UCLA

UNDERGRADUATE CATALOG 1982–83

UNIVERSITY OF CALIFORNIA, LOS ANGELES JUNE 1982

UCLA

UNDERGRADUATE CATALOG
1982–83

UNIVERSITY OF CALIFORNIA, LOS ANGELES JUNE 1982 $3.00

Contents

UCLA (USPS 646-680)
· Volume 22, Number 8 · June 15, 1982
A series of administrative publications of the University of California, 405 Hilgard Avenue, Los Angeles, CA 90024. Second-class postage paid at Los Angeles, CA. Fourteen a year—one issue in March, April, August and November; two issues in May, July and September; five issues in June.

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, Management, Medicine, Nursing, Public Health and Social Welfare and in the announcement of the College of Fine Arts and the *UCLA Graduate Catalog*.

This book was produced by UCLA Publication Services Department. Edited by Leann Hennig, with consultation by Hallie Masler. Cover illustration by UCLA student, Masahiro Toriyama.

Please note

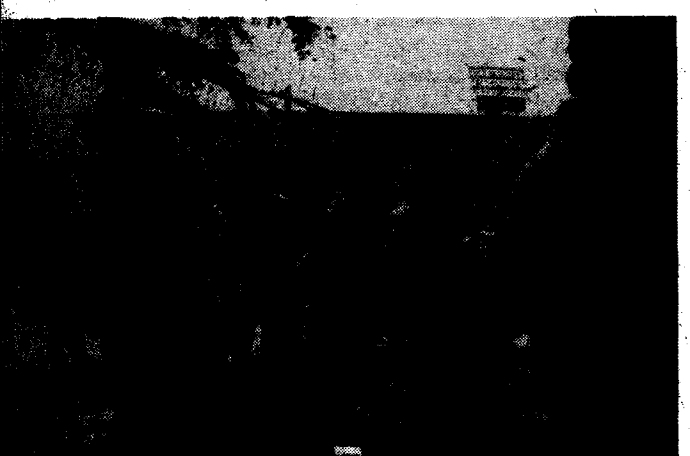
Every effort has been made to insure the accuracy of the information presented in the *UCLA Undergraduate Catalog*. However, all courses, course descriptions, instructor designations, curricular degree requirements and fees described herein are subject to change or deletion without notice. You may consult the appropriate department, School, College or division mentioned in the catalog for further information.

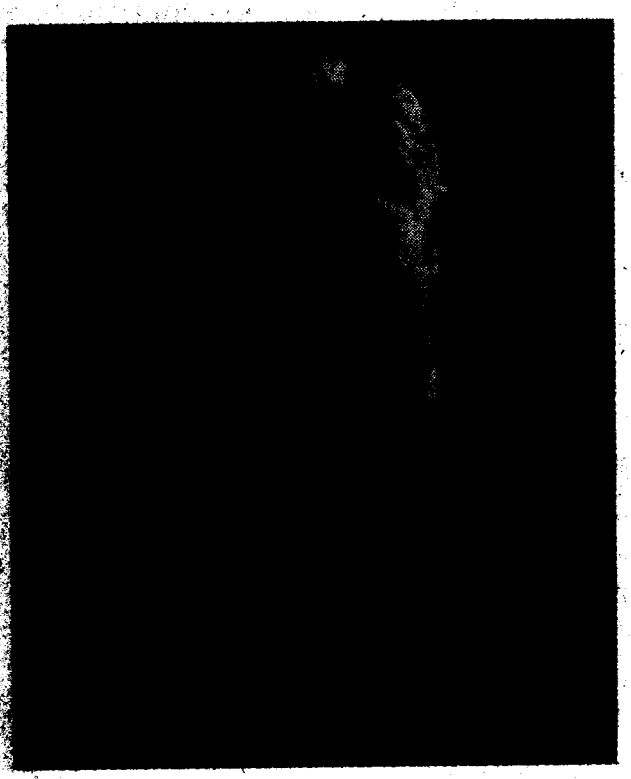
Calendar 1982-83

	Fall 1982	Winter 1983	Spring 1983
First day to file undergraduate application with Admissions Officer, 1147 Murphy Hall (last day will depend on number of applications received)	November 2, 1981	July 1, 1982	October 1, 1982
First day to obtain "Student Parking Request" for campus parking permit at Campus Parking Service	May 3	not applicable	not applicable
*Distribution of registration materials by letter groups for continuing students	June 7	November 10	February 10
Schedule of Classes goes on sale at Ackerman Union Students' Store, North Campus Student Center Store and Health Sciences Student Store	June 9	November 10	February 10
Eligibility date for new and reentrant student registration by mail	July 1	November 1	January 14
Academic counseling for new students is available by appointment	July 1	November 2	January 17
First day for UCLA Student Health Insurance enrollment (purchase at A2-143 CHS)	July 1	December 1	March 21
Last day to submit "Student Parking Request" for parking permit	July 14 (1st run) August 19 (2nd run)	November 15	February 21
***First mailing date for continuing student registration (fee payment) and enrollment in classes**	July 16	November 19	February 18
Last day to file undergraduate application for readmission with Registrar, Window A, Murphy Hall	July 30	November 15	February 15
New and reentrant students eligible to register by mail should receive registration materials at permanent address	August 6	November 30	February 25
***First mailing date for new and reentrant student registration (fee payment) and enrollment in classes**	August 11	December 3	March 2
***Last mailing date for ALL students to register (pay fees) and/or enroll**	September 3	December 10	March 9
Registrar mails: 1. Validated Registration Cards of students who paid fees during "By Mail" period 2. Tentative Study List datamailer with results of enrollment processed during "By Mail" period and undergraduate enrollment-in-person appointment	September 15	December 20	March 16
English as a Second Language Placement Examination (ESLPE)	September 21	January 4	March 29
Subject A English Placement Test	September 21	January 5	March 30
QUARTER BEGINS	September 28	January 5	March 30
Begin issuing Student Photo ID Cards to new and reentering students	September 28	January 5	March 30
Chemistry/Mathematics Preliminary Examination	September 28	January 5	March 30
Financial Aid check distribution to registered students begins	September 28	January 5	March 30
Registration in person, 8:30 am to 5 pm (allow 30 minutes to complete fee payment process)	September 28-October 1	January 5-7	March 30-April 1
Undergraduate enrollment in person by appointment	September 28-October 1	January 5-7	March 30-April 1
Music Placement Examination	September 29	January 6	March 31
French Placement Examination	September 29	January 7	April 1
Spanish and Portuguese Placement Examination	September 30	January 6	March 31
Proficiency Examinations for English 3	October 1	January 7	April 1
INSTRUCTION BEGINS	October 4	January 10	April 4
Changes in Study List without fee, 8:30 am to 5 pm	October 4-15	January 10-21	April 4-15
Late registration in person with $50 fee, 8:30 am to 5 pm	October 4-15	January 10-21	April 4-15

	Fall 1982	Winter 1983	Spring 1983
Last day: 1. For UCLA Student Health Insurance enrollment 2. That computer wait lists for courses exists 3. To change Study List (add, drop courses) without fee 4. To file Study List card without fee	October 15	January 21	April 15
Registrar mails Official Study List to all registered students	October 18	January 24	April 18
Last day for continuing students to file applications for undergraduate scholarships for 1983-84		February 1	
Last day to file (without fee) bachelor's Degree Candidate card for current quarter with Registrar, Window A, Murphy Hall	October 29	February 4	April 29
WITH APPROVAL OF ACADEMIC DEAN: **1. Last day for undergraduates to add or drop courses on Official Study List with $3 petition fee** **2. Last day for undergraduates to file Late Study List card with $50 fee** Note: Changes to Official Study List after this date will be considered only under extraordinary circumstances and are subject to the Academic Dean's approval	October 29	February 4	April 29
Last day to file removal of incomplete petition ($5 fee) with Registrar, Window A, Murphy Hall	November 12	February 18	May 13
Last day for undergraduates to change GRADING BASIS (optional P/NP) with $3 petition fee and APPROVAL OF ACADEMIC DEAN	November 12	February 18	May 13
Last day to file (with $3 fee) bachelor's Degree Candidate card with Registrar, Window A, Murphy Hall	November 19	February 25	May 20
INSTRUCTION ENDS	December 11	March 19	June 11
Final examinations	December 13-17	March 21-25	June 13-17
QUARTER ENDS	December 17	March 25	June 17
Unofficial copy of previous quarter's grades available at Registrar's Office, Window A, Murphy Hall	February 1	May 3	August 2
Academic and Administative Holidays:	July 5 September 6 November 25-26 December 23-24 December 30-31	February 21 March 28	May 30
*Commencement			June 19

*Tentative dates — consult quarterly *Schedule of Classes*
Note: Anything submitted or requested as an exception to a published deadline will be subject to an additional penalty fee of $10.





A Word from the Chancellor

The last time someone counted the courses in this undergraduate catalog, there were more than 2800. Together they represent a considerable part of the range of human knowledge, and no student could take all of them — it would require some 233 years.

What they illustrate is the great variety of resources that a large university like UCLA can offer, and they also point to the necessity of making intelligent and ordered choices.

Some classes may help prepare students to make a living in a changing world; others may enrich the mind and contribute to a better appreciation of the human cultural heritage.

Whatever your goal, we feel confident that you will find helpful answers between these pages, and we welcome you to the ever growing and fulfilling search for knowledge.

Charles E. Young

UCLA

A Growth in Excellence

"In a sense, UCLA is the heart and source of Los Angeles." So says Jack Smith, a prominent local journalist. From humble beginnings more than half a century ago, UCLA has progressed admirably to its present status.

In 1919, when UCLA opened as the State Normal School on Vermont Avenue, they called it "The Southern Branch" of the University of California at Berkeley. By the time the University moved to Westwood in 1929, it was already known as "University of California at Los Angeles" (the "at" became a comma in 1958). Starting a new life in Westwood with four buildings surrounding the main quadrangle, UCLA began the phenomenal growth which would in time bring full use of its 411 acres.

The current numbers alone are impressive: 13 Schools and Colleges, 70 departments of instruction, 23 research centers and institutes, 21,000 undergraduates, 12,000 graduate students.

However, there is another kind of growth that is even more important than mere size. It's a growth in excellence, not only in facilities but in people. **UCLA is consistently ranked among the leading universities in the country.** UCLA professors have won Nobel Prizes, National Academy of Science memberships, and many Guggenheim and Fulbright awards. Our 19 libraries house more than four million volumes — one of the largest university collections in the nation. The accomplishments of UCLA's excellent research institutes are world-renowned.

In athletics, UCLA's teams have won a collection of national collegiate championships in almost every field of men's and women's competition. Our students enjoy a virtually limitless scope of academic and social opportunities. And UCLA has done more than meet the complex challenge of offering excellence in instruction. As a public University — a public trust — UCLA also meets a daily commitment to public service. The spectrum of contributions UCLA has made in scholarship, research, science and the arts touches the lives of people every day.

Part of a Plan

UCLA is part of the University of California statewide system, a network of resources for knowledge that literally spans the state. Its nine campuses range from Davis in the northern part of the state to San Diego in the south. In between are Berkeley, San Francisco, Santa Cruz, Santa Barbara, Riverside, Irvine and, of course, Los Angeles. Each campus has a beauty and flavor all its own, best experienced firsthand with a personal visit.

The system as a whole is governed by the Board of Regents. Among its powers is the appointment of the President of the University, its chief executive officer. Currently the President is David S. Saxon, a former UCLA faculty member who also held the post of Executive Vice Chancellor here. In addition to setting broad general policy for the University of California system, including budgetary decisions, the Board of Regents also appoints (with the advice of Dr. Saxon) the top administrative officers of the various campuses. The Academic Senate, made up of the faculty and designated administrators, sets the conditions for admission, authorizes courses and curricula and makes rules for the granting of degrees and certificates.

A City Within a City

Another factor that contributes to the climate of excellence at UCLA is diversity.

The location of UCLA offers a collection of contrasts. Set in an urban environment, the University is ten minutes away by car from either the Santa Monica Mountains or the Pacific Ocean. On campus, concrete coexists with open green areas.

Our faculty and student body represent a diversity of backgrounds and personal experience, a blend which helps to support an institutional attitude of personal exploration and individual growth.

A Mutual Obligation

The *UCLA Undergraduate Catalog* has one basic purpose — communication — but it works in two directions. These pages describe the workings of an undergraduate education at UCLA and your responsibilities toward the rules, regulations and requirements. At the same time, the catalog spells out the responsibilities which UCLA has toward you. Thus, the *UCLA Undergraduate Catalog* is a guidebook to the details of a mutual obligation for undergraduate UCLA students. (Graduate students or undergraduates interested in graduate study at UCLA can purchase a copy of the *UCLA Graduate Catalog* at the ASUCLA Students' Store.)

Every attempt has been made to provide complete information within this guidebook, and careful study of its contents should answer most questions.

How To Use This Book

Basically, the *UCLA Undergraduate Catalog* is divided into four sections.

The first section deals with the application process and eligibility requirements to attend UCLA. It also explains how to register and enroll in classes.

The second section deals with the various Colleges and Schools that comprise UCLA. The entrance and academic requirements and major fields of study within each College and School are explained in detail.

The third section of the catalog explores the social and economic aspects of UCLA. This section covers financial aid, parking information, on- and off-campus housing, general University life such as clubs, fraternities, sororities and athletics, and the other numerous services and activities offered by the University.

The final and most lengthy part of the book contains alphabetically arranged course descriptions. A thorough investigation into a specific College, School or major would not be complete until an examination of course content is made.

To best utilize this catalog, see the detailed index in the back.

UCLA

A Growth in Excellence

"In a sense, UCLA is the heart and source of Los Angeles." So says Jack Smith, a prominent local journalist. From humble beginnings more than half a century ago, UCLA has progressed admirably to its present status.

In 1919, when UCLA opened as the State Normal School on Vermont Avenue, they called it "The Southern Branch" of the University of California at Berkeley. By the time the University moved to Westwood in 1929, it was already known as "University of California at Los Angeles" (the "at" became a comma in 1958). Starting a new life in Westwood with four buildings surrounding the main quadrangle, UCLA began the phenomenal growth which would in time bring full use of its 411 acres.

The current numbers alone are impressive: 13 Schools and Colleges, 70 departments of instruction, 23 research centers and institutes, 21,000 undergraduates, 12,000 graduate students.

