfactory, the student is informed in writ-
ing by the Chief of the Division as to facts, suggestions regarding remedial action, and the consequences of unsatisfactory progress. Progress during the first year of graduate study is based primarily upon grade point averages. The policy, as set by the Division, regarding grade point average is: when the grade point average falls below the minimum 3.0, the student is put on probation for the following (sec-

ond) quarter. A substantial improvement must be made at the end of that quarter; otherwise, the student is subject to dismissal. If, at the end of the third quarter the grade point average is still below 3.0, the student is dismissed from graduate status.

Disqualification and Appeal of Disqualifi-
cation. Conditions which may lead to termina-
tion of graduate status include failure to main-
tain reasonable progress toward the degree, failure to maintain 3.0 grade point average in

three quarters, and failure to complete an ac-

ceptable thesis or dissertation.

Tentative decisions to recommend termination are made in a meeting of the teaching faculty. The student is informed and given an opportunity to make an appeal before a final decision is reached.

The Master of Science Degree

Course Requirements. Total number of courses: nine minimum (36 units); number of graduate courses: eight.

For those students wishing to become practic-

ing professional medical physicists, 12 gradu-

cate courses are normally required for the M.S.

degree. These are the three clinical rotations (Rad Sci 202A; C, D), their prerequisites (Rad

Sci 200A and B, 203, 204, 205, 207, 208) and Rad Sci 210, Biomath 210 and Public Health

100A and B. Students are also required to pre-

sent a seminar on their research before grad-

uation (Rad Sci 260A or B).

For some students with a Medical Physics background or a career objective other than a prac-
ticing medical physicist, a more sharply focused curriculum may be advised.

Thesis Plan. All students are required to write a thesis based on a research project. After the student has completed the course require-

ments, he/she approaches a faculty member to guide this research. If the faculty member

agrees to guide the research, he/she becomes chair of the thesis committee. The student, in consultation with the thesis chair, selects two additional committee members. All three members may be selected from within the Dep-

artment. When a student indicates interest in specific areas of research but is uncertain of

the faculty member to approach with a thesis problem, the Graduate Adviser guides him/her in the selection of possible committee mem-

bers.

Time to Degree. From graduate admission to conferral of the M.S. degree, normal progress is six to eight quarters of full-time enrollment.

500 Series Course Limitations. 500 series courses which may apply toward the degree are Rad Sci 596, 4 units, letter grade only, and

Rad Sci 598, 4 units, S/U grading only.

Eight units of 500 series quarter units may ap-

ply toward the total course requirements. Four units may apply toward the minimum graduate course requirements.

Ph.D. Degree

Admission to the Doctoral Program. Admis-

sion to the doctoral program requires passing the Departmental screening examination, given at the end of the Fall and Spring Quarters each year. This examination covers the con-

tent of all Medical Physics courses and in-

cludes current research in Medical Physics. Permission to take the examination a second time may be granted by the faculty, but each student's case is reviewed individually. Com-

pletion of a master's program is not required. No courses are required for the degree.

Written and Oral Qualifying Examinations. The screening examination for admission to the Ph.D. program should be taken by the end of the sixth quarter in residence. Once the screening examination is passed and the can-
didate has chosen a research area for the dis-
sertation, he/she should, within a reasonable time frame agreed upon with the dissertation adviser, form a doctoral committee and schedule the first Oral Qualifying Examination. This examination also covers the student's mastery of the Medical Physics curriculum, particularly the areas of the proposed dissertation topics.

Students who do not complete the dissertation within four years of taking the written screening examination may be required to take it again.

Final Oral Examination Following Comple-
tion of the Dissertation. The Final Oral Ex-

amination, or dissertation defense, is required.

Time to Degree. It is estimated that a full-time student entering the program with no under-

graduate deficiencies can complete the Ph.D.

degree in 4.7 years (equivalent to approxi-

mately 14 quarters).

Upper Division Courses

195. Directed Individual Study or Research in Medical Physics for Undergraduate Students. (1 to 1 course) Prerequisite: consent of the Graduate Adviser of Medical Physics. Directed individual study in Medical Physics for undergraduate students. Stu-

dent must submit written proposal outlining study or research to be undertaken. This should be worked out in consultation with the faculty member involved prior to the beginning of the quarter.

Graduate Courses

200A. Physics and Chemistry of Nuclear Medi-
cine. Prerequisite: consent of instructor. Nuclear structure, statistics of radioactive decay, nuclear radiations and their interaction with matter, nuclear decay processes, nuclear reactions, dosimetry, and com-

partment models. The physical and chemical properties of radioactive preparations used in nuclear medi-

cine.

200B. Instrumentation in Nuclear Medicine. Pr-

erequisite: course 200A. Introduction to nuclear medi-
cine instrumentation including exterior probe sys-
tems, well scintillation detectors, liquid scintillation counters, scanners and cameras; dosimetry of inter-

nally administered radioisotopes. Mr. Graham

201. Environmental Radiations. The sources, physical properties, and biological hazards of ionizing radiations, ultraviolet and laser light, and microwave and acoustic radiations in the environment. Social benefit vs. technological risk will be evaluated.


202A. Nuclear Medicine. Prerequisite: 200B or con-
sent of instructor.

202B. Diagnostic Radiology. Prerequisite: 200A, 205,

208 or consent of instructor.

202C. Radiation Therapy. Prerequisite: 203, 204,

207, 208 or consent of instructor.
202E-220F. Application of Medical Physics to Clinical Problems: Radiation Therapy. Prerequisite: course intended for physicians only. Lecture/ seminar discussion of dosimetric calculations and measurements in radiation oncology cases under treatment. Written reports on representative problems selected from current literature and/or clinical experience.


204. Introductory Radiation Biology. Lecture. Effect of ionizing radiation on chemical and biological systems.

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 will illustrate the basic theory.

207. Radiation Protection and Health Physics. Concepts in radiation protection, the recommendation of the national council on radiation protection and measurements, the maximum permissible dose levels. Shielding calculations. The layout and design of radiologic installation.

208A-208B. Medical Physics Laboratory. (1 course each) Prerequisites: courses 203 and 205. Techniques for measuring ionizing and non-ionizing radiation, applications to problems in radiological sciences.

Mr. Herman


Mr. Huang

M216. Computer and Biomathematical Applications in Radiological Sciences. (Same as Biomathematics M216.) Prerequisites: Biomathematics 210 and elementary calculus are recommended. Computational and biomathematical methods will be presented that relate to dosimetry, treatment strategies, biological effects of radiation, and laboratory research in radiotherapy and radiobiology. Mr. Frey, Ms. Newton

260A-260B. Seminar In Medical Physics. (1 course each) Seminar. 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, Mr. Riley

266A-266B-266C. Seminar In Nuclear Medicine. (1/2 course each) Seminar. Topics of current interest in nuclear medicine. Seminar intended for physicists, radiation physicists, and graduate students.


Mr. J. Barno

481. Angiographic Techniques. (1/2 course) Prerequisite: consent of the instructor. Laboratory. Beginning Radiology residents will be taught basic techniques of angiographic procedures, utilizing animals.

Mr. Snow

495. Special Studies in Medical Physics. Teaching assistance in graduate laboratory courses under the supervision of a member of the faculty. May be taken on a S/U basis only.

596. Research in Medical Physics. (1 to 3 courses) Directed individual study of research. May be taken any number of times for letter grades; only one course may be used for M.S. credit.

Shirley L. Arora, Ph.D., Professor of Spanish.
Margherita Cottino-Jones, Ph.D., Professor of Italian.
Eric Gans, Ph.D., Professor of French.
C.P. Otero, Ph.D., Professor of Spanish and Romance Linguistics.
Edward F. Tuttle, Ph.D., Associate Professor of Italian and Romance Linguistics.
A. Carlos Quicoli, Ph.D., Assistant Professor of Portuguese and Romance in Linguistics (Chair of the Program).

The integration of linguistic and literary knowledge is taken to be one of the highest aims of this interdepartmental program.

The Master of Arts Degree

Admission Requirements. The UCLA B.A. in French, Italian, Portuguese, or Spanish, or its 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 his/her proposed program. Three letters of recommendation and the Aptitude Test of the Graduate Record Examination are also required. Students admitted from elsewhere whose preparation is considered deficient in view of their intended specialization are required to make up their deficiencies by taking specified upper division courses. Such courses may be taken concurrently with graduate courses, but they do not count toward the course requirements for the M.A. degree. During his/her first graduate year, the student who knows only the language of his/her major should prepare himself/herself in at least one other Romance language so he/she can take courses in his/her minor no later than the second year of graduate study.

Advising. Each new graduate student must make an appointment with the Chair during the week preceding the start of classes to discuss general requirements and to decide on a program of courses for the quarter. Following this initial interview, the student is required to see his/her adviser at least once a quarter for review of his/her progress towards the degree. Students who have not been authorized to form their guidance committee are advised by their major language adviser: French: Prof. Hassan El Nouty, 160 Haines Hall; Portuguese: A. Carlos Quicoli, S312 Rolfe Hall; Spanish: Prof. Carlos P. Otero, S317 Rolfe Hall.

He/she must have his/her study list approved by his/her adviser each quarter before it is signed by the Chair of the Program. Progress reports will be placed in the student's file.

A guidance committee will be constituted for each student upon declaration of his/her specialization and in no case later than the end of the second quarter in the program. The guidance committee is composed of the student in consultation with the Program Chair and is composed of three faculty members of the sponsoring departments representing the student's major and minor fields of specialization.

Before meeting with his/her guidance committee, each student must complete the Program Proposal form for their approval. The forms are available at the Program office. No later than two weeks after the student's guidance committee meeting, he/she must submit the duly approved Program Proposal to the Interdepartmental Committee for review. Any student who wishes to make substantial changes to his/her Program Proposal must follow the same procedure.

Foreign Language Requirement. In addition to the Romance language of major interest and the Romance language of minor interest, candidates are required to have either UCLA Latin 3 or the equivalent, or UCLA Italian 3 or the equivalent (provided Italian is not their major), whether they specialize in Linguistics or in Literature. The language requirement must be completed no later than the quarter before the quarter in which the student expects to receive his/her degree.

Course Requirements. The M.A. program permits specialization in either Linguistics or Literature and will include a major and a minor. Twelve courses are the minimum requirement of which six courses (at least five of them graduate) must be in the student's 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 the student's major field of study. Each individual program will be worked out in close consultation with the guidance committee. Course 596 may be included twice. Linguistics 100 is required as a prerequisite of all students majoring in the linguistics field. Note: During the first graduate year, the student who knows only the language of his/her major should prepare himself/herself in at least one other Romance language so he/she can take courses in his/her minor no later than in the second year of graduate study.
Teaching Experience. Teaching experience is not required, but is considered desirable. Consult the Chair for information 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. A student may petition for authorization to write an M.A. thesis only after completion of six courses which count toward the degree. It is the responsibility of the student to choose an appropriate topic and find a professor willing to direct the thesis. He/she then petitions the program for authorization to proceed. The Program Chair first examines the petition and then presents it to the Interdepartmental Committee for approval or denial by a majority vote. If the petition is approved, a thesis committee (normally the student's guidance committee) is appointed which consists of a chair in the field of the thesis and two other members of the sponsoring departments who represent the minor fields. After completion of the thesis, the candidate must pass a 2-hour oral examination testing his/her knowledge of the field of this thesis and his/her 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. The Comprehensive Examination is administered by three members of the student's guidance committee, appointed by the Chair. Two of the three committee members will represent the languages and field of the student's major and minor. The written Comprehensive Examination, consisting of one 4-hour examination in the major field, one 2-hour examination in the minor field, and one oral examination not to exceed one hour, will be given each quarter in the second week prior to final examinations. The examination is graded by the comprehensive examination committee, whose decision is final. If a student fails the examination or any part thereof, he/she may retake the failed portions once when the examination is next regularly offered. 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.

Time to Degree. A full-time student with no deficiencies at entrance who takes three courses per quarter should complete the coursework and the Comprehensive Examination in four quarters from graduate admission. Students with a deficiency at entrance and teaching assistants will require more time.

500 Series Course Limitations

<table>
<thead>
<tr>
<th>Course Unit Type of No.</th>
<th>Value Grading</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>596</td>
<td>4-8 Letter</td>
<td>8 units may apply toward the M.A.</td>
</tr>
<tr>
<td>597</td>
<td>S/U</td>
<td>does not count toward the M.A.</td>
</tr>
<tr>
<td>598</td>
<td>S/U</td>
<td>does not count toward the M.A.</td>
</tr>
</tbody>
</table>

Disqualification and Appeal of Disqualification. The Chair of the Program reviews the progress of each student at the end of each academic year. If he/she finds that a student is not making satisfactory progress, he/she proposes a probationary period during which certain conditions must be met. The Chair then advises the student in writing of this decision. If the student is unwilling to comply with the expectations of the Chair, he/she is subject to dismissal. This decision may be appealed to the Interdepartmental Committee.

The Ph.D. Degree

Admission Requirements. The UCLA M.A. in Romance Linguistics and Literature or the UCLA M.A. in French, Italian, Luso-Brazilian Language and Literatures (Portuguese) or Spanish, or the equivalent is required. Three letters of recommendation and the Graduate Record Examination Aptitude Test are also required.

The UCLA M.A. in Romance Linguistics and Literature, or the UCLA M.A. in French, Italian, Luso-Brazilian Language and Literatures (Portuguese), or Spanish, or the equivalent as determined by the Chair. Entering students whom the Chair determines to have obtained the M.A. with distinction are automatically eligible for admission to the Ph.D. program and may file Form 1 (“Notice of Intention to Proceed with the Doctoral Degree”) and form their guidance committee; those whose M.A. program registers deficiencies in scope or quality will be required to make up those deficiencies and complete three graduate courses from the offerings of the sponsoring departments, after which they are eligible to file Form 1. Admission to the Ph.D. program will be determined by the Interdepartmental Committee.

Following the determination of the student’s eligibility and his/her approval of Form 1, his/her guidance committee will be formed. The latter is composed of a chair, who represents the student’s major field of study and under whom the student proposes to write his/her dissertation, and two members representing the minor fields, all members belonging to the sponsoring departments. The chair of the committee will normally be a tenured professor. It is the student’s responsibility to constitute the committee and to secure the individual member’s consent, which will be transmitted to the Chair in writing. As soon as possible after official admission into the doctoral program (see below), the student meets with his/her guidance committee for the purpose of working out his/her program of courses and setting a tentative date for the Qualifying Examinations. For this first meeting with his/her guidance committee, each student must complete the Program Proposal form for their approval. The forms are available at the Program office. No later than two weeks after the student’s guidance committee meeting, he/she must submit the duly approved Program Proposal to the Interdepartmental Committee for review. Any student who wishes to make substantial changes to his/her Program Proposal must follow the same procedure.

Major Fields or Subdisciplines. The program recognizes two fields of specialization: Linguistics or Literature.

Linguistics. A student specializing in Linguistics may take as his/her major field one of the following: (1) The present-day grammar of the Romance language of his/her 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 his/her 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 Ro-
mance languages, or one other Romance lan-
guage plus a field of Romance literature.

**Literature.** The student specializing in Litera-
ture may take as his/her major field one of the
following fields in the literatures of at least two
Romance languages: (1) Early Romance Lit-
erature 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 chosen
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
required in the student’s program, Latin 3 or
Italian 3, or the equivalent, is required of all
students in the interdepartmental program.
Students choosing options 2 or 3 in Linguistics
or option 1 in Literature also require German,
whereas those choosing option 1 in Linguistics
or option 2 or 3 in Literature will require another
foreign language to be determined by the guid-
ance committee in accordance with the individ-
ual’s program. A minimum level of acceptable
accomplishment in non-Romance languages is
passing the Educational Testing Service (ETS)
test, where such a test exists. In lan-
guages where there is no such test, passing an
examination administered by the correspond-
ing language department fulfills the require-
ments. This foreign language requirement may
also be met by evidence of completion of two
years of college level courses in the language
with grade B or better, or by evidence of fulfill-
ment of the foreign language requirement in
connection with an M.A. obtained elsewhere.
The foreign language requirement must be
satisfied no later than the quarter before the
quarter in which the Qualifying Examinations
are taken.

**Teaching Experience.** Teaching experience is
not required, but is considered desirable. Con-
sult the Chair for information regarding the
availability of teaching assistantships.

**Course Requirements.** In each of the two
specializations (Linguistics or Literature) the
Ph.D. program will consist of a major and two
minors. These courses (a minimum program)
will be distributed as follows: Major — 5
courses, First Minor — 3 courses, Second Mi-
nor — 2 courses. At least one seminar is re-
quired in each of the three fields. In addition to
these requirements, the student must take a
course in each of the following fields: Indo-
European Linguistics; Romance Linguistics;
Italio-Romance; Medieval Latin; Vulgar Latin;
History of the Latin Language; Italio Dialects
and Latin Historical Grammar; Palaeography;
Studies in the History of the Romance Lan-
guages; Gallo-Romance; Hispano-Romance;
Italio-Romance. A student must pass or make
adequate grades in the required courses to
complete the degree.

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 prereq-
quisites:

**Introduction to Romance Studies**
(Spanish M200) (Italian 201)

**Courses in Linguistics**
Grammatical Theory:
(Linguistics 201A-201B, 206A-206B)
Historical Linguistics:
(Linguistics 202A)

**Synchronic Linguistics**
Advanced Grammar:
(French 201A-201D, 206)
(Spanish 204A-204B, 206)
(Italian 259B)
(Portuguese 204A-204B, 206)

**Studies in Linguistics and Dialectology**
(French 261, 262)
(Spanish 256A-256B)

**Historical Linguistics**
The Development of the Romance Lan-
guages:
Northern Gallo-Romance:
(French 204A-204B)
Southern Gallo-Romance:
(French 215E)
Hispano-Romance:
(Spanish M203A-M203B)
Italio-Romance:
(Italian 259A)

**Romance Dialectology:**
(Italian 259C)
(Spanish 209)

**Indo-European Linguistics:**
(Indo-European Studies 210, 280A-280B)

**Romance Linguistics:**
(Linguistics 225G)

**Medieval Latin:**
(Latin 231A-231B)

**Vulgar Latin:**
(Latin 232)

**History of the Latin Language:**
(Latin 240)

**Italio Dialects and Latin Historical Gram-
mar:**
(Latin 242A)

**Palaeography:**
(History 219A-219B)

**Studies in the History of the Romance Lan-
guages:**

**Gallo-Romance:**
(French 215A)

**Hispano-Romance:**
(Spanish M251)

**Italio-Romance:**
(Italian 259A-255B-259C, 210A)
Courses in Literature

The Intellectual Background of Romance Literature:
(French 205A-205C)

Studies in Medieval Latin Literary History:
(Professor M201)
(205A-205B)

Studies in the History of Ideas:
(French 260A-260B)

Studies in Literary Criticism:
(French 258A-258B)

Studies in Philosophy and Literature:
(French 259A-259B)

Early Romance Literature

Early Romance Literature:
(French 215B-215E)

Studies in Early Romance Literature:
(French 205A-205B)
(205A-205B)
(205A-205B)

Renaissance and Baroque Literature

Renaissance and Baroque Literature:
(French 216A-216H, 217A-217I)

Studies in Renaissance and Baroque Literature:
(French 251A-251B, 252A-252B, 253A-253B)

Modern Romance Literature

The XVIIIth Century:
(French 218A-218B)

The XXth Century:
(French 220A-220C, 221A-221D)

Study in the XIXth Century:
(French 254A-254B)

Studies in the XXth Century:
(French 256A-256B, 257A-257B)
(256A-256B, 257A-257B)

Genre Studies:
Novel: Portuguese 252A, 253A
Poetry: Portuguese 252B, 253B
Theater: Portuguese 252C, 253C
Essay and Short Story: Portuguese 252D, 253D

Slavic Languages and Literatures

(Office, 115 Kinsey Hall)

Aleksandar Abijanid, Ph.D., Professor of South Slavic Languages and Literatures.
Henrik Birnbaum, Ph.D., Professor of Slavic Languages and Literatures.
Thomas Eckman, Ph.D., Professor of Slavic Literature.
Michael S. Fier, Ph.D., Professor of Slavic Languages and Literatures (Chair of the Department).
Maaria Gimbutas, Ph.D., Professor of European Archaeology.
Kenneth E. Harper, Ph.D., Professor of Russian Literature.
Vladimir Markov, Ph.D., Professor of Russian Literature.
Michael Shapiro, Ph.D., Professor of Russian Linguistics and Poetics.
Dean S. Worth, Ph.D., Professor of Slavic Languages.
Michael Heim, Ph.D., Associate Professor of Czech and Russian Literature.
Peter Hodgson, Ph.D., Associate Professor of Russian Literature.
Rochelle Stone, Ph.D., Associate Professor of Polish and Russian Literature.
Alan H. Timberlake, Ph.D., Associate Professor of Slavic Languages.