However, there is another kind of growth that is even more important than mere size. It's a growth in excellence, not only in facilities but in people. **UCLA is consistently ranked among the leading universities in the country.** UCLA professors have won Nobel Prizes, National Academy of Science memberships, and many Guggenheim and Fulbright awards. Our 19 libraries house more than four million volumes — one of the largest university collections in the nation. The accomplishments of UCLA's excellent research institutes are world-renowned.

In athletics, UCLA's teams have won a collection of national collegiate championships in almost every field of men's and women's competition. Our students enjoy a virtually limitless scope of academic and social opportunities. And UCLA has done more than meet the complex challenge of offering excellence in instruction. As a public University — a public trust — UCLA also meets a daily commitment to public service. The spectrum of contributions UCLA has made in scholarship, research, science and the arts touches the lives of people every day.

Part of a Plan

UCLA is part of the University of California statewide system, a network of resources for knowledge that literally spans the state. Its nine campuses range from Davis in the northern part of the state to San Diego in the south. In between are Berkeley, San Francisco, Santa Cruz, Santa Barbara, Riverside, Irvine and, of course, Los Angeles. Each campus has a beauty and flavor all its own, best experienced firsthand with a personal visit.

The system as a whole is governed by the Board of Regents. Among its powers is the appointment of the President of the University, its chief executive officer. Currently the President is David S. Saxon, a former UCLA faculty member who also held the post of Executive Vice Chancellor here. In addition to setting broad general policy for the University of California system, including budgetary decisions, the Board of Regents also appoints (with the advice of Dr. Saxon) the top administrative officers of the various campuses. The Academic Senate, made up of the faculty and designated administrators, sets the conditions for admission, authorizes courses and curricula and makes rules for the granting of degrees and certificates.

A City Within a City

Another factor that contributes to the climate of excellence at UCLA is diversity.

The location of UCLA offers a collection of contrasts. Set in an urban environment, the University is ten minutes away by car from either the Santa Monica Mountains or the Pacific Ocean. On campus, concrete coexists with open green areas.

Our faculty and student body represent a diversity of backgrounds and personal experience, a blend which helps to support an institutional attitude of personal exploration and individual growth.

A Mutual Obligation

The *UCLA Undergraduate Catalog* has one basic purpose — communication — but it works in two directions. These pages describe the workings of an undergraduate education at UCLA and your responsibilities toward the rules, regulations and requirements. At the same time, the catalog spells out the responsibilities which UCLA has toward you. Thus, the *UCLA Undergraduate Catalog* is a guidebook to the details of a mutual obligation for undergraduate UCLA students. (Graduate students or undergraduates interested in graduate study at UCLA can purchase a copy of the *UCLA Graduate Catalog* at the ASUCLA Students' Store.)

Every attempt has been made to provide complete information within this guidebook, and careful study of its contents should answer most questions.

How To Use This Book

Basically, the *UCLA Undergraduate Catalog* is divided into four sections.

The first section deals with the application process and eligibility requirements to attend UCLA. It also explains how to register and enroll in classes.

The second section deals with the various Colleges and Schools that comprise UCLA. The entrance and academic requirements and major fields of study within each College and School are explained in detail.

The third section of the catalog explores the social and economic aspects of UCLA. This section covers financial aid, parking information, on- and off-campus housing, general University life such as clubs, fraternities, sororities and athletics, and the other numerous services and activities offered by the University.

The final and most lengthy part of the book contains alphabetically arranged course descriptions. A thorough investigation into a specific College, School or major would not be complete until an examination of course content is made.

To best utilize this catalog, see the detailed index in the back.

PART I:
Application and Eligibility

Admission, Registration and Enrollment

Preparing for University Work

A carefully planned program of high school courses provides you with the best preparation for University work. It can give you a definite edge in your undergraduate studies and the opportunity to do advanced preparation for your chosen field of study. Most important, if you master certain basic subjects and skills in high school, you substantially increase your chance of success at the University.

As a prospective University student, you should give priority to completing the high school courses required for admission — the **"A-F"** requirements listed below. In addition, you should give careful thought to the general field of study, if not the specific major, that you want to pursue. If you can make this decision in advance, you can then plan to take additional high school courses related to your field.

You should understand that the **"A-F"** requirements for admission are **minimum** entrance standards. Completing the required high school courses with satisfactory grades will not automatically prepare you for freshman work in every subject, much less in your major or program of study. Many entering students discover that they are not adequately prepared for basic courses, such as English composition and calculus, which they are expected to take in their freshman year. Also, many undergraduate majors, particularly those in sciences and mathematics, require more high school preparation than that necessary for admission. This lack of preparation can cause problems for students who do not choose a major until after they enter the University or for those who prepare for one major but later decide to change to another.

For these reasons, you should take courses that will prepare you beyond minimum levels of competence in reading, writing and mathematics. **A student who is well-prepared for University work will have taken four years of English in high school, three to four years of mathematics, two to three years of foreign language, two to three years of laboratory science, one year of history and one or more years of art or humanities.**

Undergraduate Admission

The admission requirements of the University of California are founded on two basic principles: first, that the best assurance of success in the University is shown by the high quality of scholarship in previous work, and second, that the study of certain specific subjects will provide students not only with sound preparation for the range of University courses but also with reasonable freedom in choosing their field of specialization.

Fulfilling the requirements stated below, however, may not necessarily assure admission to the campus of your first choice. On some University of California campuses, limits have had to be set for the *enrollment of new students;* thus, not everyone who meets the minimum requirements can be admitted. At UCLA, for example, students who are or who would be college seniors are discouraged from applying.

Admission to Freshman Standing — Residents

An applicant for admission to freshman standing is one who has not enrolled in any college-level institution since graduation from high school (except for a summer session immediately following high school graduation).

The requirements listed below apply to California residents; if you are a nonresident, please see the "Special Requirements for Nonresidents" discussion later in this section of the catalog.

High School Subject Requirements

Courses offered in satisfaction of the following subject requirements must be included on a list of courses from each California high school and be certified by the University. If the high school is not located in California but is regionally or state accredited, appropriate courses will be considered acceptable.

(A) History — 1 Year

This must consist of a year course in United States history or one-half year of United States history and one-half year of civics or American government.

(B) English — 4 Years

These must be university preparatory courses in English composition and/or literature with no more than one year taken in the ninth grade.

(C) Mathematics — 2 Years

These must consist of university preparatory courses in such subjects as algebra, geometry, trigonometry, calculus, elementary functions and mathematical analysis.

(D) Laboratory Science — 1 Year, completed after the ninth grade

This must be a year course in one laboratory science.

(E) Foreign Language — 2 Years

These must be in one language. Any foreign language with a written literature is acceptable.

(F) Advanced Course — 1 or 2 Years

This must be chosen from one of the following:

Mathematics — A total of one year of mathematics beyond the two years offered toward the mathematics requirement.

Foreign Language — Either an additional year in the same language offered toward the foreign language requirement or two years of another foreign language.

Science — A year course in laboratory science taken after the one-year science requirement is completed.

The subject requirements listed above may be satisfied only by courses completed with a grade of "C" or higher.

Scholarship and Examination Requirements

Eligibility for admission is based on a combination of your grade-point average in the **"A-F"** subject requirements listed above (grades received in courses taken in the ninth grade or earlier are not used in determining your scholarship average) and the scores on either the SAT examination given by the College Entrance Examination Board or the ACT test given by the American College Testing Program. In addition, you are required to submit scores for three achievement tests of the College Entrance Examination Board, which must be taken in the following areas:

(1) English composition
(2) Mathematics
(3) Social studies or a foreign language

Eligibility Table

The following Eligibility Index Table may be used by California high school graduates and residents to determine their eligibility for freshman admission to the University:

"A-F"*** GPA	ACT* Composite	SAT** Total	"A-F"*** GPA	ACT* Composite	SAT** Total
2.78	35	1600	3.05	22	970
2.79	35	1580	3.06	21	950
2.80	34	1550	3.07	21	920
2.81	34	1530	3.08	20	900
2.82	33	1510	3.09	19	880
2.83	33	1480	3.10	18	850
2.84	33	1460	3.11	18	830
2.85	32	1440	3.12	17	810
2.86	32	1410	3.13	16	780
2.87	32	1390	3.14	15	760
2.88	31	1370	3.15	14	740
2.89	31	1340	3.16	14	710
2.90	30	1320	3.17	13	690
2.91	30	1300	3.18	12	670
2.92	29	1270	3.19	11	640
2.93	29	1250	3.20	10	620
2.94	28	1230	3.21	9	600
2.95	28	1200	3.22	9	570
2.96	27	1180	3.23	8	550
2.97	27	1160	3.24	8	530
2.98	26	1130	3.25	7	500
2.99	26	1110	3.26	7	480
3.00	25	1090	3.27	6	460
3.01	25	1060	3.28	6	430
3.02	24	1040	3.29	5	410
3.03	24	1020	3.30	5	400
3.04	23	990			

*ACT is scored in intervals of 1 point from a minimum of 1 point to 35 points maximum.
**SAT is scored in intervals of 10 points from a minimum of 400 points to 1600 points maximum.
***"A-F" subjects are listed above under "High School Subject Requirements."

If prospective applicants need detailed information about these requirements, they should consult the *Undergraduate Admissions Circular* or the "Undergraduate Application Packet" available in the Undergraduate Admissions and Relations with Schools Office or in high schools and community colleges.

The test results of all applicants will be used for purposes of counseling, placement and, when possible, satisfaction of the Subject A requirement, as well as determining eligibility for admission.

The verbal and mathematics scores on the Scholastic Aptitude Test must be from the same sitting.

For arrangements to take the tests, see below.

Admission by Examination Alone

An applicant who does not meet the scholarship and subject requirements for admission may qualify for admission by examination alone. For admission of nonresident applicants by this method, see "Special Requirements for Nonresidents" later in this section.

To qualify, you must achieve high scores on the examinations required of all eligible applicants. Your total score on the Scholastic Aptitude Test must be at least 1100, while a total composite of at least 26 is required on the American College Test. The scores on the three Achievement Tests must total at least 1650 with no score less than 500 on an individual achievement test.

Taking the Tests

You can obtain information about the tests or make arrangements for taking them by applying to the Educational Testing Service, 1947 Center Street, Berkeley, CA 94704 or the American College Testing Program, Registration Unit, PO Box 168, Iowa City, IA 52240. Scores will be regarded as official only if they are sent to the Undergraduate Admissions Office directly from these testing services.

High School Proficiency Exam

The University of California will accept the Certificate of Proficiency, awarded by the State Department of Education upon successful completion of the California High School Proficiency Examination, proficiency tests from other states and the General Educational Development Certificate (GED) in lieu of the regular high school diploma. However, all other University entrance requirements (subject pattern, grades, tests) must be met. The date of graduation on University records will be the date of the certificate. Entrance by CEEB scores will remain an option for the student ineligible on the basis of high school record.

Admission to Advanced Standing — Residents

The University defines an advanced standing applicant as a high school graduate who has been a registered student in another college or university or in college-level extension classes other than a summer session immediately following high school graduation. An advanced standing applicant may not disregard the college record and apply for admission as a freshman.

Requirements

As you will see below, the requirements for admission in advanced standing vary according to your high school record and when you graduated from high school (for further details, see the "Undergraduate Application Packet" available at any UC campus). If you are a nonresident applicant, you must also meet the additional requirements described under "Special Requirements for Nonresidents" later in this section. If you have completed less than twelve quarter or semester units of transferable college credit since high school graduation, you must also satisfy the examination requirement for freshman applicants.

The transcript you submit from the last college you attended must show, as a minimum, that you were in good standing and that you had earned a grade-point average of 2.0 or better. If your grade-point average fell below 2.0 at any one college you attended, you may have to meet additional requirements in order to qualify for admission.

Your grade-point average is determined by dividing the total number of acceptable units you have attempted into the number of grade points you earned on those units. You may repeat courses that you completed with a grade lower than "C" up to a maximum of 16 quarter units without penalty.

The scholarship standard is expressed by a system of grade points and grade-point averages earned in courses accepted by the University for advanced standing credit. Grade points are assigned as follows: each unit of "A" — 4 points, "B" — 3 points, "C" — 2 points, "D" — 1 point, "I" and "F" — no points.

As an advanced standing applicant you must also meet one of the following conditions:

(1) If you were eligible for admission to the University as a freshman, you may be admitted in advanced standing at any time after you have estab-

lished an overall grade-point average of 2.0 or better at another college or university.

(2) If you were not eligible for admission as a freshman only because you had not studied one or more of the required high school subjects, you may be admitted after you have:

(a) Established an overall grade-point average of 2.0 or better at another college or university,

(b) Completed, with a grade of "C" or better, appropriate college courses in the high school subjects that you lacked and

(c) Completed twelve or more quarter or semester units of transferable college credit since high school graduation or have successfully passed the examinations required of freshman applicants.

(3) If you were not eligible for admission as a freshman because of low scholarship or a combination of low scholarship and a lack of required subjects, you may be admitted after you have:.

(a) Established an overall grade-point average of 2.4 or better at another college or university,

(b) Completed, with a grade of "C" or better, appropriate college courses in high school subjects that you lacked. Up to two units (a unit is equal to a year's course) of credit may be waived, or as an alternative, you must complete one college course in mathematics, one in English and one in either U.S. history, a laboratory science or a foreign language. You must pass these courses with a grade of "C" or better. Courses other than mathematics must be transferable to the University. The course in mathematics must complete a sequence of courses at least as advanced as the equivalent of two years of high school algebra (elementary and intermediate) or one year of algebra (elementary) and one year of high school geometry and

(c) Completed 84 quarter units (56 semester units) of college credit in courses accepted by the University for transfer.

Credit for Work Taken at Other Colleges and by Examination

The University grants unit credit for courses appropriate to its curriculum which have been completed in other regionally accredited colleges and universities. This credit is subject to the restrictions of the senior residence requirement of the University (see "Requirements for the Bachelor's Degree" under the description of each College and School).

As an integral part of the system of public education in California, the University accepts, usually at full unit value, approved transfer courses completed with satisfactory grades in the public junior colleges of the State. Such transfer courses are limited, however, to a maximum of 70 semester units or 105 quarter units. Individual Colleges and Schools should be consulted concerning additional credit limitations.

Extension courses taken at an institution other than the University may not necessarily be acceptable. The decision regarding their acceptability rests with the Office of Undergraduate Admissions.

In addition, credit may be allowed for having completed with high scores, certain tests of the College Entrance Examination Board. These include Advanced Placement Tests. You should be sure to contact the Undergraduate Admissions Office before taking any examinations to determine whether they are acceptable.

Special Requirements for Nonresidents

The regulations discussed below are designed to admit out-of-state applicants whose standing, as measured by scholastic records, is in the upper half of those who would be eligible under the rules for California residents.

You can find a full definition of residence and nonresidence in the "Money at UCLA" section of this catalog.

Freshman Standing

(See also the requirements for "Admission to Freshman Standing — Residents" discussed earlier in this section.)

Graduation from High School — The acceptability of records from high schools outside California will be determined by the Office of Undergraduate Admissions.

Subject Requirements — The same subject pattern as for California residents is required.

Scholarship Requirements — You must have maintained a grade-point average of 3.4 or higher in the required high school subjects (grade points are assigned as follows: each unit of "A" — 4 points, "B" — 3 points, "C" — 2 points, "D" — 1 point, "I" and "F" — no points).

Examination Requirements — A nonresident applicant must take the same SAT or ACT tests as those required of a resident applicant; however, the Eligibility Index applies to California residents only.

Admission By Examination Alone

A nonresident applicant who is not thus eligible for admission and who has not registered at any college-level institution (except to a summer session immediately following high school graduation) may qualify for admission by examination alone. The requirements for a nonresident applicant are the same as those for a resident (discussed earlier) except that the scores on the three Achievement Tests must total at least 1730 with a score of at least 500 on each test.

Advanced Standing

If you met the admission requirements for freshman admission as a nonresident, you must have a GPA of 2.8 or higher in college courses that are accepted by the University for transfer credit.

If you are a nonresident applicant who graduated from high school with less than a 3.4 GPA in the subjects required for freshman admission, you must have completed at least 84 quarter units (56 semester units) of transferable work with a GPA of 2.8 or higher. If you lacked any of the required subjects in high school, you must have completed college courses in those subjects with a grade of "C" or higher. Up to two units (a unit is equal to a year's course) of credit may be waived, or as an alternative, you must complete one college course in mathematics, one in English and one in either U.S. history, a laboratory science or a foreign language. You must pass these courses with a grade of "C" or better. Courses other than mathematics must be transferable to the University. The course in mathematics must complete a sequence of courses at least as advanced as the equivalent of two years of high school algebra (elementary and intermediate) or one year of algebra (elementary) and one year of high school geometry.

Applicants from Other Countries

The credentials of an applicant for admission from another country are evaluated in accordance with the general regulations governing admissions. An application, official certificates and detailed transcripts of record should be submitted to the Office of Undergraduate Admissions early in the appropriate filing period (see the "Applying for Undergraduate Admission" section which follows). Doing so will allow time for exchange of necessary correspondence and, if the applicant is admitted, will help in obtaining the necessary passport visa.

Proficiency in English

As an applicant from another country whose mother tongue is not English, you may be admitted only after demonstrating a command of English sufficient to permit you to profit by instruction at the University. Your knowledge of English will be tested by an examination upon your arrival at the University. Admission of an applicant who fails to pass this examination will be deferred until proficiency in the use of English has been acquired. The student held for the English as a Second Language requirement who fails to take the test on the date specified will not be permitted to register for the quarter for which admission is approved. If you are an applicant from a non-English-speaking country, you are urged to take the Test of English as a Foreign Language as a preliminary means of testing your ability. Arrangements to take the test may be made by writing directly to TOEFL, Educational Testing Service, 1947 Center Street, Berkeley, CA 94704. Results of the test should be forwarded to the University.

Language Credit

As a student from a country where the mother tongue is not English, you will be given college credit in your own language and its literature only for courses satisfactorily completed. Such credit will be allowed only for courses taken in your country at college-level institutions or for advanced level upper division or graduate courses taken at this University or at another English-speaking institution of approved standing.

Health Insurance

The University requires, as a condition of registration, that all foreign students attending UCLA on nonimmigrant visas supply written proof of adequate health insurance to the Student Health Service annually at the beginning of Fall Quarter. Additionally, all new and reentering foreign students are required to be cleared by Student Health for freedom from communicable disease. These students must have a chest X ray performed at Student Health Service.

Engineering

A freshman applicant seeking a bachelor's degree in engineering whose entire secondary schooling was outside the United States must pass, with satisfactory scores, the College Entrance Examination Board Scholastic Aptitude Test (verbal and mathematics sections) and Achievement Examinations in English composition, physics and advanced mathematics before a letter of admission to engineering can be issued. Arrangements to take the tests in another country should be made directly with the Educational Testing Service, 1947 Center Street, Berkeley, CA 94704. You should request that your scores for the tests be forwarded to the University.

Applying for Undergraduate Admission

An application form may be obtained at the Office of Undergraduate Admissions, 1147 Murphy Hall, University of California, Los Angeles, CA 90024, in person or by mail.

The opening dates for filing applications for the year 1982-83 are as follows: Fall Quarter 1982 — November 1, 1981; Winter Quarter 1983 — July 1, 1982; Spring Quarter 1983 — October 1, 1982. Applications for the Fall 1983 Quarter should be filed during the month of November 1982.

A fee of $25 must accompany each application.

You are responsible for requesting the graduating high school (and each college attended if you apply in advanced standing) to send official transcripts of your record directly to the Office of Undergraduate Admissions.

If admitted, you must return a "Statement of Intention to Register" and a "Statement of Legal Residence," together with a nonrefundable fee of $50 which will be applied to the University Registration Fee if you register in the quarter for which you applied. Registration materials will be prepared only after you submit these forms.

Subject A: English Composition

Every undergraduate entrant must demonstrate an acceptable ability in English composition. There are several ways in which this requirement may be met before the first quarter in residence (see "Subject A: English Composition" in the "Undergraduate Degree Requirements" section of this catalog). Students who have not already fulfilled the requirement must, during their first quarter, enroll in either English A or English 1. Assignment in one of these courses is determined by performance on the Subject A Placement Test.

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 regarding the University's equal opportunity policies may be directed to the Campus Counsel, 2241 Murphy Hall, UCLA, or the Director of the Office for Civil Rights, United States Department of Education.

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 Students Office, 2224 Murphy Hall, for further information and procedures.

Registration

Registration is the payment of fees, enrollment in classes and the filing of various informational forms. Your name is 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*. Failure to complete and file all forms by established deadlines may delay or even prevent you from receiving credit for work undertaken.

Registration is divided into two equal, but separate processes. Registration materials (the "Registration Packet") are issued by the Registrar and include cards for payment of the quarterly fees and a Study List card for requesting enrollment in classes. When both processes are completed, you are considered a duly registered and enrolled student for the quarter.

Registration by Mail

In advance of the quarter, the registration processes may be completed entirely through the mail. All eligible students are encouraged to register by mail. Currently registered students may obtain their "Registration Packet" for registration by mail at the time (approximately the fifth week of the preceding quarter) and place announced in the quarterly *Schedule of Classes* and on official campus bulletin boards. New and reentering students eligible to register by mail (see the "Calendar" at the beginning of this catalog) will receive the "Registration Packet" in the mail from the Registrar approximately six weeks before the quarter begins. Complete instructions and envelopes for return of the cards are included with the registration materials. Each student is responsible for purchasing the quarterly *Schedule of Classes*, available in the Students' Stores.

The Registrar and the Main Cashier process enrollment and fee payment separately — date of payment does not affect enrollment provided such date is "on time" as published in the *Schedule of Classes*. At the completion of the by-mail process, materials are returned by first class postage to all students who participated. Students who requested enrollment will receive the results of the enrollment processing (see "Enrollment in Classes"), while students who paid their quarterly fees will receive the valid Registration Card (proof of student status for University services). These separate mailings are made approximately ten days prior to the beginning of the quarter.

In Person

At the beginning of the quarter, in-person processing of fee payment and enrollment in classes are available for all students not processed by mail. Dates and location of registration-in-person processing are announced in the *Schedule of Classes*, the *Registration Circular* 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 publications. By observing this suggested time schedule for reporting to register, you can complete the registration procedure with a minimal delay. New and reentering students processed for registration in person will be issued an "Appointment to Register in Person" by the admitting (or readmitting) officer within 10 days of receipt of their "Statement of Intention to Register" and classification of

residence for tuition based on information provided on the accompanying "Statement of Legal Residence." The appointment is your notice of the date, time and location that the Registrar will be prepared to issue individualized materials for your registration process.

While you may use a combination of both processes (by mail/in person) 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.

Any student allowed to register on or after the first day of instruction is subject to a late fee and may request classes only after payment of fees is completed. Late registration with payment of a late fee is accepted during the first ten days of classes; enrollment in classes, however, may be difficult. No student may register after the tenth day of classes without prior written approval of the academic Dean and payment of all regular and late fees.

Enrollment in Classes

A student's name is entered on official rolls of the University only after the registration process is completed as published in the *Schedule of Classes*. This quarterly publication is available in June for the Fall Quarter, in November for Winter Quarter and in February for Spring Quarter at the Students' Stores. To obtain a copy by mail, send $1.50 to ASUCLA Students' Store, 308 Westwood Plaza, Los Angeles, CA 90024, ATTN: Mail Out.

The *Schedule* lists courses, enrollment restrictions, final examination groups, names of instructors, class times and meeting locations, a detailed calendar of deadlines, samples of registration materials and full instructions for registration (payment of fees and enrollment in classes). From the *Schedule* and with the aid of academic counseling, you can assemble a program of courses. Two or three alternate programs should be planned in case your first choice of courses is not available. You may not choose two courses in the same final examination group and should not choose classes which conflict in the class meeting times. If conflicts are unavoidable, you should consult with the instructor of each course at the first meeting of the class.

Enrollment requests are processed by the Registrar's Office from the completed Study List card contained in the "Registration Packet" issued to each prospective student.

All continuing students (who are eligible to register in the same status without filing applications for readmission) have the opportunity and are encouraged to request their classes by mail.

New and reentering students who have completed the admission/readmission process by the eligibility date to register by mail (see the "Calendar" at the beginning of this catalog) will receive registration materials from the Registrar approximately six weeks prior to the beginning of their first quarter.

Results of enrollment by mail are printed on a Tentative Study List mailed by the Registrar approximately ten days prior to the beginning of the quarter.

For the convenience of undergraduates who wish to enroll in person at computer terminals, an appointment to enroll is printed on the Tentative Study List. This appointment should be kept only if you want to make changes in enrollment and must be shown with the valid current quarter Registration Card and UCLA Student Photo ID Card. Students who did not participate in the by-mail process and those eligible for in-person processing will receive an enrollment appointment time as part of the registration (fee payment) process.

Study List

Your Official Study List is the list of courses in which you are officially enrolled at the end of the second week of classes (at which time a copy is mailed to you). You are responsible for every course listed and can receive no credit for courses not entered on it. Unapproved withdrawal from or neglect of a course entered on the Study List will result in a failing grade.

Changes in the Official Study List require approval of the Dean of your College, School or Graduate Division. Forms for this purpose may be obtained at the office of your Dean or department. The approved petition must be filed with the Registrar. There is a fee for such changes. See the calendar in the *Schedule of Classes* for the last day to add or drop courses or change grading basis.

Study List Limits

The minimal program for an undergraduate student to be considered full-time is three courses (12 units).

The normal program for an undergraduate student is four courses. A student on scholastic probation, except in the School of Engineering and Applied Science, is limited to a program of three courses each quarter.

Any course, such as Mathematics M or Chemistry A, which does not give full credit toward a degree, nevertheless displaces one course from your program. These courses are identified in the *Schedule of Classes*. All military science and all repeated courses are to be counted in Study List limits.

For students in good academic standing, undergraduate Study Lists may be presented as follows:

School of Engineering and Applied Science — Within the limits prescribed in each individual case by the Dean or his representative. Students may not enroll in an excess of 18 units per quarter unless an "Excess Unit Petition" is approved in advance by the Dean.

College of Fine Arts — Three or four courses per quarter without special permission. After your first quarter, you may petition to carry a program of not more than five courses if you have an overall grade-point average of 3.0 ("B") and have attained at least a "B" average in the preceding quarter.

College of Letters and Science and School of Public Health — Three courses for students in the first quarter of the freshman year. All other students who have a "C" average or better and who are not on probation may carry four and one-half courses without petition. After the first quarter, you may petition to enroll in as many as five courses if in the preceding term you attained at least a "B" average in a program of at least three courses included in the grade-point average. First-quarter transfer students from any other campus of the University may carry excess Study Lists on the same basis as students who have completed one or more terms at the Los Angeles campus.

School of Nursing — Three courses. You must petition to enroll in more courses.

Concurrent Enrollment

Concurrent enrollment in resident courses and in courses in University Extension or another institution is permitted only when your entire program has received the approval of your academic Dean before the work is undertaken.

Special Studies (199) Courses

Senate regulations limit the undergraduate student to 8 units (two courses) of credit per quarter in special studies (199) courses. The total number of units allowed in such courses for a letter grade is 16. A separate petition is required for each enrollment in a special studies (199) course.

Credit by Examination

A student who has completed a minimum of 12 units of work at this University and is in good standing may petition to receive credit by examination in a course regularly offered by the University. You must satisfy conditions stated on the petition and make arrangements in advance both with the instructor who will give the examination and with the Dean of your College or School, from whom the required petition form may be secured. There is a $5 fee for each petition.

The results of such examinations are entered upon your record in the same manner as regular courses, and corresponding grade points are assigned.

PART II:
Undergraduate Schools and Colleges

Before You Begin

Nothing at UCLA will have a more direct effect on your daily life than your academic program. Together its components make up the content — and the quality — of your education here.

So, decisions about your academic program must be made carefully.

This section describes the five Colleges and Schools at UCLA that offer undergraduate degree programs: the College of Letters and Science, the School of Engineering and Applied Science, the College of Fine Arts, the School of Nursing and the School of Public Health. Regardless of the field of study you decide to follow, your academic life will be governed by one of the Colleges or Schools.

At UCLA you can also choose how much help—or how little—you want in planning your program. The section of this book titled "Resources to Help You" offers a description of offices and people who can help you with your academic program; the last page of the "College of Letters and Science" description provides a list of publications that do the same.