Edward Danzler, M.A., Lecturer in Russian.

The Department of Slavic Languages and Literatures at UCLA offers M.A. and Ph.D. degrees in Slavic Languages and Literatures.

Admissions Requirements. In addition to the University minimum requirements for study toward an M.A., 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 such that the student 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. Students who do not hold a UCLA M.A. in Slavic Languages and Literatures are required to take the M.A. Comprehensive as a screening examination within one calendar year after admittance and to make up any deficiencies in their 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 the student's academic potential. No admission tests are required, but the Graduate Record Examination is strongly recommended for students applying for financial assistance.

A departmental brochure describing the curriculum in Slavic Languages and Literatures is available by writing to the Graduate Adviser (address given below).

The Department does not utilize its own specialized application form.

Advising. Graduate Adviser: Professor Dean S. Worth, Department of Slavic Languages and Literatures, Kinsey 115, UCLA, Los Angeles, CA 90024.

To assure uniformity and continuity in students' programs, there is one graduate adviser for all students. Students are obliged to meet with the Graduate Adviser at the beginning of each quarter for consultation about their programs and progress toward the degree. The Preferred Program Card is signed after the student and the Graduate Adviser agree upon a program of study for the quarter. Students wishing to enroll in Slavic 596 or 597 must obtain prior permission from the instructor with whom they plan to work before the Graduate Adviser can include the course on the study list. Petitions to alter the study list (Drop/Add) after it has been formulated must be approved by the Graduate Adviser before they are submitted to the Graduate Division.

The Department does not have an institutionalized review procedure of its graduate students.

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 respectively. On the Ph.D. level, students by special arrangement may specialize in a language or literature other than Russian.

Disqualification and Appeal of Disqualification. Normally, a student is disqualified from continuing study if he/she fails to pass the M.A. Comprehensive Examination with a "Pass" or fails to pass the Ph.D. Qualifying Examinations, or does not maintain a 3.0 grade point average. Disqualification for any other reason must be recommended by the Admissions and Support Committee of the Department. The student may appeal to the Department Chair.

The Master of Arts Degree

Foreign Language Requirement. There are two foreign language requirements which must be completed at least one quarter before the quarter in which the student takes the M.A. Comprehensive Examination. (1) Students must pass a departmental Russian language proficiency examination testing the ability to
translate from Russian to English and vice versa. This examination may be retaken each quarter until the grade "Pass" is achieved. (2) Students 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 the fifth quarter of study at UCLA in one of the languages with a grade of "B" or better (equivalent university-level coursework in French or German taken no more than two years prior to the candidate’s admittance into the Department may be used to satisfy this requirement at the discretion of the Graduate Adviser).

Course Requirements. Required of all M.A. students: Slavic 201 — Old Church Slavic; Russian 102A-B-C — Advanced Grammar and Reading (1/4 course each); Russian 112A-B-C — Advanced Conversation and Composition (1/4 course each); Russian 204 — Introduction to the History of the Russian Literary Language.

Required of Literature students: Russian 211 — 18th Century Russian Literature; Russian 212 — 19th Century Russian Literature; Russian 213 — 20th Century Russian Literature; one other literature course in the Department. Total number of courses: twelve (36 units), including five (20 units) graduate courses.

Required of Linguistics students: Slavic 202 — Introduction to Comparative Slavic Linguistics; Russian 221 — Advanced Russian Phonology (1/4 course); Russian 222 — Advanced Russian Morphology (1/4 course); Russian 225 — Russian Syntax; two graduate courses in Russian literature. Total number of courses: fourteen (40 units), including eight (28 units) graduate courses.

Thesis or Comprehensive Examination Plan. The Department uses only the 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, but will be accepted only if the candidate has satisfied the foreign language requirement in French or German and has passed the Russian Language Proficiency Examination. Examinations are offered at the end of each quarter: After a student has declared his/her 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 (a) Linguistics, including a knowledge of Russian phonology and grammar and an acquaintance with comparative Slavic linguistics, Old Church Slavic, and the history of the Russian literary language; or (b) Literature, including an acquaintance with the history of Russian literature from its origins to the present and a knowledge of the major developments and figures of the 19th and early 20th centuries. The written examination is graded "Pass" or "Fail". A student receiving "Pass" on the written examination will be admitted to a 2-hour oral examination, which is designed to test the fields of his/her major interest and general background. It will be conducted partly in Russian. Although all faculty members in the major field may read the written examination, it is the student's committee which conducts the oral examination and evaluates the student's performance.

The combined performance of the student in the written and oral examinations is graded "High Pass", "Pass", or "Fail". A grade of "Pass" or "High Pass" is necessary to receive the M.A. degree; the grade of "High Pass" is necessary to enter the Ph.D. program. Students may retake the examination once, not later than one calendar year after the first attempt.

Time to Degree. From graduate admission to conferral of the degree, normal progress is six quarters. (Coursework is normally completed in five quarters.) It is common for students without a UCLA bachelor's degree in Slavic Languages and Literatures to take three to six additional courses to make up deficiencies. These courses are not applicable toward the degree.

For teaching assistants and research assistants the program may take slightly longer (usually up to a year).

The M.A. examination must be taken within two calendar years from the time of admission to the Graduate Division (time spent in removing deficiencies, to a maximum of one year, does not count toward this 2-year period).

500 Series Course Limitations. Courses in the 500 series may not be counted as meeting course requirements in the master's program.

The Ph.D. Degree

Admission to the Doctoral Program. A student is formally admitted to the Ph.D. program on completing the following requirements: (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.

For students entering UCLA with an M.A. from another institution, the Comprehensive Examination serves as a screening examination for admission to the doctoral program. All students are allowed to retake the examination once in order to achieve the necessary "High Pass" for admission to the Ph.D. program.

Foreign Language Requirement. Students must demonstrate an ability to read scholarly literature in both French and German by completing one of the three options listed under Master's Degree. With departmental approval, a student 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 points on the ETS examination for the second of his/her French and German examinations (i.e., in the examination in either French or German). The Department Chair prescribes the manner in which the student should be tested in the substituted language. A 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 Chair of the Department recommends the formation of a doctoral committee, students must have been officially admitted to the doctoral program and have taken the following required courses:

Linguistics students: Slavic 221 — Introduction to East Slavic Languages; Slavic 222 — Introduction to West Slavic Languages; Slavic 223 — Introduction to South Slavic Languages; four advanced linguistics courses or seminars (numbered above 220).

Recommended preparation for Linguists: Linguistics 100, 103, 110, 120A-B, M150.

Literature students: Two courses chosen from Slavic 230A-B-C — Comparative Slavic Literature; Russian 251A — Old Russian Literature; three additional seminars.

Candidates specializing in literature are advised to acquire a sound general knowledge of modern Western European literature.

Written and Oral Qualifying Examinations. The Department Chair arranges a brief meeting of the candidate and the Graduate Adviser in order to form a 3-member departmental component of the examination committee, including a chair. In consultation with the candidate, the committee chair obtains the agreement of two non-departmental members to serve on the committee. The committee will conduct the Ph.D. Qualifying Examinations; in the case of Linguistics candidates, the committee will also evaluate material submitted to satisfy the research paper requirement, which necessitates the forming of the committee at least one quarter before the quarter in which the comprehensive written examination is to be taken (see below).

Research Paper Requirement: Linguistics. 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 quarter in which the comprehensive written examination is to be taken.

Comprehensive Written Examination(s). 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 3-hour Qualifying Examination given at the end of each quarter. The nature and scope of this examination is prescribed for each candidate. Candidates are expected to demonstrate a detailed mastery of linguistics, including Old Church Slavic, comparative Slavic linguistics, and the structure and history of one major and one or two minor Slavic language(s) (from the Western and/or Southern groups), which presupposes knowledge equivalent to one year's study of a second and third Slavic language or two year's study of a second Slavic language. For Literature students, there are two written 3-hour Qualifying Examinations given one week apart at the end of each quarter. The nature and scope of these examinations are prescribed for each candidate. Candidates are expected to demonstrate a detailed mastery of literature, including Russian literature from its origins to the present, and a basic knowledge of the major figures and developments in the literature of at least one Slavic country other than Russia, which presupposes knowledge equivalent to one year's study of a second Slavic language. The written examination(s) will be graded either "Pass" or "Fail".

Comprehensive Oral Examination. A student receiving "Pass" on the written examination(s) is admitted to a 2-hour oral examination, which is designed to test the fields of his/her major interest and general background. The oral examination typically includes discussion of the candidate's dissertation topic.

After considering the candidate's overall performance in both the oral and written examinations, the committee assigns a cumulative grade of "Pass" (this entitles the student to write a dissertation in order to receive the Ph.D. degree) or "Fail". At the committee's discretion, the candidate may be required to retake any or all portions of the Ph.D. examinations, no later than one calendar year after the first attempt.

Upon successful completion of the Qualifying Examinations, the candidate consults with the committee (and especially its chair) concerning a dissertation topic. Within two quarters (or one quarter and a summer) after passing the exams, the candidate must prepare a prospectus of the dissertation, setting forth broad outlines of his/her proposed treatment. A copy of the prospectus must be made available to each faculty member in the Department; the committee chair may call a meeting, if necessary, to consider comments of faculty members. The dissertation committee is typically, but not necessarily, the same as the examination committee.

Slavic Colloquium Requirement. The candidate is required to deliver a formal lecture in the Slavic Colloquium no later than two calendar years after advancement to candidacy.

Doctoral Committee. The Department does not set any conditions besides those of the Graduate Council on the formation of doctoral committees.

Final Oral Examination Following Completion of the Dissertation. A Final Oral Examination is required except in case of geographically imposed hardship on the part of the candidate.

Time to Degree. Students normally take from three to four quarters to gain formal admittance into the doctoral program and four to six additional quarters to complete required coursework. It is common for students without a UCLA M.A. in Slavic Languages and Literatures to take three to six additional courses to make up deficiencies.

For teaching and research assistants the program may take slightly longer.

The Qualifying Examinations must be taken within two years of the date of admission to the doctoral program. The dissertation must be completed within three calendar years of the date when the Qualifying Examinations are passed.

• The normative time-to-degree from graduate admission to award of the degree is 18 quarters (six years).

Candidate in Philosophy Degree. The Candidate in Philosophy degree is available upon advancement to candidacy for the Ph.D. degree.

Slavic

Upper Division Courses

M171. Slavic Folklore in North America.
177. Baltic Languages and Cultures. (½ course).
M178. Southeast European Folklore and Ethnography.
M179. Baltic and Slavic Folklore and Mythology.
199. Special Studies. (¼ to 2 courses).

Graduate Linguistic Courses

201. Introduction to Old Church Slavic. Three hours weekly. Introduction to phonology and grammar; readings. Required for the M.A. (Linguistics, Literature).
223. Introduction to South Slavic Languages. Three hours weekly. Prerequisite: Slavic 202. Recommended preparation: Serbo-Croatian 103A-103B-103C or Bulgarian 103A-103B-103C. Introduction to the structure and history of the South Slavic languages. Required for the Ph.D. (Linguistics).
224. Introduction to Ukrainian and Belorussian. Three hours weekly. Prerequisite: Slavic 202. Introduction to the history and structure of Ukrainian and Belorussian.

Graduate Literature Courses

290. Seminar in Comparative Slavic Literature. Three hours weekly. Prerequisite: Slavic 230A-230B-230C. Reading knowledge of one Slavic language in addition to Russian is recommended. Selected topics involving more than one Slavic literature or Slavic and Western literatures. May be repeated for credit with consent of instructor and the Graduate Adviser.
295. Seminar in Literary Analysis. Three hours weekly. Prerequisite: Reading knowledge of one Slavic language in addition to Russian is recommended. Selected topics from various Slavic or from Slavic and Western literatures with an emphasis on analytic methods. May be repeated for credit with consent of instructor and Graduate Adviser.

Individual Study and Research

596. Directed Individual Study or Research. (¼ to 2 courses) Prerequisites: consent of instructor and the Graduate Adviser.
597. Preparation for the Comprehensive Examination for the Master's Degree or the Qualifying Examination for the Ph.D. (¼ to 2 courses) Prerequisites: consent of instructor and the Graduate Adviser.
599. Research for Dissertation. (¼ to 2 courses)

Bulgarian

103A-103B-103C. Elementary Bulgarian.
154. Survey of Bulgarian Literature.

Czech

102A-102B-102C. Elementary Czech.
102D-102E-102F. Advanced Czech.
155A-155B. Czech Literature.

Polish

102A-102B-102C. Elementary Polish.
Russian Language Courses (Upper Division)

101A-101B-101C. Advanced Russian (4 course each).
102A-102B-102C. Advanced Grammar and Reading (4 course each). Required for the M.A. (Linguistics, Literature).
111A-111B-111C. Conversation and Composition. (4 course each).

Linguistics Courses (Upper Division)

121. Russian Phonology.
122. Russian Morphology.
123. Historical Commentary on Modern Russian.

Literature and Civilization Courses (Upper Division)

100. The Russian Novel in Translation.
118. Survey of Russian Literature to Pushkin.
119. Survey of Nineteenth-Century Russian Literature.
120. Survey of Twentieth-Century Russian Literature.
125. The Russian Novel In Its European Setting.
126. Survey of Russian Drama.
130A-130B-130C. Russian Poetry.
134. Pushkin.
140A-140D. Russian Prose.
M150. Russian Folk Literature.
M170. Russian Folklore.
193. Seminar in Russian Literature.

Graduate Linguistics Courses

203. Higher Course In Russian. (1/2 course) Two hours weekly. Prerequisite: Russian 102C. Reading advanced texts; advanced composition, conversation; stylistics. Required two quarters/year of all enrolled post-M.A. students. May be repeated for credit. Grading basis S/U only.
210. Readings in Russian Historical Texts. Three hours weekly. Prerequisite: Slavic 201 or consent of instructor. Readings in early Russian chronicles and other documents of historical interest.
221. Advanced Russian Phonology. (1/2 course) Two hours weekly. Prerequisite: Russian 102A-102B-102C, 121 (may be taken concurrently). Advanced study and analysis of problems in Russian phonology. Required for the M.A. (Linguistics).
222. Advanced Russian Morphology. (1/2 course) Two hours weekly. Prerequisites: Russian 102A-102B-102C, 122 (may be taken concurrently). Advanced study and analysis of problems in Russian inflection and derivation. Required for the M.A. (Linguistics).
241. Topics in Russian Phonology. Three hours weekly. Prerequisite: Russian 221. Selected topics in Russian phonology.
242. Topics in Russian Morphology. Three hours weekly. Prerequisite: Russian 222. Selected topics in Russian inflection and derivation.
243. Topics in Historical Russian Grammar. Three hours weekly. Prerequisite: Russian 123; Slavic 221. Selected topics in Russian historical phonology, morphology, and syntax.
253. Russian Diachronology. Three hours weekly. Prerequisite: Slavic 221. Phonology and grammar of modern Great Russian dialects.
254. The History of the Russian Literary Language. Three hours weekly. Prerequisites: Slavic 201, Russian 204. The evolution of literary Russian from the eleventh to twentieth centuries. Lectures and discussion of texts.
255. Advanced Russian Syntax. Three hours weekly. Prerequisite: Russian 225. Traditional and generative approaches to Russian syntax.
256. Russian Lexicology. Three hours weekly. Examination of the formal and semantic structure of the Russian lexicon.

Graduate Literature Courses

251A-251B. Old Russian Literature. Three hours weekly. 251A. Survey of Old Russian Literature from the beginnings through the Kievan and the Muscovite periods up to the end of the seventeenth century. 251B. Detailed discussion of specific writers, periods or genres. 251A required for the Ph.D. (Literature).
270. Russian Poetics. Three hours weekly. Prerequisites: Russian 130A-130B-130C. Recommended preparation for Russian 290. 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 eighteenth through twentieth centuries.
280. Seminar in Russian Poetry. Three hours weekly. Prerequisites: Russian 130A-130B-130C. Recommended preparation: Russian 270. Detailed study of a single author, period, or work. May be repeated for credit with consent of instructor and Graduate Adviser.
291A. Seminar In Old Russian Literature. Three hours weekly. Prerequisite: Russian 251A. Selected topics from the eleventh through seventeenth centuries. May be repeated for credit with consent of instructor and Graduate Adviser.
291B. Seminar In Eighteenth-Century Russian Literature. Three hours weekly. Prerequisite: Russian 211. Selected authors and works from eighteenth-century poetry, prose and drama. May be repeated for credit with consent of instructor and Graduate Adviser.
292. Seminar In Nineteenth-Century Russian Literature. Three hours weekly. Prerequisite: Russian 212. Selected authors and works from nineteenth-century poetry, prose and drama. May be repeated for credit with consent of instructor and Graduate Adviser.
Social Welfare

(Office, 200 Dodd Hall)

Jerome Cohen, Ph.D., Professor of Social Welfare.
Maurice F. Connery, D.S.W., Professor of Social Welfare (Chair).
Jeanne M. Giovannoni, Ph.D., Professor of Social Welfare (Chair, Doctoral Program Committee).
Alfred H. Katz, D.S.W., Professor of Public Health and Professor of Social Welfare.
Harry H. L. Kitano, Ph.D., Professor of Social Welfare and Professor of Sociology.
Nathan E. Cohen, Ph.D., Emeritus Professor of Social Welfare.
Donald S. Howard, Ph.D., L.H.D., Emeritus Professor of Social Welfare.
Elliott T. Studt, D.S.W., Emeritus Professor of Social Welfare.
Roseba Becerra, Ph.D., Associate Professor of Social Welfare.
Warren Haggstrom, Ph.D., Associate Professor of Social Welfare.
Doris S. Jacobson, Ph.D., Associate Professor of Social Welfare.
Maruel R. Miranda, Ph.D., Associate Professor of Social Welfare.
Alex J. Norman, D.S.W., Associate Professor of Social Welfare.
Harry Wasserman, D.S.W., Associate Professor of Social Welfare.
Diane de Andre, Ph.D., Assistant Professor of Social Welfare.
Carol W. Williams, D.S.W., Assistant Professor of Social Welfare.
Laura S. Wiltz, Ph.D., Assistant Professor of Social Welfare.
Maxine Jackson, M.S.W., J.D., R.N., Visiting Lecturer in Social Welfare.
James Karas, Ph.D., Visiting Lecturer in Social Welfare.
Stan Katz, Ph.D., Visiting Lecturer in Social Welfare.
Katherine M. Koldolzieski, D.C.S.W., Field Work Consultant.
Jane E. Kuroha, M.S.W., Field Work Consultant.
Joanne Mantell, Visiting Lecturer in Social Welfare.
Rose Monteiro, M.S.W., Visiting Lecturer in Social Welfare.
Joseph Nunn, M.S.W., Field Work Consultant.
Many Seguin, D.S.W., Field Work Consultant.
David Shapiro, Ph.D., Visiting Lecturer in Social Welfare.
Winfred E. Smith, M.S.W., Field Work Consultant, Emeritus.
Bernice Sokol, M.S.W., Adjunct Lecturer in Social Welfare.
Jaime Soliz, M.S.W., Field Work Consultant (Chair of Admissions and Student Affairs).