What is a Major?

Basically, a major is the label you put on your central area of academic interest. The factors that go into selecting a major are determined by the person who is doing the selecting—you. You should consider your current interests, your future plans and your curiosity about a particular aspect of knowledge.

Additionally, carefully consider and evaluate general College or School requirements, the description of the set of courses offered in the major (you can find descriptions in the "Majors and Courses of Instruction" section of this catalog) and the requirements each department has for completing the program of study.

Lastly, all of these factors should be evaluated against the background of other time commitments — job, personal responsibilities — if you are to make an intelligent decision.

Exploring Majors

It isn't necessary to declare your major in your freshman year — unless you are in the College of Fine Arts.

Many students prefer to explore the diversity of subjects and study areas at UCLA, many of which you may never have had a chance to investigate before.

But, keep in mind that certain majors, especially in the sciences, require early declaration. Some have enrollment quotas and will allow application by new majors only during a specified quarter.

Don't lose sight of the fact, either, that each UCLA undergraduate student is limited to a total of 208 units—unless you are in the School of Engineering and Applied Science — to complete the academic program. So, if you wait to declare a major, don't wait too long.

A good way to explore majors is to check out introductory courses. In most departments, these are the classes with course number designations under 100. They are a general introduction to the field of study, they give an idea of the vocabulary of the major, and they preview the kind of questions studied in the field.

Naturally, if you have already decided on a major, you will begin taking the courses that are required to complete that major.

A Final First Word

Again, the specific major requirements are discussed in two sections in this book: under each College or School and in the description of each major in the "Majors and Courses of Instruction" section. The College or School makes the rules governing your major; these rules vary with each School or College.

Undergraduate Degree Requirements

In working toward a degree, you should keep in mind the various levels on which you must satisfy requirements. College or School and departmental requirements are discussed fully in this section and in the "Majors and Courses of Instruction" section of this catalog. The following are general University requirements for the bachelor's degree.

Course Credit

The grades "A", "A−", "B+", "B", "B−", "C+", "C" and "P" in acceptable courses denote satisfactory progress toward a bachelor's degree. The grades "C−", "D+", "D" and "D−" give unit credit toward the degree, but must be offset by grades of "C+" or better in other courses.

Scholarship

In order to qualify for a bachelor's degree you must earn at least a "C" (2.0) average in all courses undertaken at the University of California—all campuses.

Subject A: English Composition

Entering undergraduate students must demonstrate ability in English composition. This requirement may be met by:

(1) Scoring 3, 4 or 5 on the College Entrance Examination Board (CEEB) Advanced Placement Test in English *or*

(2) Scoring 600 or better on the CEEB Achievement Test in English Composition *or*

(3) Presenting transfer credit for an acceptable college-level course in English composition at another institution *or*

(4) Passing a Subject A Placement Test required of all students who have not otherwise met the requirement.

Students who do not meet the requirement in one of the ways described above must, during the first quarter of residence at the University, enroll in either English A or English 1. Placement is determined by performance on the Subject A Placement Test. Students failing either course are required to repeat the course in the next quarter of residence at the University.

Students from other countries whose native language is not English will be instructed by the Office of Admissions to take the English as a Second Language Placement Exam. Those authorized to take this special examination may meet the English as a Second Language requirement by passing the examination or by satisfactorily completing the advanced course (English 33C) in English as a Second Language. Students directed by the Office of Admissions into the English as a Second Language program are not required to meet the regular Subject A requirement.

American History and Institutions

Candidates for a bachelor's degree must satisfy the "Requirement in American History and Institutions" by demonstrating a knowledge of

American history and of the principles of American institutions under the federal and state constitutions. This requirement may be met by one of the following methods:

(1) By the completion of any of the following courses with a grade of "C" or better or a grade of Passed: Economics 10, 183, English 80, 85, 104, 115, 170, 171, 172, 173, 174, Geography 136, History 6A, 6B, 6C, 7A, 7B, 145A, 145B, 146A, 146B, 147A, 147B, 148A, 148B, 148C, 149A, 149B, 150A, 150B, 150C, 151A, 151B, 152A, 152B, 153, 154A, 154B, 154C, 154D, 155A, 155B, 156A, 156B, 156C, 156D, 156E, 157A, 157B, 157C, 158A, 158B, 158C, 158D, 158E, 159A, 159B, 160, 161, 162, 163, Political Science 1, 114A, 114B, 143, 144, 145, 171, 172A, 172B, 180, 186.

Equivalent courses completed in University Extension may be used to fulfill the requirement. Equivalent courses taken at other collegiate institutions and accepted by the Board of Admissions may also be used to fulfill the requirement.

(2) By presentation of a certificate of satisfaction of the present California requirement as administered in another collegiate institution within the State.

(3) Satisfactory completion with an average grade of "B" or better of a year's course in high school of American history or American government or a one-year combination of the two effective with the student entering UCLA in Spring 1972 or later.

Candidates for a teaching credential, but not for a degree, must take one of the following courses: History 7A, 7B, 151A, 151B, Political Science 172A, 172B.

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

More information regarding the requirement is available from the History undergraduate counselor, 6248 Bunche Hall.

Senior Residence

For specific details regarding senior residence, see "Requirements for the Bachelor's Degree" under the descriptions of each College and School.

Candidacy for Degree

You should notify the Registrar at least three quarters before you expect to receive the bachelor's degree by completing and filing the Degree Candidate (DC) card in the quarterly "Registration Packet." The completed DC card must be filed (even though one or more DC cards were filed at earlier registrations) no later than the tenth day of classes in the quarter in which you expect to complete work for the degree.

Degree Candidate cards accepted after the twentieth day of classes are subject to a late fee. See the calendar in the *Schedule of Classes* for the late filing dates.

Change of College or Major

A change of College (or major) by an undergraduate student requires the approval of the College (or department) to which admission is sought. Applications are made by petition, which may be obtained from the College or School office. No student is permitted to change majors after the opening of the last quarter of the senior year.

College of Letters and Science

The College of Letters and Science is the largest college at UCLA. It encompasses more than 70 majors in the humanities, social sciences, life sciences and physical sciences. Its curricula lead to a degree of Bachelor of Arts or Bachelor of Science, normally awarded at the end of the twelfth quarter.

The degree programs are designed to expose students to a variety of intellectual possibilities by combining a reasonably wide distribution of courses and the opportunity to specialize in one particular field. To this end, students are required to select lower division courses that deal with general fundamentals of human knowledge. In the more diverse offerings of the upper division courses students are relatively free to concentrate attention upon one field of interest: their major.

Each student is expected to choose a major as soon as possible. This may be a program of related upper division courses within a single department (departmental major) or a group of coordinated courses involving a number of departments (interdepartmental major) or, under certain circumstances, an organized group of courses chosen to meet a student's special need (individual major). The pursuit of such definite courses of study often requires knowledge of courses known as *prerequisites*. With the assistance of a departmental advisor, students are expected to select lower division courses related to the advanced studies they propose to follow.

Academic Counseling Services

The office of the Dean of the College of Letters and Science is located in 1312 Murphy Hall. A staff of academic counselors is readily available to assist students with questions pertaining to academic regulations and procedures, selection of courses, options and alternatives, etc.

Many questions can be answered at the College Information Window or by phoning the Information Desk at 825-1687 or 825-1965. Students in the College who would like to confer with a counselor (regarding overall degree requirements, academic difficulty, program planning or assistance in selecting a major) can arrange an appointment by phoning 825-3382. Appointments may also be made on a same-day basis. Group counseling sessions on a variety of academic issues are offered quarterly.

Academic Excellence

College Honors

The Certificate of College Honors is the highest academic recognition the College of Letters and Science confers on its undergraduates. College Honors recognizes the needs of highly qualified and motivated students for a challenging education. Its flexible provisions for superior students are designed to stimulate critical, imaginative and self-reliant thinking. The program of College Honors under the direction of the Dean, Division of Honors, provides the exceptional UCLA undergraduate the organization and environment within which to pursue individual excellence.

College Honors will be awarded by the Dean of the College of Letters and Science to graduating seniors who have completed approximately 48 hours in honors-designated courses as approved by the Dean, Division of Honors. Such courses will include, among others, courses in the Honors Collegium, courses designated by the departments as honors courses, honors-contract courses, Freshman-Sophomore Seminars, Senior Seminars, Graduate Colloquia and Seminars, and research and thesis preparation courses. Students admitted to the program are encouraged at the lower division level to pursue the breadth of interdisciplinary approaches to learning and at the upper division level to engage in the depth of research in a specific discipline.

Students in the College Honors program pursue individualized curricula which emphasize the colloquium, seminar and tutorial experiences. They have access to graduate courses and seminars. They enjoy the same

library privileges as graduate students, preferential preenrollment, eligibility for honors research awards and special counseling within the Division of Honors. Admission to the program facilitates taking exceptionally heavy course loads if the student so desires, receiving credit for courses pursued by independent study ("Credit by Examination"), and applying for concurrent work for both undergraduate and graduate degrees in the Departmental Scholar Program. The Dean will maintain a progress file on each student which can be used to support applications for graduate study, professional schools, jobs, etc., and will write appropriate letters of recommendation outlining the student's achievement in College Honors. Further, College Honors will be recorded on the student's transcript and a Certificate of College Honors awarded upon graduation.

Entering freshmen with both an exceptional grade-point average (3.5 or above) and SAT scores (a combined 1270 score) are invited by the Dean, Division of Honors, to participate in the College Honors program. Those entering freshmen who have graduated in the top 3% of their class may apply for admission to College Honors. Other students with at least 16 or more graded units at UCLA with a cumulative grade-point average of 3.5 or above are encouraged to apply. Interested students with a lower grade-point average, who feel they could benefit from and contribute to the program, are invited to discuss admission with the Dean, Division of Honors.

Honors Status

A student in the College of Letters and Science who has demonstrated superior academic achievement is eligible to apply for admission to Honors Status, which is recorded on the student's transcript. Admission may be granted by the Dean, Division of Honors, after completion of 16 or more graded units at UCLA with a cumulative grade-point average of not less than 3.5. Continued superior academic achievement is requisite for remaining in Honors Status.

Application for admission may be made at the Division of Honors Office, 1331 Murphy Hall, Window 10.

Honors Status students are under the immediate jurisdiction of the Division of Honors Office, receiving their counseling and other student services there. Admission facilitates taking exceptionally heavy course loads (see "Study List Limits" in the "Admission" section of this catalog) and receiving credit for courses pursued by independent study (see "Credit by Examination" later in this description of the College).

Students with Honors Status are usually eligible for admission to the honors programs offered by a number of the departments in the College, including honors sections of regular courses, honors courses of a seminar type, honors thesis programs, and supplementary and advanced directed study. The departments are responsible for admitting students to their separate honors programs. For details of these programs, consult the Dean of the Division of Honors or the department of your major. (For the possibility of concurrently working for both undergraduate and graduate degrees, see the "Departmental Scholar Program" later in this section.)

Honors with the Bachelor's Degree

(1) Departmental Honors and Departmental Highest Honors may be awarded at graduation upon the recommendation of your major department. The recommendation will be based on successful completion of a departmental honors program. For the requirements of the various departments, consult the department concerned.

(2) Honors with the Bachelor's Degree will be awarded according to your overall grade-point average at the beginning of the last quarter of academic work, or, if not then eligible, at graduation. To be eligible for Honors with the Bachelor's Degree, a student must have completed 90 or more units for a letter grade at the University of California. Course work taken on the Education Abroad Program will not count toward Honors with the Bachelor's Degree, effective Fall 1979. The College Committee on Honors is responsible for awarding Honors. The levels of honors and the requirements for each level are: *Cum laude,* an overall average of 3.5; *Magna cum laude,* 3.65; *Summa cum laude,* 3.85. Marginal cases will be decided by the Committee on Honors. Students should be aware that the Committee grants petitions for waiver of these requirements only in extraordinary cases.

(3) A list of students who have graduated with Honors with the Bachelor's Degree, Departmental Honors, or both, shall be published yearly. Each honors student will be awarded a certificate of honors at graduation indicating both the Departmental Honors and the Honors with the Bachelor's Degree.

Dean's Honor List

The Dean's Honor List recognizes high scholastic achievement in any one quarter. The following criteria are used to note Dean's Honor List on the student records: (1) all students who have achieved a 3.75 GPA in any one quarter with at least twelve graded units and no grade of "NP", "NR" or "I" or (2) all students who have achieved a 3.66 GPA and have earned at least 56 grade points during the quarter, with no grade of "NP", "NR" or "I".

Dean's Honor List is automatically recorded on the student's transcript. This notation cannot be retroactively posted nor can a student become retroactively eligible for the Dean's Honor List by removal of an Incomplete. Any student who wishes to receive a personal acknowledgment of appearance on the Dean's Honor List for the fifth and tenth time may receive a letter to that effect upon request to the Dean, Division of Honors, accompanied by the appropriate evidence.

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, completion of the requirements in preparation for the major and eligibility for Honors Status in the College of Letters and Science. To obtain both the bachelor's and master's degrees, the Departmental Scholars must be provisionally admitted to the Graduate Division, must fulfill requirements for each program and must maintain a minimum average of "B". No course may be used to fulfill requirements for both degrees. When admitted to the status of Departmental Scholar, a student must have one or more quarters remaining at UCLA.

The departmental Chair submits the student's nomination to the Dean of the Division of Honors for recommendation to the Dean of the Graduate Division on or before the application dates for admission to graduate standing (see the *UCLA Graduate Catalog* calendar). Interested students should consult their departments well in advance of these dates for admission to graduate standing.

The Honors Collegium

The Honors Collegium is a unique and innovative educational alternative designed primarily for students in their freshman and/or sophomore years.

The primary goals of the courses offered through the Collegium are to engage the energies and intelligence of UCLA's liveliest students in the interdisciplinary study of broad topics pertinent to contemporary society and, thus, to liberate them from the more compartmentalized approach to knowledge. For those students, study of the Collegium courses should be a dynamic experience which thrives on discussion and the exchange of ideas among students, as well as between students and professors. Students thus participate actively in the educational process, constantly interacting with a group of distinguished professors who have varying and sometimes contradictory insights into the topic at hand.