The School of Social Welfare is a graduate professional school whose primary objective is to prepare students not only for successful careers but also for imaginative leadership in the social welfare field. The educational program is based on the premise that all students need to acquire a common body of knowledge and basic skills, and a common understanding of the philosophy and values of the profession, as a sound foundation for the development of more specialized knowledge and skills along the lines of each student’s interests, and the needs of the field.

In addition to the M.S.W. program in Social Welfare, the School offers a doctoral program of study leading to the D.S.W. It is designed to prepare candidates who wish to train for careers in teaching, research, administration and high level practice positions. Courses are scheduled in the Graduate School of Social Welfare and in schools and departments of related disciplines and professions.

Master of Social Welfare Degree

Admission Requirements. 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 and social welfare subjects as prerequisite undergraduate preparation for graduate study in the field of social work. Completion of courses in psychology, sociology and statistics is ordinarily expected.

A grade point average of 3.0 or better is required in all courses taken during the junior and senior years. However, applicants who have a grade point average of between 2.95 and 3.0 may be considered on an individual basis when there is clear evidence of capacity for academic achievement and professional development. In addition to an acceptable academic record and completion of the above preparatory courses, 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 requirements for the degree.

An official copy of the score from the Aptitude Test of the Graduate Record Examination is required, as are official transcripts of record from every school attended since high school. Results from the Graduate Record Examination must be submitted prior to any evaluation of the application for admission. GRE scores must be less than five (5) years old, and may be repeated to achieve a higher score, if desired. The GRE is given several times a year in various locations in the United States and foreign countries. Applications and information may be secured either from the Graduate Admissions Office of UCLA or a geographically convenient school, or from the Educational Testing Service. The Southern California Regional Office of the Educational Testing Service is located at: 2200 Merton Avenue, Los Angeles, CA 90041. 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 a student to 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.

Write for the departmental brochure and applications for admission to UCLA School of Social Welfare Admissions, 200 Dodd Hall, UCLA, 405 Hilgard Avenue, Los Angeles, CA 90024.

Admission to the School of Social Welfare requires simultaneous application to (1) the School of Social Welfare for admission to the graduate program, and (2) the Graduate Division of the University of California for admission to graduate status in this University. Both applications and the School brochure can be obtained upon written request to the above address, or by calling (213) 825-7737.

Advising

Graduate Adviser: Mr. Jaime Soliz, Chair of Admissions and Student Affairs, UCLA School of Social Welfare, 200 Dodd Hall, UCLA, 405 Hilgard Avenue, Los Angeles, CA 90024.

On entering the School, each student is assigned an adviser whose responsibility it is to counsel the student concerning his/her program of study and progress toward the fulfillment of the degree requirements. The student may request a change in advisers at any time during the course of study, submitting this request to the Dean either through the current adviser or directly.

Each quarter, a written summary of the student’s School of Social Welfare grades is provided through the Office of Admissions and Student Affairs, 200 Dodd Hall. Since no official grade is entered for the practicum course until the Spring Quarter each year, an unofficial in-progress grade of satisfactory or unsatisfactory is maintained within the School to effect action to help achieve graduate standards. The overall assessment of progress is monitored by the Graduate Adviser.

Ordinarily, students are expected to meet with advisers twice each quarter and more frequently if students are experiencing difficulty in their coursework or if situations in their personal life are affecting their studies. When indicated, a statement of any relevant data or action taken or contemplated of concern to other faculty working with the student, is entered into the student’s record. If a student fails below the established graduate standard (a grade point average of 3.0), a faculty committee consisting of the student’s adviser and at least two other faculty members is convened to recommend appropriate action to the Dean.


Course Requirements. A total of 72 units in courses of the School of Social Welfare curriculum are required for the M.S.W. degree. The required courses include three courses in social welfare policy and services; five courses in the human behavior and social environment sequences; five courses in methods of social work practice; three courses in social welfare research; plus six quarters of field instruction.
Appropriate substitutions or waivers may be made by the Dean. To the extent that scheduling allows, and with permission from the Dean, students may take courses in other graduate schools of the University in fulfillment of the degree requirements.

Thesis or Comprehensive Examination Plan. Thesis Plan. While no University-approved specific 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. Successful passing of an oral Comprehensive Examination is required of all candidates for the M.S.W. degree in the Spring Quarter of the student's second year of study. The comprehensive examination committees are appointed by the Dean, each consisting of at least two faculty members. Committees are appointed in the Spring Quarter, and are responsible for examining a selected group of students. The examination covers the entire range of the candidate's program of study.

Time to Degree. Students in the M.S.W. degree program are expected to be in full-time attendance and to work without interruption toward the degree. The requirements for the M.S.W. degree should be met ordinarily within two consecutive years (six quarters). Course scheduling is predicated on this understanding. In rare exceptions, students may be admitted for study on a part-time basis which permits completion of the first-year academic courses and field instruction over a period of two academic years. The second-year program of study requires concurrent course and field instruction and necessitates enrollment on a full-time basis.

500 Series Course Limitations. With the approval of the instructor and the Dean, students may substitute tutorial studies of comparable material in the 500 series for either required or elective courses. Only 596A (Special Study and Research for the Master's Degree) and 597A (Preparation for the Comprehensive Examination — Master's Degree) may be taken. Each course has variable unit values, from 2 to 8 units possible. For 596A, letter grading is used, and for 597A, S/U grading is used. A maximum of 9 units of 500 series courses may apply toward the entire graduate-course requirement for the Master of Social Welfare degree.

Disqualification. All students are expected to maintain a level of performance in both the academic and practicum components of the curriculum consistent with the standards and procedures of the Graduate Division of the University. In addition, as a professional school, the School of Social Welfare reserves the right to terminate at any point in their program, students who fail to demonstrate in classwork, field instruction and professional relations, those standards essential to the responsible practice of social work (even though the academic work performed by such students may be satisfactory). Such action shall be taken by the Dean only on recommendation of a committee composed of at least three members of the faculty. The student involved in such review shall be permitted to appear before this committee.

Appeals. The School's recommendation to terminate a particular student may be appealed by the student to the Dean, and is also subject to appeal to the Dean of the Graduate Division.

Other Relevant Information. Practicum requirements: First year: concurrent placement for 25 weeks at 2 to 2½ days per week. Second year: concurrent placement for 25 weeks at 3 days per week.

Doctor of Social Welfare Degree

Admission Requirements. In addition to the University minimum requirements, the School of Social Welfare requires completion of an M.S.W. degree program with a superior record from an accredited school of social work. At the discretion of the Doctoral Committee of the School and with the permission of the Dean, this requirement may be waived if an applicant possesses a postgraduate degree and related professional experience in a related field. Such candidates, however, may be required to fulfill specified requirements in the M.S.W. program of the school as determined by the Doctoral Program Committee. These requirements are in addition to the normal doctoral requirements.

Criteria that will be taken into consideration in admitting students include their quality of performance in previous undergraduate and graduate study, their capacity for doctoral level scholarship, ability to express themselves clearly in writing, success in professional employment and other pertinent experience, results of the Graduate Record Examination, and personal qualifications indicating suitability for advanced study and research.

An official copy of the score from the Aptitude Test of the Graduate Record Examination is required, as are official transcripts of record from every school attended since high school. The Graduate Record Examination is given several times a year in various locations in the United States and foreign countries. Applications and information about the Graduate Record Examination may be secured either from Graduate Admissions Office of UCLA or a geographically convenient school, or from the Educational Testing Service. The Southern California Regional Office of the Educational Testing Service is located at: 2200 Merton Avenue, Los Angeles, CA 90041. 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 Test of English as a Foreign Language (TOEFL). The School may request a student to take specified additional examinations to assist in the assessment of candidacy for admission.

Five letters of recommendation are required. Also required is a typewritten statement of professional and educational objectives. To exemplify their communication skills, applicants may submit any of the following: Published articles, master's thesis, unpublished papers, or term papers written in graduate courses.

Each applicant will be evaluated by a group of faculty from the Doctoral Program Committee; assigned by the chair of the Committee. Although a personal interview is not normally required as part of the application procedure, whenever possible a conference is arranged between the applicant and a member of the doctoral faculty.

Prospective students must apply separately to the School of Social Welfare and to the Graduate Division of the University of California, Los Angeles. Both applications and the School brochure are obtainable upon written request to the UCLA School of Social Welfare Doctoral Program, 200 Dodd Hall, 405 Hilgard Avenue, Los Angeles, California 90024.

Advising. Graduate Adviser: Professor Jeanne Giovannoni, Chair of the Doctoral Program Committee, School of Social Welfare, 200 Dodd Hall, UCLA, 405 Hilgard Avenue, Los Angeles, CA 90024.

Following admission, each student is assigned an individual adviser. Appropriate assignment of adviser, as far as possible in accord with the interests and background of the student, is made by the Chair in consultation with the Doctoral Program Committee. Students are sent written notification of their adviser during the summer preceding entry into the program. The student will ordinarily continue with the initial adviser until successful completion of the Written Qualifying Examinations. The student may request a change in adviser at any time during the course of study, submitting this request to the Doctoral Program Committee chair either through the current adviser or directly. However, once the Graduate Division has officially appointed the dissertation chair, consent and approval of the Graduate Division is necessary for any change in committee structure.

For each quarter, a written statement of School of Social Welfare grades is provided to the student. In addition, a written report to the student and/or to the student record may be made by the adviser or instructors as necessary. Overall student progress is reviewed regularly by the Doctoral Program Committee. The adviser's written approval is prerequisite to enrollment in all courses. Advisers and students are expected to meet regularly to review student progress.
and plan an individualized program in relation to the student's needs. The student's dissertation committee may be formed after successful passage of the Written Qualifying Examinations, with the consent of the faculty member assuming the chair of the committee and the other members. Once formed, this committee assumes the role of guidance committee for the student's continued progress, and the chair of this committee acts as the student's adviser.

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 2-year span of study. All first-year course requirements must be completed before taking the Qualifying Examinations.

Required courses for the first year are: three consecutive quarters of research methods seminar (286ABC); a quarter devoted to a review of the psychological and social theories on which further work in practice theory is based, and two quarters of practice theory seminar (245ABC); two quarters in social welfare systems and social welfare policy (225AB). In addition, one quarter may be required in an area to be chosen by the Doctoral Program Committee, depending on the educational needs and interests of the first-year class.

Required courses for the second year are: two quarters of integrative seminars (210AB). A third quarter course is also required which may be a seminar or individual or small group tutorials, as determined by the Doctoral Program Committee.

In addition to these requirements, the student must take a minimum of three quarters in a graduate school or department outside the School of Social Welfare in an area related to the student's professional objectives. These courses are to be approved by the student's adviser. In exceptional instances, a student may obtain either a waiver of or substitution for a required course. A student who feels that such action is justified should make a request to the Doctoral Program Committee through his/her adviser. The Doctoral Program Committee will make the final decision, based upon the recommendations of the professor giving the required course. Ordinarily, students in full-time study will be expected to enroll in at least 12 units of study each quarter during the first two years and at least 8 units per quarter thereafter.

Written and Oral Qualifying Examinations. Before the formation of a doctoral committee, each student in the doctoral program must pass Written Qualifying Examinations — an examination in each of the three core areas, as follows: (1) Social Welfare Policy, History, and Philosophy; (2) Social Work Practice Theory; and (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 the student's ability to integrate the knowledge he/she has 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. Full-time students are expected to take the Written Qualifying Examinations before commencing the second year of doctoral program study.

The Written Qualifying Examinations are graded on a pass/fail basis, with the following scale: pass; fail with permission to retake the examination(s); fail without permission to retake the examination(s). Each examination will be read by several readers who will reach agreement on the grade given. In cases where it is recommended that the student not be permitted to repeat the examination(s), the Doctoral Program Committee will make the final judgment. In case of failure with permission to retake one or two of the three examinations, the student is required to retake only the examination(s) which was failed. Students will ordinarily be required to take the Written Qualifying Examinations in June of the first year of study; any retaking of examinations will ordinarily take place in September.

The Oral Qualifying Examination for advancement to candidacy covers the student's dissertation proposal and related areas. This examination is administered by the students' doctoral dissertation committee, which must have been formally approved by the Graduate Division prior to the examination date. The Written Qualifying Examinations must be successfully completed prior to the oral examination.

Doctoral Committee. Following the successful completion of the Written Qualifying Examinations, when the student has obtained a faculty adviser to chair the dissertation committee, notification will be given to the chair of the Doctoral Program Committee. The dissertation adviser will chair the student's doctoral committee overseeing the progress of the dissertation. The dissertation committee is composed of a minimum of five faculty members, of whom three must be from the School of Social Welfare and two from other schools or departments of the University, in accordance with Graduate Division regulations.

Final Oral Examination Following Completion of the Dissertation. A Final Oral Examination is not required of all candidates, but may be required at the option of the student's doctoral committee.

Time to Degree. A full-time doctoral student will usually complete all required coursework by the end of the sixth quarter (second year) after admission into the doctoral program. In general, students admitted to the doctoral program will have completed a 2-year graduate program in an accredited school of social work conferring an M.S.W. degree.) At the end of the first year of doctoral study, having completed all first-year required courses, the Written Qualifying Examinations are given. The Oral Qualifying Examination is administered at a time appropriate to the student's progress in relation to his/her dissertation proposal, ordinarily no later than the seventh quarter of study, but varying according to the student's individual situation. It is generally expected that three quarters beyond completion of all required courses will be required for completion of the dissertation. This includes passage of a Final Oral Examination, if such is required by the student's doctoral committee. The period from doctoral admission to award of the degree is generally expected to be nine quarters (three years), although it may range up to five years in occasional instances.

Extension of time beyond the 5-year maximum is possible only by special permission of the Doctoral Program Committee. Students are generally expected to attend the program on a full-time basis. Only in exceptional instances may a student be admitted for a part-time program. This program is developed on an individual basis between the student and adviser, but would generally require at least one year of study in addition to the normal 3-year program for award of the D.S.W. degree.

Dissertation. All students are expected to maintain a level of performance consistent with the standards and procedures of the Graduate Division of the University. In addition, as a professional school, the School of Social Welfare reserves the right to terminate students at any point in their program who fail to demonstrate those attitudes and behaviors consistent with the personal and ethical standards essential to the responsible practice of social work (even though the academic work performed by such students may be satisfactory). Such action shall only be taken by the Dean on recommendation of a committee composed of at least three members of the faculty. The student involved in such review shall be permitted to appear before this committee.

Appeals. The School's recommendation to terminate a particular student may be appealed by the student to the Dean, and is also subject to appeal to the Dean of the Graduate Division.

Written Qualifying Examination. In case of failure of the Written Qualifying Examinations in one or more of the three core areas, the examination readers will make a recommendation to the School's Doctoral Program Committee as to whether the student will be permitted to retake the examination(s). The Doctoral Program Committee will make the final recommendation to the Dean based upon the student's total educational performance.

Insufficient Progress Toward the Degree. In cases where the student is not maintaining required progress toward the degree or has not
completed the Doctoral Program, including the dissertation, within five years of entry into the Program, the student is subject to the Doctoral Program Committee's recommendation to the Dean for termination of graduate study. Continuation in the Doctoral Program beyond five years is permitted only in exceptional instances, by petition to the School's Doctoral Program Committee.

Other Relevant Information. A practicum may be required as a component of one or more courses, although it is not a general program requirement. With the permission of the adviser and course instructor, a doctoral student may also make arrangements to enroll in courses in the M.S.W. program.

Graduate Courses

201A-201B-201C. Dynamics of Human Behavior I, II, III (½ course each) Lecture, two hours; laboratory, one hour. Credit for completion of the series graded separately.

221A-221B. Social Welfare Policy and Services I, II (½ course each) Prerequisite: consent of instructor. Credit for completion of the series graded separately.

222A-222B. Social Welfare Administration I, II (½ course each) Prerequisite: consent of instructor. Credit for completion of the series graded separately.

241A-241B. Advanced Theory of Social Work Method (Community Organization) I, II, III (½ course each) Prerequisite: consent of instructor. Credit for completion of the series graded separately.
Individual Study and Research

595A. Special Study and Research for M.S.W. Degree Candidates. (1 to 2 courses) Individual programming for selected students to permit pursuit of a subject in greater depth.

595B. Special Study and Research for D.S.W. Degree Candidates. (1 to 2 courses) Prerequisite: Doctoral status and/or consent of instructor. S/U and letter grade.

597A. Preparation for the Comprehensive Examination for the M.S.W. Degree. (1 to 2 courses) Prerequisite: consent of instructor.

597B. Preparation for the Qualifying Examination for the D.S.W. Degree. (1 to 2 courses) Prerequisite: Doctoral status and/or consent of instructor.

599. Dissertation Research in Social Welfare for D.S.W. Degree Candidates. (1 to 2 courses) Prerequisite: Doctoral status and/or consent of instructor.

Sociology

(Office, 264 Haines Hall)

Jeffrey Alexander, Ph.D., Professor of Sociology
Rodolfo Alvez, Ph.D., Professor of Sociology
Phillip Bonacich, Ph.D., Professor of Sociology
Howard E. Freeman, Ph.D., Professor of Sociology
Harold Garfinkel, Ph.D., Professor of Sociology
Oscar Grusky, Ph.D., Professor of Sociology
Gene N. Levine, Ph.D., Professor of Sociology
Hans H. Light, Ph.D., Professor of Sociology
Valerie K. Oppenheimer, Ph.D., Professor of Sociology
Georges Sabagh, Ph.D., Professor of Sociology
Melvin Seeman, Ph.D., Professor of Sociology
Emmanuel A. Scheffgott, Ph.D., Professor of Sociology
Chair, Department

Michael D. TenHouten, Ph.D., Professor of Sociology
Donald J. Treiman, Ph.D., Professor of Sociology
Ralph H. Turner, Ph.D., Professor of Sociology
Marin Zeitlin, Ph.D., Professor of Sociology
Lee J. Winer, Ph.D., Emeritus Professor of Sociology
Kenneth D. Bailey, Ph.D., Associate Professor of Sociology
Robert M. Emerson, Ph.D., Associate Professor of Sociology
Lois C. Hirata, Ph.D., Associate Professor of Sociology
John H. Horton, Ph.D., Associate Professor of Sociology
David E. Lopez, Ph.D., Associate Professor of Sociology
David D. McFarland, Ph.D., Associate Professor of Sociology
Melvin Poliner, Ph.D., Associate Professor of Sociology

Jerome Rebow, Ph.D., Associate Professor of Sociology
Samuel Surace, Ph.D., Associate Professor of Sociology
Roderick J. Harrison, Ph.D., Assistant Professor of Sociology
Jack Katz, Ph.D., Assistant Professor of Sociology
Clarence Lo, Ph.D., Assistant Professor of Sociology
Linda B. Nilson, Ph.D., Assistant Professor of Sociology
Melvin Oliver, Ph.D., Assistant Professor of Sociology
Jeffrey Prager, Ph.D., Assistant Professor of Sociology
William G. Roy, Ph.D., Assistant Professor of Sociology
Lynne G. Zucker, Ph.D., Assistant Professor of Sociology

Ralph L. Beals, Ph.D., Emeritus Professor of Anthropology and Sociology
Judith Blake, Ph.D., Professor of Public Health and Sociology
Burton R. Clark, Ph.D., Professor of Education and Sociology
Michael S. Goldstein, Ph.D., Associate Professor of Public Health and Sociology
C. Wayne Gordon, Ph.D., Professor of Education and Sociology
Harry H. L. Kitano, Ph.D., Professor of Social Welfare and Sociology
Edwin S. Shneidman, Ph.D., Professor of Thanatology, Medical Psychology, Psychology, and Sociology
Gerald H. Shure, Ph.D., Professor of Psychology and Sociology
Julia C. Wrigley, Ph.D., Assistant Professor of Education and Sociology

David O'Shea, Ph.D., Associate Professor of Education and Sociology

M.A. and Ph.D. Degrees

The graduate program of the Department of Sociology 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 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 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 non-university research centers.

Admission Requirements. In addition to the minimum University requirements (an acceptable bachelor's degree, and a "B" average in all upper division and graduate level work), the Sociology Department requires (1) three letters of recommendation, preferably from professors of sociology who are familiar with the applicant's written work and research experiences; (2) transcripts from all colleges where the applicant had studied (the Department's evaluation considers not only the record in sociology, but all undergraduate work, including coursework in English composition, logic, linguistics, and mathematics); (3) a statement of purpose not to exceed three typewritten double-spaced pages 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 written by the applicant; (5) an official statement of scores on the Graduate Record Examination; and (6) for applicants whose native tongue is not English, the Test of English as a Foreign Language (TOEFL) is required.

Although background preparation in sociology is highly desirable, it is not mandatory for admission to the Department. Applicants need not be uniformly high on all indicators of potential. The Admissions Committee, which generally consists of five faculty members and two advisory graduate student members, uses a number of indicators of particular skills rather than relying heavily on just one or two. For example, in assessing the level of verbal skills, the Committee considers several items, including samples of written work and grades in courses that ordinarily require extensive verbal skills, as well as verbal Graduate Record Examination scores.

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 December 31. Application forms and more detailed information are available upon request from: The Graduate Affairs Assistant, Department of Sociology, UCLA, Los Angeles, CA 90024.

Entering graduate students are assigned a faculty member as an entrance adviser. At any time, the student may change from this adviser to any other consenting faculty member.

During the first year of graduate study, the student is expected to form a 2-person Dossier Committee to supervise written work in the Department. (Please note that the entrance adviser does not automatically become a member of the Dossier Committee.) The Dossier Committee must be formed by the first quarter of the student's second year of study, and when constituted, will assume all advising responsibilities for that student.

Faculty advisers, whether Entrance Adviser or Dossier Committee member, will meet with the student at the beginning of each quarter in order to plan the student's coursework for that quarter, sign study list cards, and discuss questions about professional training. In addition, the student will meet with the members of his/her Dossier Committee no later than the fifth quarter of graduate work to discuss current progress on the dossier papers, and to plan the student's future program of courses.
Major Fields or Subdisciplines. The Department of Sociology is large and diverse, and its faculty conducts research and teaching in a large number of the fields into which sociological work is commonly categorized. Like most social sciences, as Sociology has developed, it has become increasingly differentiated with regard to subfields. Specialties are often not clearly bounded social groups, and as a result it becomes more and more difficult to group scholars within a small number of interest areas. Granting this limitation, it would appear that 11 fields are now prominent or are becoming particularly prominent in the Department at this time: Comparative and Historical (including the study of social change); Demography; Ethnomethodology (including the organization of language, thought and experience); Mathematical-Quantitative Sociology; Minorities; Organizations; Political (including Marxist) Sociology; Social Policy and Applied Sociology (including evaluation research); Social Psychology; Stratification; and Theory. The Department has developed strong concentrations in each of these areas, involving both instruction and research opportunities.

Clearly, the domains of concentration listed above are broad in their scope, and they do not detail the variety of specializations and subfields that are actively pursued within the Department. Thus, for example, within the general area of theory and methods, the student will find opportunities for training in experimental methods, survey research, theory construction, quantitative historical methods, and ethnographic research, among others. With respect to comparative analysis, the Department has specialists in a variety of area studies including Latin America, Europe, Asia, Africa and the Middle East, and for all of these areas there are interdisciplinary centers devoting special attention to problems relating to these areas. In the same way, research and training on American minorities (including women) are well-represented in both the institutions and the faculty on the campus. The student can also make ready use of resources that are formally affiliated with other departments and schools at UCLA — e.g., resources relating to demographic studies and medical sociology in the School of Public Health, and to the sociology of education. Thus, graduate students are not compelled to select one of the 11 fields listed above for specialization. They may wish to combine fields or to develop their own interests in one of the myriad of subfields in Sociology not specifically listed here.

Foreign Language Requirement

Master's Degree. There is no foreign language requirement for the master's degree.

Ph.D. Degree. 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 their graduate study. In any case, the foreign language requirement must be fulfilled before the doctoral committee is nominated and the oral examination is taken. A reading knowledge, as demonstrated either by acceptable performance on a standardized test or by completing Course 5 of a language, or the equivalent, with at least a grade of C, is required for the Ph.D. in sociology. The student may choose from French, German, Italian, Russian and Spanish. He/she may also petition the Department for approval of some other language that will be more useful in relation to his/her special interests in sociology.

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 that students might find it equally profitable for their research to study sources in an allied field such as history, political science, linguistics, psychology, economics, philosophy, or mathematics. The student 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. In order to do this, the student must submit the proposed list of courses to the Executive Committee with a justification for the set of courses — presumably based on the potential contribution of these courses to the Ph.D. research. Only courses taken while the student is a graduate student will count toward fulfilling this requirement and once approved, any substitution of courses for those originally approved require full committee approval.

It should be stressed that the Department, via its Executive Committee, has adopted strict guidelines for such language substitution in the Ph.D. program as follows:

1. Petitions for substitutions must include clear evidence that foreign language proficiency would not be useful to the student's research area or dissertation topic. If such evidence is not presented, it will be presumed that a suitable foreign language will be learned.
2. Petitions for substitutions must indicate the relevance of the proposed coursework to the major research area or dissertation topic.
3. Petitions must include detailed statements of the content of the courses, either in the form of a course outline or in a note written by the course instructor.
4. Petitions for substitutions must outline coursework developing a proficiency qualitatively similar to a foreign language — courses which enhance the student's skills in an area not covered in departmental course offerings.
5. While methods courses can be undergraduate offerings (e.g., matrix algebra; historiography), substantive courses should generally be graduate offerings. Exceptions will be granted only when sufficiently explained by a statement attached to the petition.
Any student entering for graduate studies at UCLA with a M.A. degree in Sociology from another institution will normally come up for a dossier review in the first quarter of residence at UCLA, and under no circumstances later than the third quarter of residence. In this dossier review, the Department will determine whether or not the student may proceed directly to preparation for the field examinations, whether additional courses need to be taken for breadth purposes, whether the submitted papers need additional work, or whether additional papers need to be done, and whether the statistics and methodology sequences have been adequately satisfied. Such a student should submit for the dossier review two papers, one of which can be a M.A. thesis written at another university, and a transcript from the university at which the M.A. degree was earned so that this Department can determine whether the requirements ordinarily constraining students in the first years of our program have been met.

Field Examinations and Oral Qualifying Examinations

Following successful completion of the dossier, the student should request the Department to appoint a Ph.D. guidance chair, who will normally be the principal adviser throughout the completion of all work. The guidance chair should be a faculty member who is qualified in the student’s field of major interest, and qualified to supervise the student’s projected dissertation. In consultation with the student, the guidance chair will recommend to the Department two other faculty members to serve with him/her as the student’s guidance committee. The guidance committee will then assume the advisory function for the student, administer and evaluate Field Examinations and Qualifying and Final Oral Examinations, and constitute the departmental members of the doctoral committee when it is formed. In the event of a change in interests or the absence of a faculty member from the University or other cause, the student may request changes in the guidance committee.

After approval of the dossier, the student becomes eligible to take the Ph.D. Field Examinations. These Examinations are administered by the student’s guidance committee and cover two fields of specialization chosen from within any of the major recognized areas in sociology which the student can justify to the satisfaction of the guidance committee. Under special circumstances, one of the fields may be in a related discipline other than sociology. The emphasis here is on mastery of a specialty and depth of understanding.

If the performance on the Field Examination is satisfactory, and the foreign language requirement has been fulfilled, the student may take the Oral Qualifying Examination. This examination may range over general sociology, the student’s specific fields, and the student’s dissertation plans. It is given by the doctoral committee not later than six months after the completion of the written examination. The student must prepare a 2-page abstract of the dissertation proposal for distribution to the entire faculty of the Sociology Department no later than one week before the oral examination.

In addition to the 2-page abstract, a full-length dissertation proposal shall be required at the time of the preliminary oral examination. A dissertation proposal approved by the committee must be filed with the Department reasonably soon after the preliminary orals. In the event of a major revision in the topic or methodology of the dissertation, a revised prospectus approved by the committee is required, and will be filed in the same manner as the original prospectus. Minor changes in the methodology and hypotheses which normally takes place as a student carries out the dissertation research do not call for a revised prospectus.

Students who successfully complete both Written and Oral Qualifying Examinations will be sent an Application for Candidacy from the Registrar’s Office. This must be signed by the chair of their committee. The student must pay a candidacy fee to the Cashier. The form must then be returned to Graduate Division.

500 Series Course Limitations. Courses in the 500 series (596, 597, 599) are normally taken in preparation for the Dossier Review, the Field Examinations, and for dissertation research.

While these courses may be taken to maintain enrollment, they do not count toward the course requirements.

Final Oral Examination Following Completion of the Dissertation (For the Ph.D. degree). The optional Final Oral Examination for the Ph.D. degree is given by the doctoral committee not later than six months after the completion of the dissertation. The Final Oral Examination will not be scheduled until sufficient time has been allowed for all committee members to read the dissertation critically, and until both committee members and the student agree that the dissertation is in final and defensible form. The judgment at this time does not preclude a subsequent decision that the dissertation requires revision or is unacceptable on the basis of the findings of the oral examination. The examination centers around the dissertation, the field in which it is written, and the relation of this field to the discipline of sociology as a whole.

A decision to waive the final examination is optional on the part of the student’s Ph.D. committee and must be consistent with the policies of the Graduate Council.

Time to Degree.

(a) From graduate admission to completion of the Dossier Review (i.e., the master’s degree stage): seven quarters.

(b) From completion of dossier to Field Examinations: four quarters.

(c) From Field Examination to first Oral Examination: two quarters.
(d) The dissertation and Final Oral Examination (if required) should be completed during the fifth and sixth years of graduate study.

(e) Normative time-to-degree for the Ph.D.: 18 quarters.

Candidate in Philosophy Degree. Candidates for this degree must conform to the general requirements set by the Graduate Division for the C.Phil. degree. It should be emphasized that the granting of the C.Phil. degree does not depend alone upon the satisfactory completion of a specified number of courses. The candidate must demonstrate competence as a research scholar and ability to give instruction in his/her field.

In addition to the general requirements set by the Graduate Division, every prospective candidate for the C.Phil. degree must have completed all of the above listed departmental requirements for the Ph.D. degree other than the filing of the dissertation and the final (optional) oral examination.

Two steps will insure that the C.Phil. is not a terminal degree:

(A) Not less than one week prior to the oral examination, all students are required to distribute a 2-page abstract of the dissertation to the entire faculty of the Department for their information and comment.

(B) Reasonably soon after the oral examination, and before the Department certifies approval of the C.Phil. degree, the student must file a final version of the dissertation prospectus, which is acceptable to the doctoral committee.

The departmental time limit between advancement to candidacy and award of the Ph.D. degree is seven years, during which time students who hold the C.Phil. will automatically be readmitted to graduate standing if they withdraw during the interval.

Disqualification and Appeal of Disqualification. If a student is to be disqualified (terminated) from the graduate program for reasons other than failure to maintain a grade point average greater than 3.0, the decision regarding such a termination is generally made, at the departmental level, by the full faculty at its quarterly dossier review meeting. A recommendation for termination may be forwarded to that meeting by the Graduate Curriculum and Advisement Committee, which serves as the review body making recommendations to the full faculty concerning disposition of candidates for completion of dossiers and awarding of M.A. degrees. The elected Executive Committee of the Department is the established mechanism by which a student may appeal for a review of the disposition of his/her case; and the Executive Committee may make a recommendation for reconsideration to the Department where it deems such reconsideration warranted. The Departmental By-Laws provide for an alternative method of appeal to full faculty review of Executive Committee action, by way of the regulation (By-Laws, Item #10) that two voting faculty members are empowered jointly to request a faculty meeting on any action within the Department.

Specific conditions that may lead to termination include (1) submission of graduate work which is, in the judgment of the Graduate Curriculum and Advisement Committee and/or the full faculty dossier review, unsatisfactory for either the granting of the M.A. degree or further pursuit of the doctorate; (2) making unsatisfactory progress toward the completion of the student's dossier and/or doctoral work (e.g., requiring repeated extensions of time for completion of program requirements; receiving numerous "Incomplete" grades, and/or failure to remove such "Incompletes"); (3) repeated failure to pass any of the several required steps in doctoral studies (e.g., specialty field examinations, language requirements or their substitutes, oral examination); or (4) failure to complete doctoral work within the required time limit (within seven years after advancement to candidacy).

Other Relevant Information. The Department of Sociology is situated on the second floor of Haines Hall and is located close to the other social sciences and the Institute for American Cultures. Other facilities of interest to Sociology graduate students are the Graduate Research Library, the Survey Research Center, which is a division of the Institute for Social Science Research (ISSR), the small group laboratories of the Graduate School of Management, and the Center for Computer-Based Behavioral Studies. The Department has its own on-line data processing equipment and an APL terminal as well as access to the data processing facilities of the Campus Computing Network of the University. The Department also has the resource of its own audiovisual laboratory and statistical facilities.

Graduate Courses

201A-201B. Proseminar in Sociology. Prerequisite: Graduate standing and extensive survey of basic concepts and theories in the major fields of sociology. Designed primarily for graduate students in the first year of residence. Mr. Alexander, Mr. Lopez

201A-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 the above theories; tables; multiple and partial correlation and regression; analysis of variance and experimental designs; the general linear model; systems of equations. Additional special topics that can include: use of computers; loglinear models; factor analysis, discriminant function analysis; scaling and measurement; sampling design; nonparametric techniques and measures; matrix algebra if used in regression analysis. The course is offered on an In-Progress basis, which requires students to complete the full two-quarter sequence, at the end of which time a grade is given for all quarters of work.

Dr. Levine, Dr. Treimari

216A-216B. Survey Research Methods. Course in methodology and techniques: formulation of research problem; study design; hypotheses; sampling; measurement; questionnaire and schedule construction; interviews and data collection; presentation and tabulation; analysis and interpretation; presentation of findings; cross-national, replicative, panel and other complex survey designs. Students participate in survey research project. This course is offered on an In-Progress basis, which requires students to complete the full two-quarter sequence, at the end of which time a grade is given for all quarters of work.

Mr. Grusky, Mr. Rabow, Mr. Shure

217A-217B. Ethnographic Field Work. Prerequisite: consent of instructor. Theories and techniques of ethnographic field work. This course will consider the kinds of problems amenable to ethnographic approaches, methods and techniques for doing fieldwork, and can include theoretical and methodological research. This course is offered on an In-Progress basis, which requires students to complete the full two-quarter sequence, at the end of which time a grade is given for all quarters of work.

Mr. Emerson, Mr. Pollner

211A-211B. Comparative and Historical Methods. The course is offered on an In-Progress grading basis, which requires students to complete the full two-quarter sequence, at the end of which time a grade is given for each quarter.

211A. Strategies of Research and Conceptualization. Prerequisite: consent of instructor. Topics include relationship of theory and fact to the social sciences, the logic of comparative and historical analysis, and substantive paradigms of comparative and historical analysis. Reading involves methodological examination of basic works in representative problem areas.

211B. Research Techniques. Prerequisite: course 211A. Topics include the problem of evidence, quantitative and qualitative data. Techniques of data analysis including use of manuscript census, content analysis, collective biography, and secondary analysis will be discussed.

Mr. Light, Mr. Lo, Mr. Prager, Mr. Roy
218A. Ethnomethodological Methods. Prerequisites: consent of instructor. Examination of techniques used in ethnomethodological research, practical experience in the conduct of an extended investigation employing ethnomethodological procedures. This course is offered on an In-Progress basis, which requires two hours per week, at the end of which time a grade is given for all quarters of work.

Mr. Garfinkel

219. Theory of Sociological Inquiry. Prerequisites: course 210A and consent of instructor. A general review of methods utilized by social scientists in attempts to achieve valid theoretical knowledge. Focuses on inductive inference and theory testing: control and randomization, experimental and non-experimental research designs, association and causation, measures, modeling, measurement, theory, sampling.

Mr. TenHouten

225. Role Theory. Prerequisites: Graduate Standing and consent of instructor. A review of theories and research dealing with social roles, with special emphasis on roles in social interaction and in formation of the self.

Mr. Turner

221. Social Ecology. Prerequisites: Graduate Standing and course 18 or equivalent, course 126 or equivalent, or consent of instructor. An examination of the various approaches to both micro and macro ecology, including identification, classification, sociological area analysis, sociological ecology, city-size distributions, effects of population density on animals and humans, proxemics, territoriality, and the effects of sociological environment on humans.

Mr. Bailey

224A-224B. Problems in Social Psychology. Prerequisites: course 210A and consent of instructor. The basic course for graduate students intending to specialize in social psychology. The first quarter examines systematically major theoretical structures to the field. The second quarter 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. Prerequisite: course 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 changes in them, affect demographic variables; and (3) how this two-way process influences the relationship between child-rearing and the socialization of participants. The first quarter will be primarily devoted to lectures and readings. The second quarter carries students into individual research projects involving a term paper and classroom reports of research.

Ms. Oppenheimer

226. Leadership and Comparative Social Structure. A comparative analysis of leadership in different social structures with particular attention to the development, maintenance, and disintegration of leadership in diverse social communities.

Mr. Horton

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 sociocultural life.

Mr. Horton

229. Processes of Social Control. Prerequisites: graduate standing or consent of instructor. Current theory and research on social control processes. Specific topics include: crime, deviance, drug use, social control, social control mechanisms, the relation between informal and formal control systems, typification and practical concerns in the processing of social control cases, and problems of "rationality" in social control decision-making.