Each course is under the direction of one faculty member, with other distinguished faculty and occasionally professionals from outside the College of Letters and Science contributing their particular expertise. The advantages of the Collegium are the challenge, interdisciplinary approach to learning, small size of the classes, close student/faculty relations and distinguished faculty. Honors Collegium courses are also applicable on

Letters and Science breadth requirements and on preparation for several Letters and Science majors. In addition, the Division of Honors offers Collegium students the expert guidance of counselors to assist them with academic problems and with the planning of an integrated academic program which reaches far beyond the Collegium.

Enrollment in Collegium courses is open to (1) entering freshmen who have satisfied the Subject A/English 1 requirement and have an SAT verbal score of 550 or above and to (2) continuing freshmen and sophomores who have a UCLA grade-point average of 3.0 or above and have satisfied the Subject A/English 1 requirement.

In 1982-83 the Honors Collegium will offer the following one-quarter courses carrying from 4 to 12 units of credit each:

Fall Quarter

HC 1 — "Freedom and Control" (12 units), Mr. Parducci, Psychology

HC 16 — "The Nature of Time" (8 units), Mr. Healey, Philosophy

HC 17 — "The Greek View of Man" (4 units), Mr. Mellor, History

Winter Quarter

HC 4 — "The City in History" (12 units), Mr. Monkkonen, History

HC 18 — "Literature and Society: Order and Control — Totalitarianism and the Modern Culture" (8 units), Mr. Lehan, English

HC 19 — "The Feminine and the Masculine: A Study of Myths" (4 units), Ms. Metzer, French

HC 20 — "The Arts in World Cultures" (4 units), Mrs. Snyder, Dance/Ethnic Arts

Spring Quarter

HC 21 — "Power and Authority: The Birth of the Sovereign State" (12 units), Mr. Benson, History

HC 22 — "Evolution vs Creation: A Clash of Science and Mythology" (4 units), Mr. Russell, Anthropology

HC 23 — "The Historical Development of the Calculus" (4 units), Mr. Grossman, Mathematics

For more information about the Honors Collegium, contact the Division of Honors, 1331 Murphy Hall (825-1553, 825-3786).

Division of Honors Office (Letters and Science)

The Division of Honors Office provides academic counseling and services for approximately one-fourth of the undergraduates in the College of Letters and Science. Under its jurisdiction are Regents' Scholars, National Merit Scholars, Alumni Scholars, students in the High School Scholars Program, the Education Abroad Program and the Departmental Scholar Program, students enrolled in the Honors Collegium, and those students who have qualified for Honors Status and College Honors by demonstrating superior academic achievement at UCLA. Services offered include academic counseling, informal degree checks, petitions and letters of recommendation to graduate and professional schools.

Requirements for the Bachelor's Degree

The degree of Bachelor of Arts or Bachelor of Science, as designated by the Executive Committee of the College, will be granted upon the following conditions:

(1) Students entering UCLA in Fall 1982 and thereafter shall have completed for credit 45 courses (180 units) or 45½ courses (182 units if English 1 is completed Fall 1979 or later), of which at least 18 courses (72 units) shall be upper division courses (numbered 100-199 only). Students entering prior to Fall 1982 must complete at least 13 courses (52 units) in upper division (courses numbered 100-199 only).

Credit Limitations — The following credit limitations apply for all students enrolled in the College:

(a) After completing 26 and ¼ courses (105 units) toward the degree (in all institutions attended), the student will be allowed no further unit credit for courses completed at a **community college.**

(b) Not more than 4 units in **physical education activities courses** may be counted toward the bachelor's degree (transfer students with credit for more than 4 units of physical education activities courses should be aware of the 4-unit limit on this credit).

(c) Not more than two courses (8 units) in the **300 and 400 course series** may be counted toward the bachelor's degree. Credit is not granted for X300 and X400 courses taken in University Extension unless the approval of the Dean has been obtained by petition prior to enrollment. Such petitions are rarely granted.

(d) Not more than 12 units of **Dance 70, 71, 170 and 171 and Music 80 and 81** taken at UCLA may be counted toward the bachelor's degree. *Letters and Science students electing to take these courses must enroll in these courses Passed/Not Passed.* The music courses are limited to one per student per quarter. These courses will not be counted in the limits on Passed/Not Passed enrollment. For further information on these limits, see Senate Divisional Regulation A-310 under the "Grading Regulations" section of this catalog.

In addition, a total of 12 units of music and/or dance performance courses (taken at UCLA or another institution) may be counted toward the bachelor's degree.

(e) Credit earned through the **College Level Examination Program (CLEP)** after June 30, 1974, will not be counted toward the bachelor's degree in the College.

(f) **Advanced Placement Test** credit (AP) earned after June 30, 1974, will not apply toward a degree in the College unless taken prior to the completion of 36 quarter units of credit toward the bachelor's degree at the time of the examination.

(g) Not more than 24 units of credit in **aerospace studies, military science or naval science** may be applied to the 180/182-unit minimum required for the bachelor's degree.

(h) Senate regulations limit the undergraduate student to two courses (8 units) of credit per quarter in special **Independent study courses.** The total number of units allowed in such courses for a letter grade is 16. Also, see specific restrictions under each departmental listing.

(i) For students entering Fall 1978 and thereafter and effective with **Chemistry 2** taken Fall Quarter 1978 or thereafter (at UCLA or another institution), no credit will be granted toward the bachelor's degree for Chemistry 2 after one year of high school chemistry completed with a grade of "C" or better. The maximum deduction will be four units.

Students enrolled in UCLA prior to Fall 1978 may take Chemistry 2 with full unit and grade-point credit, without petition.

(j) For students entering Fall 1978 and thereafter and effective with **foreign language courses** taken Fall Quarter 1978 or thereafter (at UCLA or another institution), no credit will be granted toward the bachelor's degree for college foreign language courses equivalent to quarter level 1 and/or 2 if two years of the same language were completed with satisfactory grades in high school. The maximum deduction will be eight units (4 units per course).

Students enrolled in UCLA prior to Fall 1978 may repeat high school language with full unit and grade-point credit, without petition.

(k) A student in Letters and Science who is enrolled in fewer than 12 units may *not* elect the **Passed/Not Passed option** for that term.

(l) No credit will be allowed for more than one lower division course in **statistics** or for more than one sequence of such courses.

(m) A student participating in the **Education Abroad Program** may receive toward the bachelor's degree a maximum of 48 units of credit in addition to the 8 units maximum allowable for the Intensive Language Program.

(2) The candidate shall have attained at least a "C" (2.0) grade-point average in all courses undertaken at this University. **A student is required to complete satisfactorily a minimum of 180 units for the bachelor's degree. A maximum of 208 units is allowed. After having credit for 208 units, he will not be permitted to continue, except in rare cases approved by the Dean.** *A student with credit for English 1*

taken Fall 1979 or later will be required to complete satisfactorily 182 units. A maximum of 210 units is then allowed. Students with Advanced Placement credit may exceed the 210-unit maximum by the amount of this credit.

(3) The candidate shall have completed the general University and College requirements.

(4) The candidate shall have satisfied both the course and scholarship requirements of a major (including preparation for the major) in the College of Letters and Science. Before the degree is granted, the department or committee in charge of the student's major must certify that the student has completed the requirements for the major.

(5) Residence Requirements — For students entering UCLA in Fall 1982 and thereafter, 68 units of the last 80 units completed for the bachelor's degree must be earned in residence in the College of Letters and Science on this campus. Not more than 16 of the 68 units may be completed in Summer Session at the Los Angeles campus. While registered in this College, you must complete at least ten upper division courses (40 units), including six courses (24 units) in the major. For students entering UCLA prior to Fall 1982, the residence requirements apply as indicated in the 1981-82 *UCLA Undergraduate Catalog*. The above residence regulations apply to all students, including those entering this University from other institutions or from University Extension and those transferring from other Colleges of this University. Students transferring from a College of Letters and Science at another campus of the University may petition for an exception to this rule.

(6) Concurrent enrollment in courses offered by University Extension (including correspondence courses) or at other institutions is not permitted except in extraordinary circumstances, and no credit will be given for such courses unless the approval of the Dean has been obtained by petition prior to enrollment.

Progress Toward the Degree

The recommended study load for an undergraduate in the College of Letters and Science is 12 to 16 units per quarter.

UCLA is a full-time educational institution, and it is expected that students will complete their undergraduate degree requirements and graduate within four years. Maintaining the recommended study load will enhance your learning experience and the coherence of your studies. If extenuating circumstances interfere with normal progress toward the degree, consult the College Office.

Please be aware that enrollment in 12 units constitutes the full-time student status required for programs such as financial aid, scholarships and grants, dormitory residence, Social Security and veteran benefits.

General University Requirements

Unless your chosen major demands unusually heavy work in lower division courses, it will be to your advantage to complete these requirements as soon as possible — normally within your first 24 courses (96 units).

Subject A

All students are required to demonstrate proficiency in the fundamentals of English composition (Subject A). Students from other countries whose native language is not English will be instructed by the Office of Admissions to take the English as a Second Language Placement Exam and therefore are not required to meet the regular Subject A requirement. For further regulations concerning Subject A, see "Undergraduate Degree Requirements" earlier in this section of the catalog.

American History and Institutions

You can find details about this requirement under "Undergraduate Degree Requirements" earlier in this section of the catalog.

College Requirements

Foreign Language

The College of Letters and Science does not have a collegewide requirement for foreign language. Students should consult this catalog and departments or committees administering curricula concerning the foreign language requirement of specific majors. Credit will not be allowed for completion of a less advanced course in grammar and/or composition after completion of a more advanced course. For other credit limitations, see (1) (j) under "Requirements for the Bachelor's Degree" earlier in this description of the College.

College credit for the mother tongue of a foreign student and for its literature is allowed only for courses taken in native institutions of college grade, or for upper division and graduate courses actually taken at the University of California or at another English-speaking institution of approved standing.

English Composition

You may satisfy this requirement with one course from English 3, 4, Humanities 2A, 2B, 2C or CED 3 (students may not receive credit for both English 3 and CED 3). A grade of "C" or better is required; a grade of "C−" is not acceptable. A course in English composition taken for a Passed grade does not satisfy this requirement. Courses in the above group may be applied on the humanities breadth requirement if they are not used to satisfy the English composition requirement.

The composition requirement may also be satisfied by scoring 4 or 5 on the CEEB Advanced Placement Test in English or by passing the English Department's proficiency examination. Only students scoring 660 or better on the CEEB English Achievement Test are eligible for this proficiency exam.

Each student should satisfy the composition requirement within the first three quarters of residence. Students who fail to satisfy it before having completed 90 quarter units must have their Study Lists approved by the Dean.

To enable all entering freshmen to meet the requirement, enrollment in certain sections of English 3 will now be limited to entering freshmen.

Returning students may enroll in special sections of English 3 available to them every quarter. Those students who have not yet attained sophomore standing should enroll in these sections with departmental consent.

English Composition Information for Transfer Students

(1) If you have completed an English composition course graded Passed, you may take the English Proficiency Examination upon presentation of a letter of authorization to the English Department. The letter may be obtained from the College of Letters and Science.

(2) Transfer students who have completed with a grade of "C" or better a college composition course that has not satisfied the College English composition requirement may be eligible for the proficiency examination after an interview by the English Department. Eligible students must register for the examination in the English Department office prior to the first day of enrollment each quarter.

(3) If you have credit for 90 or more units and have not completed a course that satisfies the College English composition requirement but are exempt from the Subject A requirement, you must include an acceptable composition course in the Study List of your first quarter of residence in the College. If you are required to take English 1 to satisfy the Subject A requirement, you should, upon completion of that requirement, include an acceptable composition course in the Study List of your second quarter of residence in the College.

A bona fide student from abroad, who has learned English as a foreign language and in whose secondary education English was not the medium of instruction, may satisfy this requirement by completing either English 3,

36 or 106J with a grade of "C" or better (a grade of "C–" is not acceptable). A course in English composition taken for a Passed grade does *not* satisfy this requirement.

Units evaluated by the Office of Admissions as English composition, but not sufficiently advanced to satisfy the College of Letters and Science requirement, can be applied on the Letters and Science breadth requirements as humanities only if specifically approved by the Dean. Advanced Placement English with Grade 3 has such approval and requires no petition by the student. ESL 33A, 33B, 33C and advanced standing English for Foreign Students courses may *not* be applied on the humanities breadth requirements.

Breadth Requirements

Breadth requirements are designed to acquaint you with areas of inquiry outside your own major. They provide a unique educational opportunity to bring perspectives from many fields together in a unified approach to learning.

Students who completed less than 36 quarter units before the Fall 1978 term must meet the requirements which follow. Those who completed 36 or more quarter units before Fall 1978 may fulfill either these requirements or those described in the 1977-78 *UCLA General Catalog.*

You will satisfactorily complete nine courses (36 quarter units) distributed among the three divisions outside the division of your major with at least two courses in each division. Acceptability of courses for these requirements are subject to the following general conditions:

(1) All language courses level 4 or above may be applied as humanities courses. Level 1, 2 and 3 courses may be used, provided that you have completed the level 4 course in the same language. For students entering Fall 1978 and thereafter and effective with foreign language courses taken Fall Quarter 1978 and thereafter (at UCLA or another institution), no credit will be granted toward the bachelor's degree or toward satisfaction of the breadth requirements for college foreign language courses equivalent to quarter level 1 and/or 2 if two years of the same language were completed with satisfactory grades in high school. The maximum deduction will be eight units (4 units per course). Conversational courses may not be used to satisfy the humanities requirement. Breadth requirement credit for courses in languages which do not offer level 4 courses is contingent on the approval of the Dean.

(2) The course used to satisfy the English composition requirement may not also apply on the breadth requirements.

(3) Courses required to satisfy the major or other courses taken in the major department may not be used to satisfy breadth requirements. However, courses outside the division of the major which are required as preparation for a major may be used to satisfy these requirements. For information on satisfying breadth requirements if you are following a double major, see the section on "Double Majors" later in this description of the College.

(4) Courses in other Colleges and Schools at UCLA may be used to satisfy the breadth requirements, if so designated by the Executive Committee of the College.

(5) Freshmen and sophomore seminars taught in departments in the College of Letters and Science apply. Seminars taught in other Colleges and Professional Schools may apply only by petition.

Transfer students should consult the College of Letters and Science concerning application of advanced standing courses on the breadth requirements.

Consult individual course descriptions to avoid possible duplication of courses.