Mr. Emerson

230. Theories of Deviance. An examination of various sociological approaches to the study of deviant behavior with emphasis on anomie theory as the major theoretical explanation of deviance and the articulation of sociological and psychological levels of explanation.

Mr. Emerson, Mr. Rabow, Mr. Surace

M231. The Structure of Occupations. (Same as Education M231.) Prerequisite: three lecture hours. Will explore shifts in the occupational structure of the United States, changing skill requirements for jobs, the effects of automation on work environments, and the role of formal and informal education in preparing people for occupations.

Mr. O'Shea, Ms. Wrigley

233. Foundations of Political Sociology. Lecture: three hours. Prerequisite: Graduate Standing or consent of instructor. A survey of the field of political sociology, oriented around critical themes in the major theoretical traditions and contemporary exemplars. Special attention will be paid to competing perspectives on power, the theory of the state, and the relationship of class structure to politics.

Mr. Roy, Mr. Lo, Mr. Prager

234. Sociology of Community Organization. Prerequisites: Graduate Standing and consent of instructor. A survey of recent and classical research and literature dealing with predominantly political institutions and the theory and practice of communal life in the village and the metropolis.

Mr. Sabagh

235. Social Structure and Social Movements. Prerequisite: Graduate Standing or consent of instructor. A survey of some social science theories bearing on the role of social movements in the social structural and social upheavals. The causes, course and consequences of selected social movements, insurgencies and revolutions will be examined.

Mr. Surace

236. Social Change in the Middle East. An analysis of the sources, extent, and types of social change in the Middle East with an emphasis on the origin and consequences of industrialization and urbanization.

Mr. Sabagh

237. Social Stratification in the Middle East. Models of social differentiation in traditional Middle Eastern societies, localism and tribalism, the counter influence of processes leading to the recurrent emergence of societies of large scale and their distinctive structural characteristics.

Mr. Sabagh

238A-238B. Field Work in Minority Communities. Prerequisite: Graduate Standing and consent of instructor. This two-quarter sequence is designed to supply graduate students with the theoretical and methodological equipment necessary for studying disadvantaged minority communities. Special emphasis is given to the development of skills and techniques. Nonstandard language forms (mainly Black English and Chicano) are especially focused upon instrumentally. In the field students will gather empirical data that sheds light on the ways in which data of greater validity and practical utility might be collected among these groups. This course is offered on an In-Progress basis, which requires students to complete the full two-quarter sequence, at the end of which time a grade will be earned.

240. Mathematics of Population. Prerequisites: introduction to matrices, calculus, and probability theory. Discrete and continuous deterministic and probabilistic models of the growth and composition of a one-tree-population classified by age, plus selected topics on more complicated population models.

Mr. McFarland

247. Neurosociology. Prerequisites: Graduate Standing and consent of instructor. Relations between aspects of social structure and higher cortical functions.

Mr. TenHouten

248. The Sociology of Cognitive Development. Prerequisite: Graduate Standing or consent of instructor. Analysis of the sources, extent, and types of social change in the Middle East with an emphasis on the origin and consequences of industrialization and urbanization.

Mr. Sabagh

M293A. Sociocultural Aspects of Health and Illness: Health Professions. (Same as Public Health M283F.) Prerequisite: Public Health 162, three courses in psychology, sociology, or anthropology, or equivalent, and consent of instructor. Sociological examination of the concepts "health" and "illness" and role of various health professionals especially physicians. Attention given to the meaning of professionalization and professional-client relationships within a range of organization settings.

Mr. Goldstein

M249B. Sociocultural Aspects of Health and Illness: Health Behaviors. (Same as Public Health M283G.) Prerequisites: Public Health 182, three courses in psychology, sociology, or anthropology, or equivalent, and consent of instructor. Sociocultural factors affecting differential patterns of health behavior, illness behavior, and sick role behavior.

Seminars

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. Bonacich, Mr. Freeman

M234A. Sociology of Law. (Same as Law M354.) Prerequisite: consent of instructor. Social control functions of law and legal institutions with particular attention to the contrast between law of states and tribal societies and contemporary American legal processes and institutions, primarily those of criminal law.

Mr. Prager

254B. Sociology of Law. Social control functions of law and legal institutions with particular attention to the contrast between law of states and tribal societies and contemporary American legal processes and institutions, primarily those of criminal law.

Mr. Prager

255A-255B. Selected Issues in Sociological Theory. Seminar. Prerequisite: consent of instructor. Examination of selected issues and problems in classical or contemporary sociological theory and in the history of the development of sociological theory. Course 255A is not ordinarily prerequisite to 255B.

256. Demography. Mr. Bailey, Mr. Sabagh

257. Sociology of the Arts. Mr. Horton

258. Sociology of Religion.

259. Social Structure and Economic Change: Historical and Comparative Perspectives. Mr. Hiraata, Mr. Surace, Mr. Zeitlin

260. Industry and Society. Mr. Light, Mr. Surace

261. Ethnic Minorities. Mr. Levine, Mr. Seeman

M262. Selected Problems in Urban Sociology. (Same as Afro-American Studies M200C.) Prerequisite: consent of instructor.

Mr. Harrison, Mr. Light, Mr. Oliver

263. Social Stratification. Mr. Treiman

264. Professions in the American Society. Mr. Wilson, Ms. Oppenheimer

265. Problems in Organization Theory. Mr. Grusky, Ms. Zuckar

266. Selected Problems in the Analysis of Conversation. Prerequisite: course 144A or consent of instructor.

Mr. Schegloff

267. Selected Problems in Communication.

Mr. Poliner, Mr. Schegloff

268. Historical and Interpretive Sociology. Mr. Surace

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. Prerequisites: Graduate Standing and consent of instructor. The seminar will analyze selected problems in Africa from among the following fields: urbanization; racial and ethnic relations, national integration, and political change.

275. Seminar in Comparative Social Structures: Developing Societies. One of the strands of social structures among developed societies, including the comparative analysis of the main institutional features, social class arrangements, social mobility characteristics, and the like. Comparisons will involve the U.S. and developed countries in Western Europe, Asia and Oceania.
Mr. Treiman

276. Selected Topics in the Sociology of East Asia. Prerequisites: Graduate Standing and consent of instructor. The seminar will analyze selected problems in China, in China and Japan comparatively. Possible topics include: 1. China's Great Proletarian Cultural Revolution; 2. Internal contradictions in 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. Hirata

277. Sociology of Science. Mr. Ten-Houten

278. Sociology of the Theatre. Seminar on different movements in the theatre, or expressions of the Theatre (e.g., Theatre of the Absurd, Contemporary Experimtal Theatre), with emphasis on the theatrical performance as it relates to the environging society, responds to, or reacts against, theatrical conventions, socializes the players to the performance, and creates its own social world.
Mr. Horton

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. Graded S/U and letter grade.
Mr. Freeman

281. Selected Problems in Mathematical Sociology. Prerequisite: Mathematics 49 or 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. Bonasich, Mr. McFarland

282. Organizations and the Professions:

284. Topics in Mental Health and Illness. Prerequisites: course 157 or equivalent and Graduate Standing.
Mr. Emerson, Mr. Grusky, Mr. Poliner

M287A-M287B. Population Policy and Fertility. (Same as Public Health M274A-M274B.) Prerequisites: Public Health 102, 112, 173 or equivalent. Graduate Standing, and consent of instructor. Public Health M274A is prerequisite for M274B. Sociology M287A is prerequisite for M287B. Analysis of research concerning major issues in policy population policy with special emphasis on human fertility. Ms. Blake

M287C. Seminar in Population Policy and Fertility. (Same as Public Health M274C.) Prerequisites: Public Health M274A-M274B or equivalent, Graduate Standing, and 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

291. Moral Solidarity in Communities. Comparative analysis of social solidarity and the collapse of social solidarity in voluntary and traditional communities. Contrasts more and less solidarity types with special reference to utopian communities and developmental processes.
Mr. Light


485A-485B. Supervised Teaching of Sociology. (1 course. Students must be approved by faculty and traditional community. A special course for teaching assistants. It is designed to deal with the problems and techniques of teaching introductory sociology. To be graded SU.)

Individual Study and Research

501. Cooperative Program. (½ to 2 courses) Prerequisites: approval of UCLA Graduate Advisor and Graduate Dean. Approval of 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. To be graded S/U.

596. Directed Research and Study in Sociology. (1/2 to 2 courses)

597. Individual Study for Examinations. Preparation for the dossier for the master's degree or the qualifying examination for the Ph.D.

599. Research in Sociology for Ph.D. Degree Candidates. (1 to 2 courses)

Spanish and Portuguese

(Office, 5303 Rolfe Hall)

Shirley L. Arora, Ph.D., Professor of Spanish (Chair of the Department).
José R. Barcia, Lic. F. y L., Professor of Spanish.
Rubin K. Belluz, Ph.D., Professor of Spanish.
Joaquin Gimeno, Ph.D., Professor of Spanish.
Claude L. Hulet, Ph.D., Professor of Spanish and Portuguese.
Carroll B. Johnson, Ph.D., Professor of Spanish.
Gerardo Luzuriaga, Ph.D., Professor of Spanish.
C.B. Morris, D.Litt., Professor of Spanish.
C.P. Otero, Ph.D., Professor of Spanish and Romance Linguistics.
José Miguel Oviedo, Ph.D., Professor of Spanish.
Stanley L. Robe, Ph.D., Professor of Spanish.
John A. Crow, Ph.D., Emeritus Professor of Spanish.
John E. Englekirk, Ph.D., Emeritus Professor of Spanish.
Aníbal Sánchez-Reulet, Ph.D., Emeritus Professor of Spanish.
Marion A. Zeiltin, Ph.D., Emeritus Professor of Spanish.
E. Mayona Días, Ph.D., Associate Professor of Portuguese.
A. Carlos Quicoli, Ph.D., Associate Professor of Portuguese and Romance Linguistics.
Pilar M. Reeve, Ph.D., Associate Professor of Spanish.
Enrique Rodriguez-Cepeda, Ph.D., Associate Professor of Spanish.
A. John Skirius, Ph.D., Associate Professor of Spanish.
Paul C. Smith, Ph.D., Associate Professor of Spanish.
Susana Pfann, Ph.D., Assistant Professor of Spanish.
Guillermo Hernández, C.Phil., Acting Assistant Professor of Spanish.
José M. Cruz-Salvadores, M.A., Lecturer in Spanish. George L. Voyt, J.D., Lecturer in Spanish.

Master of Arts in Spanish

Admission Requirements. The UCLA B.A. in Spanish or its equivalent is required. Students admitted from elsewhere whose preparation is considered deficient are required to make up their deficiencies by taking a specified number of relevant upper division courses in the Department. These courses may be taken concurrently with graduate courses, but they do not count toward the M.A. Three letters of recommendation are also required. These should be preferably from professors with whom the applicant has studied in the major field, who can comment on his/her potential as a graduate student. In addition, the Graduate Record Examination Aptitude Tests are required. A combined score of 1000 is preferred, although more weight is given to the Verbal than to the Quantitative aspects. The Graduate Advisers meet as a committee and make a final decision in each case.

Advising. All students working toward the M.A. are advised by graduate advisers who represent the three fields of specialization open to M.A. candidates, viz: Spanish Literature, Spanish-American Literature, Linguistics. Each new graduate student must make an appointment through the Department Graduate Counselor with the adviser who represents his/her major field of interest. Appointments are scheduled during the week preceding the start of classes in the Fall, Winter and Spring Quarters. During the interview, the student and his/her adviser discuss general requirements and decide on a program of courses for the quarter. After this initial interview, the student is required to see his/her adviser at the beginning of each quarter for a review of his/her progress toward the degree.

The adviser also approves the student's study list at this time, if the student is making satisfactory progress. At present, the Graduate Advisers are Professor C.L. Hulet (Luso-Brazilian language and literatures), C.B. Johnson (Spanish literature), G. Luzuriaga (Spanish American Literature), C.P. Otero (Linguistics), José Miguel Oviedo (Spanish American Literature), S.L. Robe (Linguistics), P.C. Smith (Spanish literature). Inquiries should be addressed to: Ms. Joanne March, Graduate Counselor, Department of Spanish and Portuguese, 5325 Rolfe Hall, Tel: 825-7091.

Foreign Language Requirement. One language besides Spanish is required. Any language which has a written literature is acceptable. For languages in which an Educational Testing Service (ETS) test exists, passing the appropriate test fulfills the requirement. In languages for which there is no such test, passing an examination administered by the relevant language department fulfills the requirement. It may also be fulfilled by evidence of completion of five quarters of college level courses in the language with grade B or above. If the student offers Portuguese, one year of study (Portuguese 3) at UCLA is sufficient. The language requirement must be met not later than the same quarter in which the final course requirement is completed.

Course Requirements. Attention is directed to the statement concerning deficiencies in the section on Admission Requirements. In addition to any deficiencies, noted, course requirements for the M.A. (Comprehensive Examination Plan) are as follows: 10 courses with a minimum of seven in the 200 series, of which one must be a seminar (250-299) which may be taken only after the relevant graduate pre-seminar (200-249). For example, course 224
"Poetry of the Golden Age" is prerequisite to course 264A "Studies in the Golden Age: Poetry." Three upper division courses in the Department may be included in the total of 10 courses. With the approval of the Graduate Adviser, a maximum of two courses may be taken at the graduate level in closely related fields outside the Department. Course 596 may be included once. Courses 597 and 598 do not count toward the degree.

Comprehensive Examination Plan. The Department favors this plan and will approve the Thesis Plan only in exceptional circumstances. See Thesis Plan below. Ten courses, distributed as stated above, are required for this plan. The examination is administered by a standing committee of six members of the Department, appointed by the Chair. Each of the three fields of study is represented by two professors. The student elects one of the three fields as his/her major, and the other two become the minors. A reading list for candidates in each specialty, with required readings in the minor fields as well, is available and constitutes the basis of the examination. Given in the Fall, Winter and Spring Quarters, the examination is entirely written and is of six hours duration. Three hours are devoted to the major (e.g., Spanish literature) and 1½ hours to each of the minors (e.g., Spanish-American literature, Linguistics). It is graded by the M.A. examination committee, whose decision is final. The examination is graded "High Pass," "Mid Pass," Low Pass," "Not Passed." A grade of "Low Pass" results in a terminal M.A. If a student does not pass the examination or any part thereof, he/she may retake the failed portions once, when the examination is next regularly offered. Passing the M.A. examination after repeating one or more failed portions results in a terminal M.A. The M.A. examination must be taken no later than two quarters after course requirements are completed.

Thesis Plan. The Department strongly favors the Comprehensive Examination Plan and will approve M.A. theses only for exceptionally well-qualified students in exceptional circumstances. It is the responsibility of the student to choose an appropriate topic and find a professor willing to direct the thesis. He/she then petitions the Department for authorization to proceed. His/her petition is examined first by the Committee of Graduate Advisers, who make a recommendation. The entire Department then either approves or denies the petition by majority vote. If the petition is approved, a thesis committee is appointed, consisting of a chair in the field of the thesis and two other members of the Department who represent the other two fields. A student may petition for authorization to write an M.A. thesis only after completion of seven courses which count toward the degree. A total of nine courses with a minimum of six courses in the 200 series, of which one must be a seminar and three may be in the 100 series, is required for this degree. Course 598 ("Research for M.A. Thesis") may not be included among the nine. After completion of the thesis, the candidate must pass a 3-hour oral examination testing his/her knowledge of the field of his/her thesis and his/her general competence in the areas of the Comprehensive Examination based on the core readings of the M.A. reading list.

Time to Degree. A full-time student, with no deficiencies at entrance, taking three courses per quarter, should complete the coursework and the Comprehensive Examination four quarters from admission. Teaching assistants and students with deficiencies at entrance will require longer. Non-TA's are expected to complete seven courses each 3-quarter period; TA's, five. See "Disqualification below." 

500 Series Course Limitations.

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Unit Value</th>
<th>Type of Grading</th>
<th>Application</th>
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<tbody>
<tr>
<td>596</td>
<td>4-8 Letter</td>
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<tr>
<td>597</td>
<td>4-8 S/U</td>
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</tbody>
</table>

Disqualification. The Committee of Graduate Advisers in the Department reviews the progress of each student at the end of each academic year. If the advisers find that a student is not making satisfactory progress, they propose a probationary period during which certain conditions must be met. The Chair of the Department then advises the student in writing of the decision of the graduate advisers in his/her case. If the student is unwilling to comply with the expectations of the Chair and the Committee of Graduate Advisers, he/she is subject to dismissal.

Not making satisfactory progress is defined as follows: (1) failure to maintain 3.0 grade point average; (2) failure to remove lapsed incomplete grades during period specified; (3) failure to complete at least five courses in each full academic year for TA's; for non TA's, seven courses per year. Reduced programs may be approved in extraordinary cases upon petition to the Chair who refers it to the Committee of Graduate Advisers; (4) failure to complete language requirement during or before the last quarter of coursework; (5) failing M.A. examination in two attempts — no degree awarded; (6) passing M.A. examination "Low Pass" — terminal M.A. awarded; (7) passing M.A. examination on second attempt — terminal M.A. awarded.

Appeals. An appeal may be presented in writing to the Chair of the Department, who in turn, presents the student's case first to the Committee of Graduate Advisers and if needed, then to the faculty of the Department whose decision is final.

Master of Arts in Luso-Brazilian Language and Literatures

Admission Requirements. The UCLA B.A. in Portuguese or its equivalent is required. Students admitted from elsewhere whose preparation is considered deficient are required to make up their deficiencies by taking a specified number of relevant undergraduate courses in the Department. These courses may be taken concurrently with graduate courses, but they do not count toward the M.A. degree. Three letters of recommendation are also required. These should be preferably from professors with whom the applicant has studied in the major field, who can comment on his/her potential as a graduate student. In addition, the Graduate Record Examination Aptitude Tests are required. A combined score of 1000 is preferred, although more weight is given to the Verbal than to the Quantitative aspects. The graduate advisers meet as a committee and make a final decision in each case.

Advising. All students working toward the M.A. are advised by the Graduate Adviser for Luso-Brazilian, Prof. C.L. Hulet. Each new graduate student must make an appointment with him through the Department Graduate Counselor. Appointments are scheduled during the week preceding the start of classes in the Fall, Winter and Spring Quarters. During the interview, the student and Prof. Hulet discuss general requirements and decide on a program of courses for the quarter. After this initial interview, the student is required to consult him at the beginning of each quarter for a review of his/her progress toward the degree. Prof. Hulet also approves the student's study list at this time, if the student is making satisfactory progress. Address inquiries to: Ms. Joanne March, Graduate Counselor, Department of Spanish and Portuguese, 5325 Rolfe Hall, Tel: 825-7091.

Fields of Study: Portuguese literature; Brazilian literature; Portuguese linguistics. At the M.A. level, all students are expected to work in all three fields.

Foreign Language Requirement. One language besides Portuguese. Any language which has a written literature is acceptable. For languages in which an Educational Testing Service (ETS) test exists, passing the test fulfills the requirement. In languages where no such test is available, passing a test administered by the relevant language department fulfills the requirement. It may also be met by evidence of completion of five quarters of college level coursework with grades of C or better. The language requirements must be met no later than the same quarter in which the final course requirement is completed.