Courses numbered in the 300 and 400 series may not be applied on the breadth requirements. Courses numbered 199 and in the 200 series may be applied on breadth requirements only by petition approved by the Dean of the College of Letters and Science.

You can determine which — and how — UCLA courses apply to your breadth requirements by studying the list of courses ("A-D") below.

For the purposes of these requirements, departmental and interdepartmental majors are classified in the divisions listed below.

PLEASE NOTE: NOT ALL COURSES WITHIN A DEPARTMENT APPLY ON BREADTH IN THE DIVISION OF THE MAJOR (e.g., psychology is listed as a life science major; however, many psychology courses apply on breadth in the social science division).

Humanities

African Languages
Ancient Near Eastern Civilizations
Arabic
Chinese
Classical Civilization
Classics
English
English/Greek
English/Latin
Ethnic Arts
French
French and Linguistics
German
Greek
Hebrew
Italian
Italian and Special Fields
Japanese
Jewish Studies
Latin
Linguistics
Linguistics and Computer Science
Linguistics and English
Linguistics and French
Linguistics and Italian
Linguistics and Oriental Languages
Linguistics and Philosophy
Linguistics and Psychology
Linguistics and Scandinavian Languages
Linguistics and Spanish
Near Eastern Studies
Philosophy
Portuguese
Russian Civilization
Russian Linguistics
Scandinavian Languages
Slavic Languages and Literatures
Spanish
Spanish and Linguistics
Study of Religion

Physical Sciences

Astronomy
Atmospheric Sciences
Biochemistry
Chemistry
Chemistry/Materials Science
Cybernetics
Economics/System Science
General Chemistry
General Physics
Geology
Geology (Engineering Geology)
Geology (Geochemistry)
Geology (Nonrenewable Natural Resources)
Geology (Paleobiology)
Geophysics (Applied Geophysics)
Geophysics (Geophysics and Space Physics)
Mathematics
Mathematics/Applied Science
Mathematics/Computer Science
Mathematics/System Science
Physics

Social Sciences

Afro-American Studies
Anthropology
Chicano Studies
Communication Studies
East Asian Studies
Economics
Economics/Business
Geography
Geography/Ecosystems
History
Latin American Studies
Political Science
Sociology

Life Sciences

Biology	Psychobiology
Kinesiology	Psychology
Microbiology	Quantitative Psychology

Note: The following courses in the College of Letters and Science will *not* apply on breadth requirements: Anthropology 186A-186B, Biology 30, Economics 40, English 136A-136B-136C, English as a Second Language 33A, 33B, 33C, 34, 103J, 103K, 106K, 107K, 109K, 111K, 122K, Journalism 101A, 101B, 182A, physical education activities courses, Mathematics 1A, 38A-38B, 104, Psychology 41, 142, Sociology 18.

Courses Applicable on Breadth

(A) Physical Sciences

Any courses for which you are eligible in astronomy, atmospheric sciences, chemistry, earth and space sciences (except Earth and Space Sciences 20 if used on life science, 115, M117, M118), mathematics (except Mathematics 1A, 38A-38B, 104) and physics. Also applicable: Computer Science 20, Engineering 11, Geography 1, M102, 104, 105, 106, Economics 141, 144, 145, 146, 147A, 147B, Philosophy 125, 128A, 128B, 134, 135. Also, either History 3A *or* History 3B if not applied on the social science breadth requirements. (NOTE: no more than one of History 3A, 3B or Physics 10 may count toward the breadth requirement in the physical sciences.)

(B) Life Sciences

Any courses for which you are eligible in biology (except Biology 30), kinesiology (except physical education activities courses and Kinesiology 106) and microbiology. Also applicable: Anthropology 1, 2, 11, 125A-125B, Earth and Space Sciences 20 (if not applied as physical science), 115, M117, M118, Geography 2, 5, 108, 109, 110, 112, Psychology 15, 110, 111, 115, 116, 117, 118A, 118B, 118C, 118D, 118E, M118F, 119, 120, 121. Also applicable: History 3C; course may also apply on the social science breadth requirements, but not on both.

(C) Social Sciences

Any courses for which you are eligible in anthropology (except Anthropology 1, 2, 11, 125A-125B, 186A-186B), Asian American studies, communication studies (except Communication Studies 142, 175), economics (except Economics 40, 141, 144, 145, 146, 147A, 147B), geography (except Geography 1, 2, 5, M102, 104, 105, 106, 108, 109, 110, 112, 171), history (History 3A or 3B may apply on the social science or physical science breadth requirements, but not on both; History 3C may apply on the social science or life science breadth requirements, but not on both), Indo-European Studies 131 and 132, political science, psychology (except Psychology 15, 41, 110, 111, 115, 116, 117, 118A, 118B, 118C, 118D, 118E, M118F, 119, 120, 121, 142), sociology (except Sociology 18). Also applicable: journalism—UCLA courses only (except Journalism 101A, 101B, 182A), Kinesiology 106, Linguistics 100, 103, 170, Music 149, Women's Studies 100, M148.

(D) Humanities

Any courses for which you are eligible in classics, Communication Studies 142, 175, English (except English 136A-136B-136C), English as a second language (except English as a Second Language 33A, 33B, 33C, 34, 103J, 103K, 106K, 107K, 109K, 111K, 122K), folklore, French, Germanic languages, humanities, Indo-European Studies M150, Italian, linguistics (except 100, 103, 170), Near Eastern languages, Oriental languages, philosophy (except 125, 128A, 128B, 134, 135), Slavic languages, Spanish and Portuguese, speech, Women's Studies M158. (Foreign language conversation courses may be applied under the old requirements to Plan A breadth only.)

The following courses in the College of Fine Arts are applicable on breadth in humanities:

Art 50, 51, 54, 55, 56, 57, 101A, 101B, 101C, 102, 103A-103D, 104B, 104C, 104D, 105A-105E, 106A, 106B, 106C, 108A, 108B, 109A-109D, 110A-110D, 112A, 112B, 112C, 114A-114D, 115A, 115B, 115C, 118A-118D, 119A, 119B, 120A, 120B, 120C, 121A, 121B, 122

Dance 140A-140B-140C, 151A, 151B

Music 2A-2B, 130, 131A-131B, 132A-132B, 133, 134, 135A-135B-135C, 137A-137B, 138, 139, 140A-140B-140C, 141, 142A-142B, 143A-143B, 144, 145, 147A-147B, 152, M154A-M154B, 157, 159, M180, M181, 188A-188Z, 189

Theater Arts 5A, 5B, 5C, 102A, 102B, 102D, 102E, 103A, 103B, 104D, 104E, 104F, 105, 106A-106E, 108, 110A, 113, 114, 130A, 130B

Old Requirements

Students who have completed 36 or more quarter units prior to the beginning of Fall Quarter 1978 may choose to complete the new breadth requirements, or Plan A or Plan B as described in the 1981-82 *UCLA Undergraduate Catalog*.

Courses taken prior to Fall Quarter 1978 may be applied according to the list in the catalog of the year in which the course was taken.

Students reentering the College after an extended absence may petition the Dean of the College to graduate under the breadth requirements of catalogs published prior to Fall 1979.

Credit for Advanced Placement Tests

You may fulfill a part of the College requirements with credit allowed at the time of admission for College Entrance Examination Board Advanced Placement Tests with scores of 5, 4 or 3. Any student who has completed 36 quarter units at the time of the examination will receive no Advanced Placement Test credit. Students with Advanced Placement credit may exceed the 210-unit maximum by the amount of this credit. Advanced Placement Test credit will fulfill requirements in the College of Letters and Science as follows:

TEST	CREDIT ALLOWED ON COLLEGE REQUIREMENTS
Art History	10 units toward humanities
Biology	Credit for Biology 2 (4 units) plus 6 units toward life science
Chemistry	10 units toward physical science
English	Composition and Literature: Score 3 — satisfaction of Subject A requirement and 10 units toward humanities Score 4 or 5 — satisfaction of Subject A requirement and English 3 and 4 (10 units) Language and Composition: Score 3 — satisfaction of Subject A requirement and 10 units toward humanities Score 4 or 5 — satisfaction of Subject A requirement and English 3 (5 units) plus 5 units toward humanities
Foreign Language	Credit for course 5 (10 units toward humanities)
Foreign Literature	10 units toward humanities
History, American	Credit for History 7A-7B (satisfies American History and Institutions requirement and counts as 10 units toward social science)
History, European	Credit for History 1C (4 units) plus European history (6 units) toward social science
Mathematics (AB test)	Credit for Mathematics 31A (5 units toward physical science)[1]
Mathematics (BC test)	Credit for Mathematics 31A, 31B (10 units toward physical science)[1]
Music, Literature	10 units toward humanities
Physics (B test)	10 units toward physical science[2]
Physics (C test)	5 units for C1 and 5 units for C2 toward physical science[2]

Some portions of Advanced Placement Test credit are evaluated by corresponding UCLA course number. If a student takes the equivalent UCLA course, a deduction of UCLA unit credit will be made prior to graduation.

[1]Students who pass the Mathematics AB examination with a score of 3, 4 or 5 receive 5 units of credit for Mathematics 31A. Students who score 3, 4 or 5 on the Mathematics BC examination will receive 10 units of credit for Mathematics 31A, 31B. Students who take both examinations will receive a maximum of 10 units of credit.

[2]Students who pass the Physics B examination with a score of 3, 4 or 5 will receive 10 units of credit for General Physics. Students who score 3, 4 or 5 on the Physics C, part 1, examination will receive 5 units of credit for General Physics. Students who take Physics C, parts 1 and 2, will receive 10 units of credit for General Physics. Students who take both the Physics B and C examinations will receive a maximum of 10 units of credit.

Credit by Examination

Within the College of Letters and Science, eligibility for credit by examination is for the most part limited to students who have established their superiority by being approved as Departmental Scholars or by their participation in a departmental honors program or by their admission to the Division of Honors.

Students may petition for credit by examination for one course at a time. The examination for that course must be taken successfully before a student may petition again for credit by examination in another course. Petitions for credit by examination are available only through an appointment with a College counselor. A $5 fee will be charged for each petition. Approval is given or withheld by the Dean of the Division of Honors who may limit the number of such petitions any student presents.

Choosing a Major in the College of Letters and Science

Choosing an area of academic specialization from the long list of majors offered by the College of Letters and Science is one of the most important decisions you will make at UCLA.

Any student with 90 or more units toward a degree must declare a major. If you have already declared your major—or are about to declare it—you can skip this section, picking up again at "Regulations Governing the Major."

Entering Students

If you are a freshman, you may be a bit uncertain about your specific academic goals. Many entering students do not specify a major, preferring instead the "undeclared major" route.

Students who have not declared a major often take introductory courses in the natural sciences, social sciences and the humanities as a way to search for the area that most excites their interest.

Then, once you choose a major you will probably find that some of the courses you have sampled will count toward fulfilling breadth requirements.

Continuing Students

If you are heading for the 90-unit limit and have still not declared a major, you should file a "Petition for Declaration of Major" with the College Office after receiving a favorable recommendation from either the department or committee which governs the major.

Available Resources

You can get a variety of help with academic planning—setting goals and getting to them—from the **College of Letters and Science Academic Counseling Office** in 1312 Murphy Hall (825-1965 or 825-1687), **Academic Resources Coordination** in Murphy Hall (206-6681), **Psychological and Counseling Services** in 4223 Math Sciences (825-7057) and the **Placement and Career Planning Center** located just south of Powell Library (825-2981).

Also, most departments have faculty members and counselors who are available to discuss in detail the offerings in their specialization(s).

Printed resources to help you are listed at the end of this section; you will also find sources of academic assistance in the "Resources to Help You" section of this catalog.

Regulations Governing the Major

A major shall consist of not less than nine (36 units) nor more than 15 (60 units) upper division courses, except that a departmental major may be increased by three more upper division courses (12 units) in other departments, with the approval of the Executive Committee of the College.

There are three categories of majors in the College of Letters and Science: **departmental, interdepartmental** or **individual.**

Departmental and Interdepartmental Majors

A departmental major consists of a group of coordinated upper division courses, of which at least six courses are in one department, set up and supervised by a department.

An interdepartmental major consists of at least 13 coordinated upper division courses, of which not more than eight are in one department, set up and supervised by a committee appointed by the Executive Committee of the College.

A student who has been away from the University for several terms should consult with his major department or curriculum advisor concerning the major requirements under which he will graduate.

Individual Major

A student who has some unusual but definite academic interest for which no suitable major is offered at the University of California and who has completed at least three quarters of work (a minimum of nine courses) at the University with a grade-point average of 3.4 or higher may, with the consent of the Dean of the Division of Honors and with the assistance of a faculty advisor appointed by the Dean, plan an individual major.

The **individual major** must be submitted to and approved by the Dean of the Division of Honors no later than the first week of classes of the third quarter before intended graduation. Your request should be accompanied by a statement defining the purposes of the major and its relation to your goals, and explaining the reasons why the program cannot be accommodated within some existing major. There must be an accompanying statement from a faculty advisor indicating that there has been significant faculty consultation in devising the program. The faculty advisor should be a regular member of the faculty of the College of Letters and Science, with a professorial title in a department that offers a major in the College.

Each request for an individual major should list the course numbers and titles in the preparation for the major and in the major itself, including an indication of the relevance of each course or group of courses to the program. The major should consist of at least twelve and not more than fifteen upper division courses, a majority of which are in departments offering a major in the College.

The major may not include any courses taken on a P/NP basis. CED and other experimental courses may not be used as part of a major.

A senior thesis is required of each student with an individual major. An outline of the thesis, worked out with the help of the faculty advisor, should be submitted to the Division of Honors Office no later than the first week of the second quarter before graduation. The faculty advisor will pass final judgment on the quality of the thesis; a copy of the thesis must be filed in the Division of Honors Office. The Dean must certify that you have completed the requirements of your major, including completion of the thesis, before the degree is granted. The title of the major will not appear on the diploma, but will be entered in the memoranda column on your official transcript. The major will be indicated on the diploma as Individual Field of Concentration. Further information about the individual major may be obtained at the Division of Honors Information Window or from one of the Division of Honors counselors.

Double Majors

Students in good standing are sometimes permitted to have a **double major**, consisting of two departmental majors in this College, provided they can be completed within the maximum limit of 208/210 units.

Double majors in the same department with very few exceptions are unacceptable. If the majors are not in the same division, the student will designate one of the two majors as the principal one, in order to identify the division for the purpose of satisfying the breadth requirements. Courses used to satisfy the requirements for the principal major may also be used to satisfy the requirements for the secondary one, but **not more than five courses may be common to both majors.**

For double majors, courses outside the department of the principal major which are required in preparation for that major may be used to satisfy the breadth requirements. Courses required for the secondary major (including preparation for the major) may be used to satisfy any set of breadth requirements.

Changing Your Major

A student in good standing who wishes to *change a major* may petition the department or committee in charge of the proposed new major, provided that the proposed new field of study can be completed **without exceeding the 208/210-unit limit.** Final action on the petition will be taken by the Dean of the College. Certain majors may be unavailable. A change of major may be denied if all preparatory courses have not been satisfactorily completed. Some departments have established specific grade requirements on courses taken in preparation for the major. A student on probation may not normally change his major. No change of major will be permitted after the opening of the student's last quarter. Each student who has declared a major should be advised by a representative of the department or committee before enrolling in classes.

Students who fail to attain a grade-point average of at least "C" (2.0) in work taken in the prerequisites for the major or in courses in the major, may, at the option of the department or committee in charge, be denied the privilege of entering or of continuing in that major.

Organized Majors in the College of Letters and Science

The College of Letters and Science offers the following departmental majors, which lead to a degree of Bachelor of Arts; those followed by an asterisk (*) lead to a degree of Bachelor of Science.

African Languages
Ancient Near Eastern Civilizations
Anthropology
Arabic
Astronomy
Atmospheric Sciences*
Biochemistry*
Biology
Chemistry*
Chinese
Classical Civilization
Classics
Economics
Economics/Business
English
English/Greek
English/Latin
French
French and Linguistics
General Chemistry*
General Physics
Geography
Geography/Ecosystems
Geology*
Geology (Engineering Geology)*
Geology (Geochemistry)*
Geology (Nonrenewable Natural Resources)*
Geology (Paleobiology)*
Geophysics (Applied Geophysics)*
Geophysics (Geophysics and Space Physics)*
German
Greek
Hebrew
History
Italian
Italian and Special Fields
Japanese
Jewish Studies
Kinesiology*
Latin
Linguistics
Linguistics and Computer Science
Linguistics and English
Linguistics and French
Linguistics and Italian
Linguistics and Oriental Languages
Linguistics and Philosophy
Linguistics and Psychology
Linguistics and Scandinavian Languages
Linguistics and Spanish
Mathematics
Mathematics/Applied Science
Microbiology
Philosophy
Physics*
Political Science
Portuguese
Psychobiology*
Psychology, General
Quantitative Psychology
Russian Civilization
Russian Linguistics
Scandinavian Languages
Slavic Languages and Literatures
Sociology
Spanish
Spanish and Linguistics

You can find a detailed description of each of these majors in the "Majors and Courses of Instruction" section of this catalog.

Interdepartmental Majors

In addition, the College offers some 13 majors which cross departmental boundaries in their field of inquiry. Each of the interdepartmental majors listed below leads to the degree of Bachelor of Arts; those marked with an asterisk (*) lead to the degree of Bachelor of Science.

Afro-American Studies
Chemistry/Materials Science*
Chicano Studies
Communication Studies
Cybernetics*
East Asian Studies
Economics/System Science*
Ethnic Arts (Intercollege)
Individual Field of Concentration
Latin American Studies
Mathematics/Computer Science*
Mathematics/System Science*
Near Eastern Studies
Study of Religion

You can find a detailed description of each of these majors under their headings in the "Majors and Courses of Instruction" section of this catalog.

Major in Afro-American Studies

The major in Afro-American Studies is designed to provide students with a program of courses leading to a Bachelor of Arts degree in Afro-American Studies. The major offers an opportunity to systematically study the origins, experiences and conditions of people of African descent in the United States and elsewhere in the New World.

Majors are exposed to multidisciplinary approaches to Afro-American studies. In addition, majors must select a concentration within a department in the social sciences, humanities or fine arts.

Counseling is available in the department of concentration, in the College of Letters and Science and in the program office (3111 Campbell Hall).

For details of the curriculum leading to the degree of Bachelor of Arts, see "Afro-American Studies" in the "Majors and Courses of Instruction" section of this catalog. For further information, contact Professor Halford Fairchild, Afro-American Studies, 3111 Campbell Hall (825-7403, 825-2961).

Major in Chemistry/Materials Science

This major is designed for students who are interested in solid state chemistry, the preparation of engineering materials such as semiconduc-

tors, glasses, ceramics, metals and polymers, the reactivity of such materials in different environments and how chemical compositions affect properties. It provides appropriate preparation for graduate studies in many fields emphasizing interdisciplinary research involving chemistry, engineering and applied science.

For details of the curriculum leading to the Bachelor of Science degree, see "Chemistry/Materials Science" in the "Majors and Courses of Instruction" section of this catalog. For further information, contact Professor John D. Mackenzie, Engineering/Materials Science, 6531 Boelter Hall (825-3539).

Major in Chicano Studies

This multidisciplinary program leading to the Bachelor of Arts degree in Chicano Studies is designed to provide systematic instruction for liberal arts and preprofessional majors who wish concentrated study of the Chicano experience.

For details of the curriculum leading to the Bachelor of Arts degree, see "Chicano Studies" in the "Majors and Courses of Instruction" section of this catalog. For further information, contact Dr. Carlos Haro, Chicano Studies Research Center, 3121 Campbell Hall (825-2363).

Major in Communication Studies

The major in Communication Studies seeks to provide the student with a comprehensive knowledge of the nature of human communication, the symbol systems by which it functions, the environments in which it occurs, its media and its effects. The major draws its resources from the social sciences, humanities and fine arts.

For details of the curriculum leading to the Bachelor of Arts degree, see "Communication Studies" in the "Majors and Courses of Instruction" section of this catalog. For an application and further information, contact Diane Simpson, Communication Studies, 232 Royce Hall (206-8446).

Major in Cybernetics

This major provides an introduction to quantitative foundations of information processing, communication, control and system analysis, accompanied by complementary studies of models and phenomena arising in the life sciences, health sciences, bioengineering, psychology and other social sciences. The major is appropriate preparation for employment or for graduate or professional studies emphasizing interdisciplinary activity.

For details of the curriculum leading to the Bachelor of Science degree, see "Cybernetics" in the "Majors and Courses of Instruction" section of this catalog. For further information, contact Professor Joseph J. DiStefano, Engineering Systems, 4731K Boelter Hall (825-7482, 825-4033).

Major in East Asian Studies

This major is designed to serve students who wish to study and/or reside in the Chinese- and Japanese-speaking areas of East Asia and the Asian American communities.

For details of the curriculum leading to the Bachelor of Arts degree, see "East Asian Studies" in the "Majors and Courses of Instruction" section of this catalog. For further information, contact Professor David M. Farquhar, History, 9381 Bunche Hall (825-3078).

Major in Economics/System Science

This major is an alternative to the regular departmental major in Economics and combines work in the Department of System Science (School of Engineering and Applied Science) with preparation in economic theory and in those aspects of mathematics and statistics that are necessary for the study of quantitative aspects of economics and systems theory.

For details of the curriculum leading to the Bachelor of Science degree, see "Economics/System Science" in the "Majors and Courses of Instruction" section of this catalog. For further information, contact the Engineering/System Science Departmental Administrator, 4532 Boelter Hall (825-6830) or Lora Clarke, Economics, 2253 Bunche Hall (825-5118).

Intercollege Major in Ethnic Arts: Interdisciplinary Studies

This is an interdisciplinary major open to students in both the College of Fine Arts and the College of Letters and Science.

The student remains in the College of his choice and fulfills the breadth requirements of that College. The student will normally elect his area of concentration when accepted into the major.

Admission to the major will be by special application to the Committee in Charge. For details of the major, see "Ethnic Arts" in the "Majors and Courses of Instruction" section of this catalog.

For further information, contact Wendy Urfrig, Dance/Ethnic Arts, 205 Women's Gym (825-3951, 825-8537).

Major in Latin American Studies

For details of the curriculum leading to the degree of Bachelor of Arts, see "Latin American Studies" in the "Majors and Courses of Instruction" section of this catalog. Students should see an advisor in the Latin American Center, 10343 Bunche Hall (206-6571).

Major in Mathematics/Computer Science

The Mathematics/Computer Science major, an alternate to the regular departmental major in Mathematics, consists of an integrated program of courses offered by the Department of Mathematics and the Computer Science Department (School of Engineering and Applied Science).

For details of the curriculum leading to the Bachelor of Science degree, see "Mathematics/Computer Science" in the "Majors and Courses of Instruction" section of this catalog. For further information, contact Sally Yamashita, Mathematics, 6356 Math Sciences (825-4701).

Major in Mathematics/System Science

This major is an alternate to the regular departmental major in Mathematics and combines work in the Department of System Science (School of Engineering and Applied Science) with thorough preparation in mathematics, including those aspects significant in the theory of systems, information and control.

For details of the curriculum leading to the Bachelor of Science degree, see "Mathematics/System Science" in the "Majors and Courses of Instruction" section of this catalog. For further information, contact Sally Yamashita, Mathematics, 6356 Math Sciences (825-4701).

Major in Near Eastern Studies

This major is designed primarily for the following students: (1) those seeking a general education and desiring a special emphasis in this particular area, (2) those who plan to live and work in the Near East whose careers will be aided by a knowledge of its peoples, languages and institutions and (3) students preparing for academic study in the various disciplines pertaining to the Near East.

For details of the curriculum leading to the Bachelor of Arts degree, see "Near Eastern Studies" in the "Majors and Courses of Instruction" section of this catalog. For further information, contact the Von Grunebaum Center for Near Eastern Studies, 10286 Bunche Hall (825-1181) or Professor Michael Morony, History, 6242 Bunche Hall (825-1962).

Major in Study of Religion

The UCLA major in the Study of Religion has a twofold purpose. In the first place it is designed to give students a broad humanistic perspective. It introduces students to several religious traditions of mankind and thus to an appreciation of the very nucleus of civilization in various periods of history and various parts of the world, as well as to an understanding of fundamental human orientations. In the second place, the program asks the student to select one particular religious tradition for study at greater depth.

For details of the curriculum leading to the Bachelor of Arts degree, see "Study of Religion" in the "Majors and Courses of Instruction" section of

this catalog. For further information, contact Professor Kees Bolle, History, 5387 Bunche Hall (825-3780, 825-4601).

Special Program in African Studies

This program is designed primarily for (1) students who plan to live and work in Africa or who are interested in government and public service careers involving African affairs and (2) students who plan to pursue graduate work in one of the social sciences or Near Eastern and African languages with primary concentration on the African field.

For details of the program, see "African Studies" in the "Majors and Courses of Instruction" section of this catalog. For more information, contact Maxine Driggers, African Studies Center, 10244 Bunche Hall (825-2944) or Professor Christopher Ehret, History, 6265 Bunche Hall (825-4093).

Special Program in Asian American Studies

The Program in Asian American Studies is intended to promote the study of Asian and Pacific peoples in the United States from several disciplines. It provides a general introduction to Asian American studies for those who anticipate advanced work at the graduate level or careers in research and community work related to the Asian American.

For details of the program, see "Asian American Studies" in the "Majors and Courses of Instruction" section of this catalog. For further information, contact Tim Dong, Asian American Studies Center, 3232 Campbell Hall (825-2974).

Program in Business and Administration

This program is not a major, but a sequence of supplemental courses designed to prepare students for the complexities of a career in business and administration.

For details of the program, see "Business and Administration" in the "Majors and Courses of Instruction" section of this catalog. For further information, contact a counselor in the College of Letters and Science, Window 4, 1312 Murphy Hall (825-3382).

Certificate Program in Diversified Liberal Arts

In order to earn a credential to teach in California elementary schools, a student must complete the Teacher Credential Program in the Graduate School of Education *and either* earn a satisfactory score on the Commons Section of the National Teachers Examination or complete the Diversified Liberal Arts Program (DLAP) in the College of Letters and Science.

For details of the program, see "Diversified Liberal Arts" in the "Majors and Courses of Instruction" section of this catalog. For further information, contact a counselor in the College of Letters and Science, Window 4, 1312 Murphy Hall (825-3382). For information regarding the Teacher Credential Program in the Graduate School of Education, students *must see a counselor in 201 Moore Hall (825-8326).*

Special Program in International Relations

This program can only be taken jointly with a major in Political Science, and all requirements for the Political Science major must be met by or in addition to meeting the requirements for this special program. The student completing this special program will receive a degree with a major in Political Science and specialization in International Relations.

For details of the program, see "International Relations" in the "Majors and Courses of Instruction" section of this catalog. For further information, contact Vicki Waldman, Political Science, 4256 Bunche Hall (825-3862).

Special Program in Urban Studies or Organizational Studies

Students may elect to combine one of these programs with a departmental major and may petition to have the area of specialization recognized with the bachelor's degree.

The option of completing an individual major in Urban Studies or Organizational Studies is also open to qualified students.

Students with departmental majors should seek advising in the appropriate department. Students interested in the individual major should consult a counselor in the College of Letters and Science.

For details of the programs, see "Urban Studies or Organizational Studies" in the "Majors and Courses of Instruction" section of this catalog. For further information, contact Professor Robert Fried, Political Science, 4289 Bunche Hall (825-4331).

Special Program in Women's Studies

Students completing a bachelor's degree may petition to receive a Women's Studies Specialization in addition to a major in their chosen discipline.

For details of the program, see "Women's Studies" in the "Majors and Courses of Instruction" section of this catalog. For further information, contact Mary M. Smith, Women's Studies Program, 240 Kinsey Hall (206-8101).

Preparing for a Professional School

The programs that follow are *not* degree programs in the College of Letters and Science. The purpose of each grouping of courses is to assist you if you plan to apply to a professional school at the end of your sophomore (90 units) or junior (135 units) year.

If you are not accepted by a professional school, you must declare a major in the College of Letters and Science and be able to complete the requirements for a degree without exceeding 208 units.

New students entering in these curricula will be listed as Undeclared Majors and will be advised in the College unless an advisor is named below in the presentation of the curriculum.