Course Requirements. Nine courses are required, of which a minimum of six must be in the 200 series. Three upper division courses in the Department may be included in the total requirement of nine courses. With the adviser's approval, two graduate courses outside the Department in closely related fields may also be included. Course 596 may be included twice.

Comprehensive Examination Plan. The Department strongly favors this plan and will approve the Thesis Plan only in exceptional
cases. (See Thesis Plan below.) The examination is administered by a committee for Luso-Brazilian language and literatures, composed of those members of the Department who teach the relevant graduate courses. The examination, based on reading lists, is divided into three major parts: 1) a 3-hour written examination in Portuguese literature; 2) a 3-hour written examination in Brazilian literature; and 3) a 1-hour written examination in the history and structure of the Portuguese language.

The examination is given in the Fall, Winter and Spring Quarters. It is graded "High Pass," "Mid Pass," "Low Pass," "Not Passed." A grade of "Low Pass" results in a terminal M.A. Portions of the exam not passed may be repeated once, whenever the examination is next regularly offered. Passing the exam after repeating failed portions results in a terminal M.A.

**Thesis Plan.** The Department strongly favors the Comprehensive Examination Plan and will approve M.A. theses only for exceptionally well-qualified students in exceptional circumstances. It is the responsibility of the student to choose an appropriate topic and to find a professor willing to direct the thesis. He/she then petitions the Department for authorization to proceed. His/her petition is examined by the Committee of Graduate Advisers and then voted upon by the entire Department. If the petition is approved, a thesis committee is appointed, consisting of a chair in the field of the thesis and two other members of the Department. After completion of the thesis, the candidate must pass a 3-hour oral examination testing his/her knowledge of the field of his/her thesis and his/her general competence in the areas of the Comprehensive Examination based on the core readings of the M.A. reading list.

**Time to Degree.** A full-time student, with no deficiencies at entrance, taking three courses per quarter, should complete coursework and the Comprehensive Examination four quarters from admission. Teaching assistants and students with deficiencies at entrance will require longer. Non-TA's are expected to complete seven courses each 3-quarter period; TA's five. See "Disqualification" below.

### 500 Series Course Limitations.

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<td>does not count toward the M.A.</td>
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**Disqualification.** The Committee of Graduate Advisers in the Department reviews the progress of each student at the end of each academic year. If the advisers find that a student is not making satisfactory progress, they propose a probationary period during which certain conditions must be met. The Chair of the Department then advises the student in writing of the decision of the Graduate Advisers in his/her case. If the student is unwilling to comply with the expectations of the Chair and the Committee of Graduate Advisers, he/she is subject to dismissal.

Not making satisfactory progress is defined as follows: (1) failure to maintain 3.0 grade point average; (2) failure to remove lapsed incomplete grades during period specified; (3) failure to complete at least five courses in each full academic year for TA's; for non-TA's, seven courses per year. Reduced programs may be approved in extraordinary cases upon petition to the Chair who refers it to the Committee of Graduate Advisers; (4) failure to complete the language requirement during or before the last quarter of coursework; (5) failing M.A. examination in two attempts — no degree awarded; (6) passing M.A. examination "Low Pass" — terminal M.A. awarded; (7) passing M.A. examination on second attempt — terminal M.A. awarded.

**Appeals.** An appeal may be presented in writing to the Chair of the Department, who in turn, presents the student's case first to the Committee of Graduate Advisers and if needed, then to the faculty of the Department whose decision is final.

### The Ph.D. in Hispanic Languages and Literatures

**Admission Requirements.** The UCLA M.A. in Spanish or Luso-Brazilian Language and Literatures, or the equivalent is required. Three letters of recommendation are also required from professors familiar with the applicant's work as a graduate student, to be addressed to his/her capacity for research-oriented doctoral studies and possible entry into the profession. The Graduate Record Examination Aptitude Test is also required. A combined score of 1000 is preferred, and the Verbal score is considered more important than the Quantitative. The Graduate Advisers meet as a committee and reach a collective decision in each case.

**Final Admission to the Doctoral Program.** Students who hold the M.A. in Spanish or Luso-Brazilian Language and Literatures from UCLA fall into one of three categories and are so notified upon receipt of the degree. The categories are: (a) Low Pass (Terminal M.A.) — Students who pass with terminal M.A.'s are not eligible for admission into the Ph.D. program. (b) Mid-Pass — Students in this category may continue toward the Ph.D. on the following probationary basis:

1. Take a minimum of three additional graduate courses with three different members of the Department, with acceptable grades.
2. Find a tenured professor who is willing to direct the dissertation.

(c) High Pass — Students who pass the M.A. in this category ("with distinction") are automatically eligible to proceed to step (2) under (b) above.

Students who hold the M.A. from other institutions will not be assigned to a guidance committee until their second quarter of studies in the Department, after complying with the provisions set forth in the "Mid Pass" category. In some cases, they may be required to pass the UCLA M.A. examination, normally in the second or third quarter of residence.

The guidance committee directs the student's program of study from this point on. It is composed of a chairperson, who represents the student's major field (e.g., 20th Century Spanish literature) and under whom the student proposes to write his/her dissertation, and four other members of the Department, who represent the four minor fields. It is the student's responsibility to approach the professor he/she wants on his/her committee and secure their consent. As soon as possible after Form I has been approved, the student meets with his/her guidance committee for the purpose of working out his/her program of courses and setting a tentative date for the Qualifying Examinations. The student prepares a "Study Report" (forms available from Department Graduate Counselor) listing the graduate courses he/she has taken at UCLA and elsewhere, to be analyzed and discussed at the meeting. This meeting is the most important administrative act in the student's progress toward the Ph.D. It should be emphasized that the course requirements listed below are the minimum acceptable to the Department. The guidance committee is the final authority in each individual case. A student who has not met with his/her committee and placed himself/herself under its direction is not officially in the Ph.D. program.

**Advising.** All students working toward the Ph.D. who have not yet been authorized to form their guidance committee are advised by graduate advisers who represent the broad fields of interest within the Department: Spanish literature (Profs. C.B. Johnson, P.C. Smith), Spanish-American literature (Profs. G. Luzuriaga, J.M. Oviedo), Luso-Brazilian language and literatures (Prof. C.P. Onofre). Each new graduate student must make an appointment through the Department Graduate Counselor with the adviser who represents his/her major field of interest. Appointments are scheduled during the week preceding the start of classes in the Fall, Winter and Spring Quarters. During the interview, the student and his/her adviser discuss general re-
quirements and plan a program of courses for the quarter. After this initial interview, the student is required to consult his/her adviser at the beginning of each quarter for a review of his/her progress toward the degree. The adviser also approves the student's Study List at this time, if the student is making satisfactory progress.

Students who have formed their guidance committee are advised principally by the chairperson of that committee, but their Study List continues to be signed each quarter by the chairperson of the committee immediately following the oral. Failed portions of the examination may be retaken once after such remedial preparation as the committee may specify. Upon passage of the entire series of examinations, the student is eligible to apply for formal advancement to candidacy for the Ph.D. and may proceed to write his/her dissertation.

Doctoral Committee. At least two months before the date of the Qualifying Examinations, the student files the form "Nomination of Doctoral Committee" with the Graduate Division through the Department Graduate Counselor. This form lists the names of the five members of the guidance committee and two additional members from outside the Department who will also pass on the student's written and oral examinations. It is the student's responsibility to approach the two "outside" members and secure their consent. The 7-member body, thus constituted, is the student's official doctoral committee and is so recorded by the Graduate Division.

The Dissertation. The dissertation may be written on any subject within the general area of Hispanic Languages and Literatures. The subject and general approach are proposed by the student, discussed at the Oral Qualifying Examination, and approved by the doctoral committee. The chair of the committee is the director and first reader of the dissertation. It is also read by one other committee member who is also a member of the Department and by one "outside" committee member. It may also be read by other members, or by the entire committee, at the committee's discretion. Note: If more than five years have elapsed between advancement to candidacy and presentation of the dissertation, the Department may require the student to revalidate his/her Qualifying Examination.

Final Oral Examination Following Completion of the Dissertation. The Final Oral Examination is optional at the committee's discretion.

Time to Degree. For full-time students taking three courses per quarter, the following figures are optimal: (a) From graduate admission to award of M.A.: four quarters; (b) from award of M.A. to authorization to form guidance committee: one quarter; (c) from formation of guidance committee to Qualifying Examination: three to five quarters; (d) from passage of Qualifying Examination (advancement to candidacy) to presentation of the dissertation: 3 to 15 quarters; e) from graduate admission to award of the degree (or normative time-to-degree): five years (15 quarters).
### Seminars

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M251</td>
<td>Studies in Galician-Portuguese and Old Spanish. (Formerly numbered 253.)</td>
<td>Same as</td>
<td>(Same as Portuguese M251.) Prerequisites: course M203A-M203B. Problems related to the historical development of Galician-Portuguese and Old Spanish. Two main periods: 1) Prehistory to 1500 and 2) after 1500. Mr. Otero, Mr. Smith</td>
</tr>
<tr>
<td>256C</td>
<td>Prose Writers.</td>
<td>Two hours weekly. Prerequisite: course 222.</td>
<td>Mr. Robe</td>
</tr>
<tr>
<td>256A-256D</td>
<td>Studies in the Golden Age.</td>
<td>Two hours weekly.</td>
<td>256A. Lyric Poetry. Meets two hours weekly. Prerequisite: course 222.</td>
</tr>
<tr>
<td>264A</td>
<td>Poetry.</td>
<td>Two hours weekly. Prerequisite: course 224.</td>
<td>Mr. Johnson, Mr. Morris, Mr. Rodriguez-Cepeda</td>
</tr>
<tr>
<td>264B</td>
<td>The &quot;Comedias.&quot;</td>
<td>Two hours weekly. Prerequisite: course 225.</td>
<td>Mr. Johnson, Mr. Morris, Mr. Rodriguez-Cepeda</td>
</tr>
<tr>
<td>264C</td>
<td>Studies in Prose of the Golden Age.</td>
<td>Two hours weekly. Prerequisite: course 226.</td>
<td>Mr. Johnson, Mr. Rodriguez-Cepeda</td>
</tr>
<tr>
<td>264D</td>
<td>Don Quijote.</td>
<td>Two hours weekly. Prerequisite: course 227.</td>
<td>Mr. Johnson, Mr. Rodriguez-Cepeda</td>
</tr>
<tr>
<td>274B</td>
<td>Contemporary Spanish American Short Story.</td>
<td>Two hours weekly.</td>
<td>274C. Novel and Short Story. Meets two hours weekly. Prerequisite: course 224.</td>
</tr>
<tr>
<td>275B</td>
<td>Contemporary Spanish American American.</td>
<td>Two hours weekly.</td>
<td>276A. The Romanenco. Meets two hours weekly. Prerequisite: course 222.</td>
</tr>
<tr>
<td>276C</td>
<td>Ballad, Poetry and Speech.</td>
<td>Two hours weekly. Prerequisite: course M249.</td>
<td>Ms. Arora, Mr. Robe</td>
</tr>
</tbody>
</table>

### Professional Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>310</td>
<td>The Teaching of Spanish in the Elementary School. Meets three hours weekly. Prerequisite: course 115.</td>
</tr>
<tr>
<td>370</td>
<td>The Teaching of Spanish in the Secondary School. Meets three times weekly. Prerequisite: course 115.</td>
</tr>
<tr>
<td>372</td>
<td>The Language Laboratory. (½ course) Meets three hours weekly. Preparation of materials, equipment, techniques, and problems related to the operation of the language laboratory. Mr. Otero</td>
</tr>
<tr>
<td>485</td>
<td>The Teaching of Spanish in the University. Prerequisites: Graduate Standing in the department. Basic concepts of modern theories of language and language acquisition which underlie modern methods of second language teaching. Methods of second language teaching: Pattern Drill; &quot;Inductive Grammar&quot; (de Saussure, Peirce, Hamel; Barca) and others. Teaching practice. Observation and discussion of selected classes. Lesson preparation and execution. Test construction. Mr. Quicoli</td>
</tr>
</tbody>
</table>

### Individual Study and Research

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>596</td>
<td>Directed Individual Study or Research. (1 to 2 courses) Prerequisites: approval of graduate adviser and Chair of the department. Study or research in areas or on subjects not offered as regular courses. Work evaluated on letter grade basis. No more than one full course may count toward the M.A. course requirement. Limited to a maximum of two full courses in any graduation year.</td>
</tr>
<tr>
<td>597</td>
<td>Preparation for Graduation Examinations. (1 to 2 courses) Prerequisites: official acceptance of candidacy by the department, and approval of graduate adviser. Individual preparation for the comprehensive examination for the M.A. degree or the qualifying examinations for the Ph.D. degree. Graded S/U. May be taken only once for each degree examination and only in the quarter that comprehensive or qualifying examinations are taken.</td>
</tr>
<tr>
<td>598</td>
<td>Research for M.A. Thesis. (1 to 2 courses) Prerequisite: consent of the guidance committee. Research in preparation of the master's thesis. Graded S/U.</td>
</tr>
<tr>
<td>599</td>
<td>Research for Ph.D. Dissertation. (1 to 2 courses) Prerequisite: restricted to those who have passed the qualifying examinations for the doctor's degree. Research for and preparation of the Ph.D. dissertation. Graded S/U.</td>
</tr>
</tbody>
</table>

### Portuguese

#### Upper Division Courses

- 100. Phonology and Pronunciation.
- 101A. Advanced Reading and Conversation.
- 101B. Advanced Composition and Style.
- 103. Syntax.
- M118. History of the Portuguese and Spanish Languages (Same as Spanish M118). |
- 120A. Survey of Portuguese Literature.
- 120B. Survey of Portuguese Literature.
- 121A. Survey of Brazilian Literature.
- 121B. Survey of Brazilian Literature.
- 125. Renaissance and Baroque Portuguese Literature.
- 127. Colonial Brazilian Literature.
- 128. 18th and 19th Century Portuguese Literature.
- 129. Romanticism in Brazil.
- 135. Naturalism, Realism and Parnassianism in Brazil.
- 137. Contemporary Brazilian Literature.
- 140A-B. Luso-Brazilian Portuguese Literature in Translation.
- 140B. Brazilian Literature.
*Graduate Courses

M200. Bibliography. (Same as Spanish M200.) Meets three hours weekly. Identification and analysis of bibliographical sources for work by doctoral candidates in their fields of specialization. Mr. Benitez, Mr. Rodriguez-Cepeda

M201. Literary Criticism. (Same as Spanish M201.) Meets three hours weekly. Definition and discussion of methods of literary criticism. Mr. Benitez, Mr. Otero

M203A-M203B. The Development of the Portuguese and Spanish Languages. (Same as Spanish M203A-M203B) Prerequisites: courses M118, 100, or consent of instructor. Intensive study of the historical development of the Portuguese and Spanish languages from their origin in spoken Latin. Mr. Otero, Mr. Smith

204A-204B. Transformational Grammar. Prerequisite: consent of instructor; course 204A or consent of instructor is prerequisite to 204B. A transformational approach to the Portuguese language, focused especially on the syntactic component and its relations with other aspects of grammar. Mr. Quicoli

206. Portuguese Linguistics. Lecture, three hours. Prerequisite: consent of instructor. A study of theoretical and synchronic linguistics of Portuguese. Mr. Quicoli

C242A-C242D. Special Topics in Portuguese Literature. (1 course each) Lecture, two hours.

C242A. Medieval Portuguese Literature. Meets two hours weekly. May be offered concurrently with Portuguese C124. Prerequisite: consent of instructor. Mr. Dias

C242B. Renaissance and Baroque Literature. Meets two hours weekly. May be offered concurrently with Portuguese C126. Prerequisite: consent of instructor. Mr. Dias

C242C. 18th and 19th Century Literature. Meets two hours weekly. May be offered concurrently with Portuguese C128. Prerequisite: consent of instructor. Mr. Dias

C242D. Contemporary Portuguese Literature. Meets two hours weekly. May be offered concurrently with Portuguese C136. Prerequisite: consent of instructor. Mr. Dias

C243A-C243D. Special Topics in Brazilian Literature. (1 course each) Lecture, two hours.

C243A. Colonial Literature. Meets two hours weekly. May be offered concurrently with Portuguese C127. Prerequisite: consent of instructor. Mr. Hulet

C243B. Romanticism in Brazil. Meets two hours weekly. May be offered concurrently with Portuguese C129. Prerequisite: consent of instructor. Mr. Hulet

C243C. Naturalism, Realism and Parnassianism. Meets two hours weekly. May be offered concurrently with Portuguese C135. Prerequisite: consent of instructor. Mr. Hulet

C243D. Contemporary Brazilian Literature. Meets two hours weekly. May be offered concurrently with Portuguese C137. Prerequisite: consent of instructor. Mr. Hulet

M249. Hispanic Folk Literature. (Same as Folklore M249 and Spanish M249.) Meets three hours weekly. An intensive study of folk literature as represented in a) ballad and poetry; b) narrative and drama; c) speech. Ms. Arora, Mr. Robe

M251. Studies in Galegian-Portuguese and Old Spanish. (Same as Spanish M251.) Prerequisites: course M203A-M203B. Problems related to the historical development of Galegian-Portuguese and Old Spanish. Meets two hours weekly. Mr. Otero, Mr. Smith


252A. Prose Fiction. Meets two hours weekly. Prerequisite: consent of instructor. Mr. Dias

252B. The Poetry. Meets two hours weekly. Prerequisite: consent of instructor. Mr. Dias

252C. The Theater. Meets two hours weekly. Prerequisite: consent of instructor. Mr. Dias

253A-253B-253C. Special Studies in Brazilian Literature.

253A. Prose Fiction. Meets two hours weekly. Prerequisite: consent of instructor. Mr. Hulet

253B. The Poetry. Meets two hours weekly. Prerequisite: consent of instructor. Mr. Hulet

253C. The Theater. Meets two hours weekly. Prerequisite: consent of instructor. Mr. Hulet

Professional Course

370. The Teaching of Portuguese in the Secondary School. For future teachers in this field. Mr. Hulet

Individual Study and Research

596. Directed Individual Study or Research. (1 to 2 courses) Prerequisites: approval of graduate adviser and Chair of the Department. Study or research in areas or on subjects not offered as regular courses. Work evaluated on letter grade basis. No more than two full courses may count toward the M.A. course requirement. Limited to a maximum of three full courses in any graduate program.

597. Preparation for Graduate Examination. (1 to 2 courses) Prerequisites: official acceptance of candidacy by the department, and approval of graduate adviser. Individual preparation for the comprehensive examination for the M.A. degree. Graded S/U. May be taken only once for each degree examination and only in the quarter that comprehensive or qualifying examinations are to be taken.


599. Research on Dissertation. (½ to 2 courses) Research for and preparation of the doctoral dissertation. Restricted to those who have passed the Qualifying Examinations for the doctor's degree. Graded S/U.

Theater Arts

(Office, 2310 Macgowan Hall)

William B. Adams, M.A., Professor of Theater Arts.
John Dubbe, M.A., Assistant Professor of Theater Arts.
Shirley M. Clarke, A.A., Professor of Theater Arts.
Robert F. Corrigan, M.A., Professor of Theater Arts.
Donald B. Crabs, M.A., Professor of Theater Arts.
Mr. Hulet

Frank D. LaTourette, M.Litt., Emeritus Professor of Theater Arts.
William W. Melnitz, Ph.D., Emeritus Professor of Theater Arts.
Darrell E. Ross, M.F.A., Emeritus Professor of Theater Arts.
Nicholas K. Browne, Ed.D., Associate Professor of Theater Arts.
Walter K. Kingson, Ed.D., Emeritus Professor of Theater Arts.

Gary A. Gardner, Ph.D., Associate Professor of Theater Arts.
Robert H. Hethmon, Ph.D., Associate Professor of Theater Arts.
William Froug, B.J., Associate Professor of Theater Arts.
Sylvia E. Moss, B.A., Associate Professor of Theater Arts.
Della N. Saihi, Ph.D., Associate Professor of Theater Arts.
Ruth E. Schwartz, Ph.D., Associate Professor of Theater Arts.
Howard Suber, Ph.D., Associate Professor of Theater Arts.
William T. Ward, M.F.A., Associate Professor of Theater Arts.
William T. Wheatley, Ph.D., Associate Professor of Theater Arts.
Margaret L. Wilbur, M.F.A., Associate Professor of Theater Arts.
Theodore Apstein, Ph.D., Adjunct Associate Professor of Theater Arts.
William H. Menger, M.A., Emeritus Associate Professor of Theater Arts.
Kamala Armstrong, M.F.A., Assistant Professor of Theater Arts.
Deshome H. Gabriel, Ph.D., Assistant Professor of Theater Arts.
Michael S. McLain, M.F.A., Assistant Professor of Theater Arts.
Pattina M. Harter, M.A., Assistant Professor of Theater Arts.
Joanne T. Mcmaster, M.F.A., Assistant Professor of Theater Arts.
Robert A. Nakamura, M.F.A., Assistant Professor of Theater Arts.
Thomas J. Orth, M.F.A., Assistant Professor of Theater Arts.
Jorge R. Prelogan, B.A., Assistant Professor of Theater Arts.
Richard L. Rose, M.F.A., Assistant Professor of Theater Arts.
Carol J. Sorgenfrei, Ph.D., Assistant Professor of Theater Arts.
Richard Walter, M.A., Assistant Professor of Theater Arts.

John D. Boehm, M.A., Lecturer in Theater Arts.
Robert Bookman, J.D., Visiting Lecturer in Theater Arts.
Edward R. Brokaw, B.A., Lecturer in Theater Arts.
Ivan N. Cupy, M.F.A., Visiting Lecturer in Theater Arts.
David Gordon, M.A., Visiting Lecturer in Theater Arts.
Anthony De Longis, B.A., Visiting Lecturer in Theater Arts.
Hugh M. Grauel, M.A., Lecturer in Theater Arts.
H. Peter Guber, L.L.M., Visiting Lecturer in Theater Arts.
John Jingle, M.A., Visiting Lecturer in Theater Arts.
Mark McCarty, M.A., Lecturer in Theater Arts.
Kerry A. Madden, M.F.A., Visiting Lecturer in Theater Arts.
Patricia A. Portman, Visiting Lecturer in Theater Arts.
Beverly Robinson, M.A., Visiting Lecturer in Theater Arts.
Robert Rosen, M.A., Adjunct Lecturer in Theater Arts.
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.) in the following specialization: (1) Motion Picture/Television and (2) Theater.

ALL APPLICANTS PLEASE NOTE: The Motion Picture/Television Division’s M.F.A. program is currently being revised and students admitted for the 1982-83 academic year and following are advised to check with the Department for description of such change.

Admission Requirements

Students are generally admitted in the Fall Quarter only. Applicants for another quarter should consult the Department. 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 Graduate Admissions, and no screening examination prior to admission is required.

Admission requires:

1. Filling the minimum requirements of the Graduate Division for admission to graduate study at UCLA.
2. Completion of an undergraduate major in theater or motion picture/television comparable to that offered by the UCLA Department of Theater Arts. Students whose theater arts preparation is deficient, as determined by the appropriate admissions committee, will be required to take work additional to the degree program to make up such deficiencies.
3. Providing the Department with at least three letters of reference and a statement of purpose.

In addition to (1), (2) and (3) above, further requirements for specific programs are as follows:

For the M.A. Program in Theater
A sample of scholarly or critical writing, statement of purpose and such other information (resume, portfolio, script interview, etc.) as may be required to establish the quality of work in the specialization.

For the M.A. Program in Motion Picture/Television
Students without a comparable undergraduate major to that of the Department must submit for consideration, film and television work done at other institutions (confirmed by the instructors originally involved as the student’s personal work), as well as evidence of their history background production and scriptwriting competency. Or, alternatively, students may be required to take such courses at UCLA as will fulfill these requirements, though these courses will not count towards the minimum of nine courses required for the M.A. program.

For the M.F.A. Program in Theater
Evidence of creative ability and professional intent. At the time of the application to the Graduate Division, the student must clearly state the degree objective (M.F.A.) and the area of specialization within the M.F.A. (Theater) program: Acting, Design (Scenic, Costume, or combined Scenic and Costume Design), Directing, Playwriting, Puppet Theater, Theater Management or Theater Technology.

In Acting: Submit strong letters of recommendation from directors familiar with their work, a complete resume of their experience, photographs, and audition for the M.F.A. faculty committee or its representative.

In Design: (Scenic, Costume, or the two combined): submit examples of creative work such as a portfolio of designs, sketches, working drawings, and photographs.

In Directing: submit evidence of motivation and talent through production and prompt books, reviews and critical commentaries, strong letters of recommendation, and arrange for an interview, when feasible.

In Playwriting: submit examples of creative writing such as full-length plays, one-act plays, and screenplays.

In Puppet Theater: submit actual puppets, photographs, and audition for the M.F.A. Committee or its representative.

In Theater Management: submit a complete resume and a statement outlining the areas of specific interest and intent.

In Theater Technology: submit evidence of ability demonstrated through production books, working drawings, lighting plots, photographs, and strong letters of recommendation.

For the M.F.A. Program in Motion Picture/Television
Applicants with diverse backgrounds and undergraduate majors other than Theater Arts are encouraged. The applicant must state clearly his/her degree objective (M.F.A.) and the area of specialization desired within the program — animation, filmmaking, screenwriting, or television production.

For those intending to concentrate in production, a description of a film or television project designed to be undertaken during graduate residence at UCLA is required. This should be in proposal, script, or treatment form.

For those intending to concentrate in writing, a finished full-length feature script in dramatic form including dialogue must be submitted.

For the Ph.D. Program in Both Motion Picture/Television and Theater
Completion of a master's level degree, M.A. or M.F.A., equivalent to those offered by the UCLA Department of Theater Arts. In exceptional cases students with a M.A. outside the field will be considered for direct admission to the program. Evidence of potential as a practicing scholar is indicated by:

a) breadth and depth of advanced coursework in history, theory and criticism;

b) imagination and quality of scholarly writing;

c) academic achievements and potential as indicated by grade point average, Graduate Record Examination scores, awards, scholarships, teaching assistantships, etc.;

In addition, for the Theater applicant evidence of artistic competence in some facet of theater production.

The dossier submitted for admission must contain a letter describing the applicant’s reasons for wishing to earn the Ph.D. in Theater Arts; and the master's thesis or samples of writing that demonstrate a high level of ability to write criticism or historical narrative.

Simultaneous application can be made for both the M.A. and Ph.D. programs in Theater.

Further information may be obtained from: Student Affairs Office, 1327 Macgowan Hall, Department of Theater Arts, University of California, Los Angeles, CA 90024.

Advising

In most instances, the chair of the appropriate graduate committee acts as principal adviser to students in the program, though some assignments may be made by the chair to other members of the faculty.

For the Theater Ph.D. applicant without a M.A. from the Department of Theater Arts, a screening examination is administered during the first week of the Fall Quarter based on a reading list supplied at the time of application. Results of this examination may require the completion of background courses.

Students meet with advisers for program planning prior to the beginning of each quarter and again early in each quarter for formal approval of the Study List. Students are urged to confer with their advisers as frequently as necessary to discuss program changes, drop-add petitions, etc.

Each program has a specific procedure and calendar for assignment of each student's committee. Consult the adviser for this information.

Assessment of academic progress of each student in the program is made by the appropriate committee during the final examination week of each quarter. The adviser then notifies the student of problems, when warranted, in writing and assists in planning a solution. Normally, committee recommendations are referred directly to the Chair of the Department, though in some instances special problems may be referred to the Divisional faculty for recommendation of action to the Chair.
It should be noted that the status of all students in the Ph.D. program in the Department is provisional until students have completed all residence, course and language requirements and have passed both Written and Oral Qualifying Examinations so as to advance to candidacy.

M.F.A. students in Motion Picture/Television wishing to change from a production emphasis to a writing emphasis must petition the M.F.A. committee, submitting an original feature length screenplay before their decision. If approved for transfer, the student must enroll in a writing course and complete at least one additional full-length screenplay before being eligible to be advanced to candidacy for the final project. If denied transfer, the student must continue the production emphasis.

Major Fields or Subdisciplines

The M.A. program in Theater is a general/graduate degree, though there are opportunities for the students, through their electives and thesis or research paper topics, 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.

The M.A. program in Motion Picture/Television requires that the student be conversant with both film and television and that he/she will be tested on each in the Comprehensive Examination.

The areas of specialization for the M.F.A. program in Theater include: Acting, Design (Scenic, Costume or combined Scenic and Costume Design), Directing, Playwriting, Puppet Theater, Theater Management, and Theater Technology.

The M.F.A. program in Motion Picture/Television includes specializations in animation, filmmaking (fictional, documentary, education), screenwriting, and television production. Subdisciplines include: ethnographic film and broadcast journalism.

The Ph.D. student in Theater is expected to be knowledgeable regarding theater history and theory, critical methods, theatrical production and dramatic literature.

The Ph.D. student in Motion Picture/Television is 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

The M.A. program in Theater does not require a foreign language, but students are urged to develop a proficiency in either French, German, Spanish or Italian.

In the M.A. program in Motion Picture/Television, a student may be required to demonstrate competence in a foreign language if necessary to support the research in the student's area of specialization.

There is no foreign language requirement for either M.F.A. degree.

For the Ph.D. programs in both specializations, mastery of one foreign language is required. Mastery must be demonstrated in one of the following ways: 1) Passing of the Educational Testing Service examination (in French, Spanish, German, or Russian) with a score of 500 or better; 2) Completion of Course 5, or the equivalent, with a minimum grade of C, in any foreign language; 3) Passing of a UCLA language examination given in any foreign language department and administered by an approved examiner. This examination must confirm competence at the level of Course 5. When mastery of more than one foreign language is necessary for the candidate's dissertation study, the candidate will be required to take courses or to pass examinations in the additional language(s). Normally, the student must pass the required foreign language examination(s) by the end of the first year of residence.

In certain cases with committee approval, Motion Picture/Television Ph.D. students may substitute a research tool such as statistics, computer science, etc., for the foreign language.

Course Requirements

Following are the course requirements for each program:

For the M.A. Program in Theater: Students are required to complete a minimum of 9½ courses (38 units), five of which must be at the graduate level, in at least one year (three quarters) of intensive study, laboratory exercises and research leading to the successful completion of either the Thesis or Comprehensive Examination Plan. The student in Theater is required to take an active part in the production program of the Department as partial fulfillment of the degree program.

The required courses are 200 245A-B, and 272A, B, C, which is a 2-unit in-progress course with a grade and units awarded only upon completion of 272C in the third quarter. After being advised, the student will select six courses, including one graduate course in the 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 205A, B and C.

For the M.A. Program in Motion Picture/Television: 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, one course in research methodology (Theater Arts 200) is required of all students. All six of the above courses must be completed with grades of "B" or better. The specific courses most beneficial to the student's program are selected in consultation with an adviser.

For the M.F.A. Program in Theater: A total number of 18 courses (72 units) is required for the M.F.A. degree. Each specialization has different requirements. Additional courses to those required must be planned and approved by the student's adviser.

Acting: Required courses: 16½, graduate 13½. Courses are 420A, B, 421A, B, C, 424A, B, C, D, E, F, 425A, B, C, D, E, F, 472 (½ course to be taken three times), and three adviser-selected courses in theater history and literature.

Design — Costume: Required courses: 16½, all graduate. Courses are: 245A, 424A, B, C, 443 (½ course to be taken six times), 444 (to be taken three times), 472 (½ course to be taken three times), 596D (to be taken three times), and 596F.

Design — Scenic: Required courses: 17½, graduate 13½. Courses are: 239, 241, 243A, B, C, 245A, B or expertise in design (scenic, lighting, costume), direction, and management established by a portfolio or similar evidence which will then allow for adviser-selected electives, 443 (½ course to be taken four times), 472 (½ course to be taken three times), 596D (to be taken three times). Upper division courses: 140B, 141B, 146 and 149A, B.

Design — Combined Scenic-Costume: Required courses: 29½, graduate 21½. The student undertaking this specialization must meet all the requirements for both the Costume Design specialization and the Scenic Design specialization. This usually necessitates an additional year of study for a total of three years or nine quarters.

Directing: Required courses: 16½, graduate 15½. Courses are: 205A or B or C, 240, 245A, B, 420, B, C, 460 A, B, C, 482, 483, 472 (½ course to be taken three times), and 596C.

Upper division course: 132.

Playwriting: Required courses: 11 or 12½, graduate 8½ minimum. Courses are: 230A, B, C, 430A, B, C, 472 (½ course to be taken three times), and upper division course 132, plus three chosen from the following: 123, 162B, 174, 190A, 205A, B, C, 240, 245A, B.

Puppet Theater: Required courses: 12, graduate 8½. Courses are: 205A or B or C, 217, 245A, B, 417, 472 (½ course to be taken three times), and 596C. Upper division courses: 117 (to be taken three times), 162A or B, and 181A.

Theater Management: Required courses: 13, graduate 11. Courses are: Management 257, Management 270, Management 271, 245A, B or expertise in design (scenic, lighting, costume), directing, and management established by a portfolio or similar evidence which will then allow for adviser-selected electives, 290A, B, 472 (½ course to be taken four times), 596A, and 596F. Upper division courses: 132 and 171A.

Theater Technology: Required courses: 16, graduate 10½. Courses are: 240, 241, 243A, 245A, B, or expertise in design (scenic, lighting, costume), directing, and management es-
Thesis Plan

Application to the M.A. student in Theater only:
Before beginning work on the thesis, the student must obtain approval of a subject dealing with the history, aesthetics, criticism or techniques of the theater and a general plan of investigation from the M.A. committee. A thesis committee is then formed which consists of three faculty members recommended by the committee and approved by the Chair of the Department. The thesis committee is generally established when the student is within one quarter of completing the coursework, at which time the student is eligible to advance to candidacy.

The student is required to present the adviser and the committee with a prospectus of the thesis with a petition to advance to candidacy. Both are used as the basis for approval.

An outside thesis committee member is not required but is considered desirable when the student's thesis topic calls for special expertise from outside the Department.

If a student's thesis fails to pass the committee, the student is allowed to present a rewritten version for approval. The number of times a thesis may be presented depends upon assessments made by the committee.

Comprehensive Examination Plan

For the M.A. Student in Theater: The examination consists of a 50-page research paper which may be associated with 4 units of credit 596A; a 1-hour oral defense of the paper; and a 2-part, 6-hour written examination covering theater history and production practice. This procedure is supervised by a 3-member faculty committee appointed in the same manner and time sequence as the thesis committee. The examination normally occurs during the final quarter of residency at which time the student should have advanced to candidacy.

For the M.A. Student in Motion Picture/Television: The examination consists of two written parts plus an oral, administered by a comprehensive examination committee appointed by the Chair of the Film/Television Studies Committee with the approval of the Chair of the Department. The first written part consists of three days of examination, four hours each day, and tests a broad range of knowledge in motion picture/television. An oral examination follows the successful evaluation of part one of the written examination. During the examination, the student also proposes the subject and scope of the required scholarly essay. When the student has satisfactorily completed all sections of the first part of the written examination and the oral examination, that student is then permitted to proceed to the writing of the 50-page scholarly essay, which tests the student's ability to write critically and in depth about a specialized area. The scholarly essay must be completed within two quarters of the time the student has passed the first part of the written examination. Upon completion of the written examination, the oral examination, and the scholarly essay, the student's examining committee renders the judgment (1) pass, or (2) fail. The examining committee may pass the student on some portions of the 3-day written examination but fail the student on other portions. In this event, the student may take the failed portions of the examination one more time in the following quarter.

For the M.F.A. Student in Theater: Generally, the student's faculty committee becomes the comprehensive examination committee with the approval of the Chair of the Department and is responsible for administering the Comprehensive Examination.

The Plan is satisfied by the fulfilling of a series of creative projects appropriate to the student's specialization. On completion of the final creative project or last quarter of residency, whichever is last, the student must file for advancement to candidacy. The committee will then review and evaluate the record of each candidate for a degree. A student's participation in the final review will be at the discretion of the committee.

For the M.F.A. Student in Motion Picture/Television: The Comprehensive Plan is satisfied by the fulfilling of projects appropriate to the student's specialization. No later than the beginning of the final quarter of residence, the student must file the appropriate documents for advancement to candidacy and receive approval for the advancement from the M.F.A. committee. The chair of the M.F.A. committee, with approval of the Chair of the Department, appoints the comprehensive examination committee consisting of three faculty members. On completion of the final creative project the M.F.A. comprehensive examination committee as a body reviews and evaluates this creative work with the individual student and submits its final recommendation to the Chair of the Department.

A student who fails to pass the review and evaluation by the M.F.A. comprehensive examination committee may be reexamined. The number of reviews will be determined by the committee with final approval by the Chair of the Department.

Written and Oral Qualifying Examinations

At the end of the second quarter of residence, the doctoral student must submit himself or herself to a preliminary oral examination to be conducted by a representative committee of the faculty of his or her specialization. Each committee will specify the areas of review and test the student's background preparation and progress to date and determine general fitness to continue in the doctoral program. This examination may result in dropping the student from the doctoral program. The committee may reexamine the student at a subsequent time to determine fitness to continue in the program.
After completion of all language and course requirements, approval of a dissertation prospectus, and appointment of a dissertation committee, the student will be required to pass the Written Qualifying Examination set by the faculty. The Written Qualifying Examination will be 12 hours of examination, administered in 4-hour segments during three successive days. Information regarding the examination is available from the appropriate Divisional Ph.D. Committee. Students who fail parts or the whole of this examination may be granted by the appropriate committee the privilege of being reexamined in part or in whole. After this examination is satisfactorily passed, the Chair of the Department of Theater Arts recommends the formation of a doctoral committee; the committee’s members may be nominated by the candidate, but must be endorsed by the appropriate Divisional Ph.D. committee. A change in membership is a formal procedure that must be endorsed by all members of the doctoral committee and approved by the Chair of the Department.

After passing the Written Qualifying Examination, the student will be required to pass the Oral Qualifying Examination conducted by his/her doctoral committee. The Oral Qualifying Examination is open only to the members of the doctoral committee and the student. The student is advanced to candidacy only upon satisfactory completion of the Qualifying Examination.

A dissertation demonstrating the candidate’s ability to carry out independent and significant inquiry in an historical, theoretical, or critical field of Theater Arts is required. Final award of the Ph.D. depends on satisfactory completion of the dissertation. A student who has advanced to candidacy for the degree of Ph.D. in Theater Arts will be awarded the Candidate in Philosophy Degree (C. Phil.) in accordance with the normal provisions approved by the Graduate Council.

Final Oral Examination Following Completion of the Dissertation

A Final Oral Examination, held after the completion of the dissertation, may be required at the option of the members of the dissertation committee.

Time to Degree

For the M.A. Student in the Theater
Normal Progress Toward the Degree: From graduate admission with no deficiencies to award of the Master of Arts degree, a minimum time period of three quarters will be necessary for completion of the required courses, the production requirements, and thesis or Comprehensive Examination. The Department does not permit students to work on a master’s degree and a teaching credential simultaneously.

For the M.A. Student in Motion Picture/Television
Normal Progress Toward the Degree: From graduate admission with no deficiencies to award of the Master of Arts degree, a minimum time period of four quarters will be necessary for completion of the required courses, Part I and Part II of the Comprehensive Examination. At the end of the third quarter, the student is eligible to take the M.A. Comprehensive Examination consisting of two parts: Part I, testing the student’s breadth of knowledge, may be taken no earlier than the end of the third quarter of residence and no later than the end of the fifth quarter of residence. Failure to comply with this regulation will result in lapse of status. Part II of the Comprehensive Examination, the scholarly essay, will generally be completed in the summer or a quarter subsequent to that in which the first part of the examination has been taken. The scholarly essay must be completed and approved by the Film and Television Studies Committee no later than two quarters after the student has completed Part I of the Comprehensive Examination.

Maximum residency allowed for the M.A. programs is seven quarters.

For the M.F.A. Student in Theater
Normal Progress Toward the Degree: All areas of specialization, except Directing and the combined Scenic and Costume Design, involve students in their specialized areas for a continuous period of two years (6 quarters). The Directing and Puppetry programs may require an additional quarter or Summer Session. The combined Scenic and Costume Design program involves the students for a full 3-year period (9 quarters). Maximum residency in any M.F.A. program is 10 quarters.

For the M.F.A. Student in Motion Picture/Television
Normal Progress Toward the Degree:
(1) From graduate admission to completion of first projects: 2 to 3 quarters;
(2) From graduate admission to completion of required courses: 6 to 9 quarters;
(3) From graduate admission to award of degree: maximum 10 quarters.

Students not making normal progress toward the degree may be dropped from the program. Continuance in the program of students on probation is determined by the Master of Fine Arts committee with the final approval of the Chair of the Department.

Caution is stressed regarding the production time, crew and budget considerations plus the considerable expense borne by the student in production. Without these sometimes formidable resources, students become disheartened, ignore their program schedule and otherwise jeopardize their continuance. Extensive planning, care, caution and financial resources are required for the production specialization of this program.

For the Ph.D. Student in Either Division
From graduate admission to the Written and Oral Qualifying Examination: 6 quarters.
From graduate admission to the approval of the dissertation prospectus: 3 to 6 quarters.
From approval of dissertation prospectus to the Oral Qualifying Examination: 1 quarter.
From advancement to candidacy to the Final Oral Examination: 3 quarters.
From graduate admission to the award of the degree: 9 quarters.

500 Series Course Limitations

For the M.A. student in Theater
Only 8 units from the 596 series may apply toward the total course requirement, and only 4 of these units may apply toward the five minimum graduate requirements. No 598 units may apply toward the total course requirement.

For the M.A. Student in Motion Picture/Television
Only 8 quarter units of 596A, B, C and 598 may apply toward the total course requirement, and none of these courses may apply toward the minimum graduate course requirement.

For the M.F.A. Student in Theater
Only 16 quarter units of 596 series may apply toward the total course requirement and the minimum graduate course requirement.

For the M.F.A. Student in Motion Picture/Television
Only 16 quarter units of 596 may apply toward the total course requirement.
Only 4 quarter units of 596A and 4 quarter units of 596B may be taken prior to advancement to candidacy.
596C through 596F may be taken only after advancement to candidacy.

Disqualification

A student must maintain the required 3.0 grade point average in all courses and pass required examinations. However, the student’s various creative projects, or courses in research methodology and history seminars may be evaluated as indicative of insufficient talent, development, imagination, or motivation. The student so evaluated will be informed of the recommendation of the appropriate committee, and placed on probation by the Department. During the following quarter, the student must provide sufficient evidence of improvement to remove the probationary status. If evidence of improvement is not presented, the committee will propose to the Chair of the Department a recommendation for disqualification and dismissal.
Appeals
The process involves the following steps:
(1) The student submits to the Chair of the Department of Theater Arts (copy to the chair of the appropriate committee) a written appeal stating the specific causes the student believes to be the grounds for reconsideration.
(2) The chair of this committee submits to the Chair of the Department of Theater Arts a written response (with a copy to the student).
(3) The Chair of the Department of Theater Arts appoints an ad hoc committee consisting of three tenured members of the faculty. This committee will review the written materials in 1 and 2 above. They will also meet separately with the concerned committees and the student. The ad hoc committee will forward its recommendation to the Chair of the Department, reporting in writing its basis for judgment.
(4) The Chair of the Department advises the student of his/her decision in writing.
(5) Further appeal may be made to the Dean of the Graduate Division.
(6) A Department faculty representative may be present at each review hearing.

Other Relevant Information
For the M.F.A. Student in Theater Field Work: 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 Parks and Recreation.
Internship: Some specialization such as Theater Management and Puppet Theater may take advantage of opportunities offered by professional organizations.

For the M.F.A. Student in Motion Picture Television Field work and internships are not required but may be taken as courses which will apply toward the degree.

For the Ph.D. Student in Both Divisions Neither field work nor internship is required for the Ph.D. degree in Theater Arts.

*Graduate Courses
ALL APPLICANTS PLEASE NOTE: The Motion Picture/Television Division’s M.F.A. program is currently being revised and students admitted to the 1982-83 academic year and following are advised to check with the Department for description of such change.

Certain graduate courses concerned with individual student projects may be repeated for credit upon recommendation of the departmental graduate adviser. Not open to undergraduate students. See College of Fine Arts, Unit Requirements.

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 and consent of instructor. A study of theatrical production and dramatic form in the Greek and Roman periods. This course may be taken for a maximum of 3 courses (12 units).
202E. Seminar in Medieval Theater Discussion, three hours. Prerequisites: Graduate Standing and consent of instructor. Selected studies of theatrical production and dramatic form in the Middle Ages. This course may be taken for a maximum of 3 courses (12 units).
202F. Seminar in Renaissance and Baroque Theater Discussion, three hours. Prerequisites: Graduate Standing and consent of instructor. Selected studies in theater architecture, theatrical production, and dramatic form in English and Continental theater from 1485 to the early 18th century. This course may be taken for a maximum of 3 courses (12 units).
202G. Seminar in Bourgeois and Romantic Theater Discussion, three hours. Prerequisites: Graduate Standing and consent of instructor. Selected studies in theater architecture, theatrical production, and dramatic form in English and Continental theater from 1700 to 1870. This course may be taken for a maximum of 3 courses (12 units).
202H. Seminar in Modern Consciousness in Theater Discussion, three hours. Prerequisites: Graduate Standing and consent of instructor. Study of the prototypes of modern experience as encountered in the work of Ibsen and Strindberg. This course may be taken for a maximum of 3 courses (12 units).
202I. Seminar in Modern Realism Discussion, three hours. Prerequisites: Graduate Standing and consent of instructor. An analysis of the major plays, commentaries, and historical materials from the classical and modern periods.
202J. Seminar in Modern Naturalism Discussion, three hours. Prerequisites: Graduate Standing and consent of instructor. A study of the major works and historical materials from the classical and modern periods.
202K. Seminar in Modern Classicism Discussion, three hours. Prerequisites: Graduate Standing and consent of instructor. A study of the major works and historical materials from the classical and modern periods.
202L. Seminar in Modern Expressionism Discussion, three hours. Prerequisites: Graduate Standing and consent of instructor. A study of the major works and historical materials from the classical and modern periods.
202M. Seminar in American Theater Discussion, three hours. Prerequisites: Graduate Standing and consent of instructor. A study of selected studies in the development of theatrical production and dramatic writing in the American theater. This course may be taken for a maximum of 3 courses (12 units).
202N. Seminar in Theater Architecture and Scenic Design Discussion, three hours. Prerequisites: Graduate Standing and consent of instructor. An exploration of the scenic arts and their historical and contemporary contexts. This course may be taken for a maximum of 3 courses (12 units).
202O. Seminar in Traditions of Afro-American Theater Discussion, three hours. Prerequisites: Graduate Standing and consent of instructor. A study of the major works and historical materials from the American theater. This course may be taken for a maximum of 3 courses (12 units).
202P. Seminar in Traditions of African Theater Discussion, three hours. Prerequisites: Graduate Standing and consent of instructor. A study of selected studies of theatrical forms such as those indigenous to Ghana, Nigeria, and other African nations and their Diaspora: Haiti, Jamaica and other areas of the Caribbean and Africa through an examination of character, structure, performance modes, and archetypes. This course may be taken for a maximum of 3 courses (12 units).
202U. Seminar in East Asian Theater Discussion, three hours. Prerequisites: Graduate Standing and consent of instructor. A study of selected topics in the theater forms of East Asia, including dramatic literature, costume, theater spaces, and critical writings. This course may be taken for a maximum of 3 courses (12 units).
202V. Seminar in South Asian Theater Discussion, three hours. Prerequisites: Graduate Standing and consent of instructor. A study of selected topics in the theater forms of South Asia, including dramatic literature, costume, theater spaces, and critical writings. This course may be taken for a maximum of 3 courses (12 units).
202W. Seminar in Southeast Asian Theater Discussion, three hours. Prerequisites: Graduate Standing and consent of instructor. A study of selected topics in the theater forms of Southeast Asia, including dramatic literature, costume, theater spaces, and critical writings. This course may be taken for a maximum of 3 courses (12 units).
203. Seminar in Film and Other Arts Discussion, three hours; additional hours as required. Prerequisites: Graduate Standing and consent of instructor. A study of the major works and historical materials from the classical and modern periods.
204. Seminar in European Motion Picture History Discussion, three hours; additional hours as required. Prerequisites: course 106B, Graduate Standing and consent of instructor. A study of the major works and historical materials from the classical and modern periods.
205. Seminar in American Motion Picture History Discussion, three hours; additional hours as required. Prerequisites: course 106A, Graduate Standing and consent of instructor. A study of the major works and historical materials from the classical and modern periods.
206. Seminar in Film Structure Discussion, three hours; additional hours as required. Prerequisites: Graduate Standing and consent of instructor. An examination of film conventions, both fictional and nonfictional, and of the role of structure in the motion picture.
207. Seminar in Classical Film Theory Discussion, three hours; additional hours as required. Prerequisites: Graduate Standing and consent of instructor. A study of the major topics and lines of inquiry that characterize the theoretical writings of Armitage, Eisenstein, Bazin, Milly, etc.
208. Seminar in Contemporary Film Theory Discussion, three hours; additional hours as required. Prerequisites: course 206B, Graduate Standing and consent of instructor. A study of the major topics and lines of inquiry that characterize the theoretical writings of Armitage, Eisenstein, Bazin, Milly, etc.
209. Seminar in Documentary Film Discussion, three hours; additional hours as required. Prerequisites: Graduate Standing and consent of instructor. A study of the nonfictional film and its relation to contemporary culture.
223. Seminar in Visual Perception. Discussion, three hours, additional hours as required. Prerequisites: Graduate Standing and consent of instructor. The aesthetic, psychological, and physiological principles of vision as they relate to the ways in which man "sees" film and television, with emphasis on the ways in which these are different from other visual experiences.

230A-230B-230C. Advanced Playwriting. Lecture, three hours. Prerequisites: course 130A, Graduate Standing and consent of instructor. Guided completion of a full-length play and preparation for the writing of a thesis play.

240. The Contemporary Playhouse. Discussion, four hours. Prerequisites: Graduate Standing and consent of instructor. Advanced study of the concept, form and function of the contemporary playhouse and its equipment.

241. Research in Technical Theater. Lecture, four hours. Prerequisites: Graduate Standing and consent of instructor. A study of the writings on the theory of narrative structure and their significance for analysis of film forms.

242. Seminar in Instructional Television. Discussion, three hours and additional hours as required. Prerequisites: Graduate Standing and consent of instructor. A laboratory course requiring the preparation of a program plan.

249. Current Business Practices in Motion Picture/Television. Discussion, three hours. Prerequisites: Graduate Standing and consent of instructor. Examination of the current structures and operations of the Motion Picture/Television industry. May be repeated for a maximum of 2 courses (8 units).

251. Advanced Design for Motion Pictures. (1/2 to 1 course) Hours to be arranged. Prerequisite: course 151 and/or consent of instructor. May be repeated for a maximum of three courses. A study and practice of techniques and methods of design for motion pictures. Art direction for advanced workshop productions in the project sequence.

261. Seminar in Film and Television Direction. Prerequisites: Graduate Standing and consent of instructor. A study, with professional guests, of their work, attitudes, and solutions to problems in directing fictional and documentary films and television. (Same as Anthropology 267B-267C.)

262. Advanced Problems in Design. Prerequisites: course 260G, Consent of instructor. Graduate Standing and consent of instructor. Examination of the business structure and the economic, social, and artistic criteria for decision-making in the production and distribution of motion pictures. May be repeated for a maximum of 2 courses (8 units).

271. Seminar in Television Criticism. Discussion, three hours, additional hours as required. Prerequisites: Graduate Standing and consent of instructor. Intensive examination of the works of outstanding creators of film. Course may be taken for a maximum of 2 courses (8 units).

272. Seminar in Contemporary Film and Television Criticism. Discussion, three hours, additional hours as required. Prerequisite: restricted to Ph.D. students in Motion Picture/Television. Study, and practice of the analytic and critical response with emphasis on contemporary film and television.

275. Seminar in Research Design. Discussion, three hours. Prerequisite: Graduate Standing and consent of instructor. An examination of the general principles that govern the formulation of major research projects, and the preparation of a prospectus for the doctoral dissertation.
Professional Courses

417. Production Project for the Puppet Theater, (2 courses) Laboratory. Prerequisite: consent of instructor. The design, construction and performance of a full-length production with puppets. Prerequisite: consent of instructor. The design and construction of the puppet for use in the Puppet Theater. Students will be expected to present the full argument for the design style and techniques used in the construction of the puppet, the rationale for the use of puppets for the course, the puppet.
Problems In the Teaching of Theater Arts.
Lecture/laboratory, to be arranged. Prerequisites: Graduate Standing and consent of instructor. Demonstration of competence in theater production through successful completion of a major teaching production assignment as technical director or designer.

495C-495D. The Problems in the Teaching of Theater Arts. (0 to 1 course) Laboratory, to be arranged. Prerequisites: Graduate Standing and consent of instructor. Study of, and practice in the teaching of Theater Arts at the college and university level.

496. The Practice of Teaching Theater Arts. (½ course) Discussion, two hours. Prerequisite: required once for all Teaching Assistants or Associates in the Department of Theater Arts. Orientation and preparation of graduate students who have the responsibility to assist in the teaching of undergraduate courses in the Department; discussion of problems common to the teaching experience. This 2 unit course will not count toward the M.A., M.F.A., or Ph.D. TAs may repeat the course. Graded S/U.

498. Professional Internship In Theater Arts. (1 or 2 or 3 courses) Full or part-time at a studio or on a professional project. Prerequisites: Graduate Standing plus advanced standing in the M.F.A. program and consent of instructor. An internship at various film, television or theater facilities accentuating the creative contribution, the organization and the work of professionals in their various specialties. Given only when projects can be scheduled.

501. Cooperative Program. (½ to 2 courses) Prerequisites: approval of Graduate Adviser and Graduate Dean, approval of host campus instructor, Department Chairman and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. To be graded S/U.

Individual Study and Research

596A. Directed Individual Studies: Research. (½ to 3 courses) Hours to be arranged. Prerequisite: Graduate Standing. May be repeated by consent of instructor.

596B. Directed Individual Studies: Writing. (½ to 3 courses) Hours to be arranged. Prerequisite: Graduate Standing. May be repeated by consent of instructor.

596C. Directed Individual Studies: Directing. (½ to 3 courses) Hours to be arranged. Prerequisite: Graduate Standing. May be repeated by consent of instructor.

596D. Directed Individual Studies: Design. (½ to 3 courses) Hours to be arranged. Prerequisite: Graduate Standing. May be repeated by consent of instructor.

596E. Directed Individual Studies: Acting. (½ to 3 courses) Hours to be arranged. Prerequisite: Graduate Standing. May be repeated by consent of instructor.

596F. Directed Individual Studies: Production. (½ to 3 courses) Hours to be arranged. Prerequisite: Graduate Standing. May be repeated by consent of instructor.

597. Preparation for the Qualifying Examination for the Ph.D. in Theater Arts. (½ to 2 courses) May be repeated for a total of three courses.

598. M.A. Thesis In Theater Arts. (½ to 2 courses) Research and writing for the M.A. thesis. Limited to students who have been advanced to candidacy. May be repeated for a total of three courses.

599. Dissertation In Theater Arts. (½ to 2 courses) Research and writing for the doctoral dissertation. Limited to students who have been advanced to candidacy. May be repeated for a total of three courses.
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Lieutenant Governor of California
Mike Curb

Speaker of the Assembly
Willie L. Brown, Jr.

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Shirley Brown Conner (1983)

Vice President of the Alumni Association of the University of California+
Frank S. Phillips (1983)

President of the University
David S. Saxon

APPOINTED REGENTS+

+ Terms of Regents appointed by the Governor expire February 28 of the year named in parentheses, with names arranged in order of original accessions to the Board. The Student Regent (Linda Rae Sabo) and Alumni Regents serve a one-year term beginning July 1 and ending June 30 of the year listed.

Glenn Campbell (1984)
William French Smith (1986)
Robert O. Reynolds (1986)
Dean A. Watkins (1984)
Joseph A. Moore (1990)
John H. Lawrence, M.D. (1988)
William A. Wilson (1986)
Vilma S. Martinez (1990)
John F. Henning (1989)
Yori Wada (1992)
Frank W. Clark, Jr. (1988)
David Geffen (1990)
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Yvonne Brathwaite Burke (1993)
Robert N. Noyce (1992)
Jeremiah F. Hallisey (1993)
Sheldon W. Andelson (1994)
Harold M. Williams (1994)
Linda Rae Sabo (1983)+

Faculty Representatives to the Board of Regents
Oliver A. Johnson, Jr. (September 1, 1980 to August 31, 1982)
Robert E. Connick (September 1, 1981 to August 31, 1983)

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Assistant President — Coordination and Review
Dorothy E. Everett

Vice President — Financial and Business Management
To be named

Executive Assistant to the President
David A. Wilson

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General Counsel of The Regents, Emeritus
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Associate Counsel of The Regents, Emeritus
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Josephine Miles, Emeritus University Professor, Berkeley, Department of English

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Glenn Seaborg, Emeritus University Professor, Berkeley, Lawrence Berkeley Laboratory

Neil Smelser, University Professor, Berkeley, Department of Sociology

Edward Teller, Emeritus University Professor, Livermore, Lawrence Livermore Laboratory

Charles Townes, University Professor, Berkeley, Department of Physics

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John R. Whinnery, University Professor, Berkeley, Department of Electrical Engineering and Computer Sciences

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Assistant to the Chancellor  
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Director of Neuropsychiatric Institute  
Louis Jolyon West, M.D.
Director of Neuropsychiatric Institute Hospital and Clinics  
Milton Greenblatt, M.D.
Campus Counsel  
Patricia M. Jasper, J.D.
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