Prehealth Care Advising Office

Information and counseling on preparing for health care professional schools and assistance in putting together an application at the time of applying are available through the Prehealth Care Advising Office, College of Letters and Science. **Open counseling sessions are held weekly** for premeds, predents, prenurses and other prehealth students (time and place are announced in the "What's Bruin" section of the *Daily Bruin* and are posted outside 1332 Murphy Hall, 825-1817). Application blanks for AMCAS, MCAT, DAT, etc, may also be obtained from 1332 Murphy Hall (Window 9).

Students in the Division of Honors can make counseling appointments in 1331 Murphy Hall for general information concerning preparation for health care professional schools.

ASK counselors are on duty each weekday in the Court of Sciences by Young Hall. They can answer some basic prehealth care questions and give referrals.

In addition, specific advisors in prehealth are listed in the "Resources to Help You" section of this catalog.

Predental Curriculum: Three Years

The College of Letters and Science offers a predental curriculum designed to fulfill the basic educational requirements for admission to several dental schools and the general educational requirements of the College of Letters and Science. It is advised that you determine and satisfy the specific requirements of the dental schools to which you expect to apply.*

You will be more adequately prepared for the predental curriculum if the following subjects are taken in high school: English, history, mathematics (algebra, geometry and trigonometry), chemistry, physics and foreign language.

The 135 quarter units of work required for admission to the UCLA School of Dentistry include the following:

General University Requirements: (1) Subject A; (2) American History and Institutions.

Specific UCLA School of Dentistry Requirements:** (1) English 3 and 4; (2) sciences: Chemistry 11A, 11B, 11BL, 11C, 11CL, 21, 23, 25, Physics 3A, 3B, 3C or 6A, 6B, 6C or 8A, 8B, 8C, Biology 5, 7, 8, 8L, 138, Psychology 10.

Social sciences and humanities should also be included in the 135 quarter units for which you may consider such courses as anthropology, history, economics, psychology, political science, appreciation of art and/or music and philosophy.

For further information, consult *Admissions Requirements of U.S. and Canadian Dental Schools,* AADS, 1625 Massachusetts Avenue NW, Washington, DC 20036.

Sample copies of the Dental Admission Test (DAT) are available in the Prehealth Care Advising Office; **open counseling sessions are held weekly** (call 825-1817 for details).

---

*School of Dentistry, see Predental Requirements.
**Other dental schools may have different requirements.

Predental Hygiene Curriculum: Two Years*

The University offers a four-year program in Dental Hygiene leading to the degree of Bachelor of Science. The first two years may be taken at Los Angeles; the last two years must be taken at the School of Dentistry in San Francisco. Admission to UCSF is by competitive application.

The 90 quarter units of work required for admission to the School of Dentistry include general University requirements and additional specific requirements as follows (the courses referred to are UCLA courses which fulfill the requirements):

Curriculum Requirements: (1) Subject A; (2) American History and Institutions (the examination in American History and Institutions may be taken at the School of Dentistry, but it is preferable to satisfy the requirements in the predental program); (3) one year of English which includes English 3; (4) Chemistry 11A, 11B, 11BL, 11C, 11CL, 21, 23, 25; (5) Biology 5, 7, 8, 8L; (6) Physics 3A, 3B, 3C or 6A, 6B, 6C or 8A, 8B, 8C; (7) Psychology 10 and one additional psychology course; (8) 16 units in social sciences and humanities (including foreign language).

Open counseling sessions are held weekly; call 825-1817 for details.

---

*The School of Dentistry reserves the right to limit enrollment if applications exceed available facilities and to require interviews and aptitude tests if they are necessary in the selection of the class. For further information, see the *Announcement of the School of Dentistry, San Francisco.*

Premedical Studies: Four Years

Students who intend to apply for admission to a medical school and who wish to complete the requirements for a bachelor's degree before such admission should select a major within the College. *Medical schools have no preference as to major. You should choose the major in which you are most interested and can do best.* In addition to fulfilling the requirements of the chosen major, you are advised to ascertain and satisfy the specific requirements for medical schools to which you expect to apply.

High school preparation for premedical studies at the University should include: English, three units; United States history, one unit; mathematics, three and one-half units; chemistry, one unit; physics, one unit; biology, one unit; foreign language (preferably French or German), two units. It is desirable that a course in freehand drawing be taken in high school.

Usually the following courses are required for admission to the UCLA Medical School: (1) English, 12 quarter units including at least one course in English composition; (2) Chemistry 11A, 11B, 11BL, 11C, 11CL, 21, 23, 25; (3) Physics 3A, 3B, 3C or 6A, 6B, 6C or 8A, 8B, 8C; (4) biology: two years of college biology to include the study of cellular, molecular, developmental and genetic biology, including at least one year of upper division courses. Required lower division biology courses are 5, 7, 8, 8L; suggested upper division courses are selected from the following: 110, 138, 144, CM156, 166. Courses in physical chemistry and calculus are strongly recommended. Course requirements for admission to other University of California medical schools vary slightly (e.g., UCLA and UCSD require genetics).

Requirements for admission to medical schools outside the University of California also vary somewhat so that students should consult the publication, *Medical School Admission Requirements, USA and Canada,* Association of American Medical Colleges, 1 Dupont Circle NW, Washington, DC 20036. Also consult *The Education of Osteopathic Physicians,* AACOM, 4720 Montgomery Lane, Suite 609, Washington, DC 20014. In addition, look at *The New MCAT Student Manual* (also an AAMC publication available at the above AAMC address). **Open counseling sessions are held weekly;** call 825-1817 for details.

Prenursing Curriculum: Two Years

The University offers a four-year course leading to the Bachelor of Science degree in Nursing. The prenursing curriculum in the College of Letters and Science is designed to prepare students for the program in the School of Nursing. You should apply to the School of Nursing when you have completed or have in progress 84 quarter credits of liberal arts courses with a grade-point average of at least 2.8. Since you must apply during the Fall of the year prior to the year in which you wish to be enrolled, you must present your proposed curriculum for the remaining quarters.

The curriculum as set forth below includes the specific requirements for application to the School of Nursing. Enrollment in the School is limited.

Since students who have completed the two-year prenursing curriculum cannot be assured of admission to UCLA's School of Nursing, all prenursing students should become familiar with the admission requirements of other nursing programs. These requirements vary from school to school so *it is imperative that prenursing students obtain this information as early in their college careers as possible.* Contact schools of nursing directly and attend **open counseling sessions** in UCLA's School of Nursing (times are posted in the Office of Student Affairs, 2-137 Factor Building) and those given by the Prehealth Care Advising Office (posted by 1332 Murphy Hall, 825-1817). Students who are not accepted by the School of Nursing must declare a major in the College of Letters and Science to be admitted to the College.

New students admitted to the College in this curriculum will be counseled in the College as Undeclared Majors, but may seek additional advisement during posted weekly open counseling sessions. Students in the College who do not transfer to the School of Nursing must declare a major and be able to complete all degree requirements within 208 units.

Prenursing Requirements: (1) Anthropology 5; (2) Biology 5, 7; (3) Chemistry 11A, 15, 15L; (4) English 3; (5) Kinesiology 13; (6) Microbiology 10; (7) Physics 10 or one year of high school physics; (8) Psychology 10, 15; (9) Public Health 160 or 161; (10) Sociology 1 or 101; (11) recommended electives in the social and biological sciences.

Preoptometry Curriculum: Three Years

A three-year program designed to prepare students for admission to optometric schools may be completed in the College of Letters and Science. Students planning to transfer to the School of Optometry at Berkeley are advised to contact the Dean of the School of Optometry, University of California, Berkeley, CA 94720, as early in their preprofessional studies as possible.

You will be adequately prepared for preoptometric studies if you have taken the following subjects in high school: English, history, mathematics (algebra, geometry and trigonometry), chemistry, physics and two years of a single foreign language.

The 135 quarter units of work required for admission to the School of Optometry, Berkeley, include the following:

General University Requirements: (1) Subject A; (2) American History and Institutions.

Specific UCB School of Optometry Requirements: (1) English 3, 4; (2) Chemistry 11A, 11B, 11BL, 11C, 11CL, 21; (3) Physics 3A, 3B, 3C or 6A, 6B, 6C or 8A, 8B, 8C; (4) Biology 5, 6, 8, 8L; (5) Psychology 10; (6) Mathematics 3A, 3B, 3C or 31A, 31B and 50A or Psychology 41; (7) Microbiology 10; (8) Kinesiology 12, 13; (9) two upper division courses in the biological sciences.

The balance of the 135 quarter units required for admission may be selected from the social sciences, foreign languages and the humanities.

For further information, see *Information for Applicants to Schools and Colleges of Optometry* which can be obtained from the American Optometric Association, 243 Lindbergh Boulevard, St. Louis, MO 63141. **Open counseling sessions are held weekly;** call 825-1817 for details.

Prepharmacy Curriculum: Two Years

The School of Pharmacy on the San Francisco campus of the University offers a four-year curriculum leading to the degree of Doctor of Pharmacy. To be admitted to this curriculum you must have met all requirements for admission to the University and have completed, with an average grade of "C" (2.0) or better at the University of California or at another institution of approved standing, at least 90 quarter units of the program set forth below. Students taking prepharmacy work at the University of California normally will be enrolled in the College of Letters and Science. If taken elsewhere, the courses elected must be equivalent to those offered at the University of California. In order to complete prepharmacy studies in the minimum time, you should complete elementary chemistry, trigonometry and a full year of intermediate algebra in high school.*

Curriculum Requirements (First Year): (1) Subject A; (2) English 3, 4; (3) Chemistry 11A, 11B, 11BL, 11C, 11CL; (4) trigonometry and intermediate algebra (if not completed in high school); (5) electives: a total of 28 quarter units should be selected from courses in foreign language, social sciences and humanities (within the two-year preparation).

Curriculum Requirements (Second Year): (1) Biology 5, 6, 6L, 7, 8, 8L; (2) Physics 3A, 3B, 3C or 6A, 6B, 6C or 8A, 8B, 8C; (3) Mathematics 3A, 3B, 3C or 31A, 31B; (4) American History and Institutions.

For further information, contact Robert LeWinter, Director of Pharmaceutical Services, A7-222 Center for Health Sciences (206-6555). **Open counseling sessions are held weekly;** call 825-1817 for details.

*Students who have completed the two-year prepharmacy curriculum at Los Angeles cannot be assured of admission to the School of Pharmacy on the San Francisco campus. When the number of qualified applicants for the Doctor of Pharmacy curriculum exceeds the available facilities, selection will be made on the basis of scholarship as determined from the College record. A personal interview may be required. Applicants to the School of Pharmacy, San Francisco campus, should contact the School in early Fall of the year preceding the September of proposed admission. Contact the Office of Student Affairs, School of Pharmacy. Applications may be obtained from the office of the Director of Admissions, University of California Medical Center, San Francisco, CA 94122, (415) 666-2732. For further information, see the *Announcement of the School of Pharmacy, San Francisco*, which may be obtained from the Dean, School of Pharmacy, University of California Medical Center, San Francisco, CA 94122.

Prephysical Therapy Curriculum: Three or Four Years

Students who intend to apply for admission to a physical therapy school should select a major (Kinesiology and Psychology are commonly selected) and complete the following prerequisite courses: one course in human anatomy (Kinesiology 13 or 14) and one course in physiology (Kinesiology 12); two courses in biology (Biology 5, 7); two courses in chemistry (Chemistry 11A, 15, 15L); Physics 10 or 3A, 3B; Psychology 10, 115, 127, 130. Recommended: one course in statistics. The prerequisite courses should be taken for a letter grade and not on a P/NP basis. GPAs for these courses should not be lower than 3.0, with no grade lower than a "C".

Information on physical therapy programs in California can be obtained from the Student Affairs Office in the Department of Kinesiology, 212 Men's Gym (825-3891). Students are urged to write each school early in their sophomore year to obtain details concerning specific admission requirements and application deadlines. Information concerning out-of-state programs can be obtained from the American Physical Therapy Association, 1156 NW 15th St., Washington, DC 20005.

Prepublic Health Curriculum: Two Years

See the *Announcement of the UCLA School of Public Health*, the section of this catalog under "Public Health" and/or request further information from the Office of Student Affairs, 16-071 Public Health, UCLA, Los Angeles, CA 90024.

Prelaw Studies

Law schools have no preference with regard to specific majors or particular courses. Admission to law school is based on the quality of an applicant's academic work, LSAT scores and other qualities as reflected in letters of recommendation, in the written application and in interviews. The College of Letters and Science offers advising on preparing for and applying to law schools through **weekly drop-in counseling sessions.** For the time and place of the drop-in sessions, see the "What's Bruin" section of the *Daily Bruin* or call 825-1965.

Students in the Division of Honors can make counseling appointments in 1331 Murphy Hall concerning preparation for law schools and letters of recommendation.

For additional information, see the *Law School Admission Bulletin* within the "Law School Admission Service Packet" (available at the Admissions Office, UCLA Law School) and *The Prelaw Handbook* (available at local book stores).

Need to Know More?

Take a look at the "Resources to Help You" section of this book. You will find some signposts to getting the guidance you need.

There are also several publications to help you:

Finders Keepers is a handbook to UCLA with sections on general academic planning. Reference copies are available through all departmental, College, School and ASK counselors, at the College Library and University Research Library reference desks and at a number of other counseling locations (AAP, Academic Resources Coordination, Admissions, Dean of Students Office, Division of Honors Office, Placement and Career Planning Center and Psychological & Counseling Services).

Schedule of Classes is published quarterly by the Registrar and contains information on class meeting places, instructors and the number of units provided for each course. It also includes a calendar for add/drop dates, registration and final examination schedules. It is available for 30 cents at the Ackerman Union Students' Store, North Campus Student Center Store and Health Sciences Student Store. To obtain a copy by mail, send $1.50 to ASUCLA Students' Store, 308 Westwood Plaza, Los Angeles, CA 90024, ATTN: Mail Out.

Daily Bruin, UCLA's daily newspaper, advertises new classes and innovative programs being offered each quarter. Issues are available in the *Daily Bruin* boxes located all over the campus. *Be sure to* look at the "Official Notices" section for information and deadline dates on procedures and announcements from the administration (i.e., financial aid, the Colleges, etc.).

Lower Division Course Abstracts are offered each quarter and may be helpful in selecting the courses you want. Professors describe their courses in terms of content, goals and purposes, necessary skills, prerequisites, reading lists, labs, field trips, exams and papers. Reference copies are available through all departmental, College, School and ASK counselors, at the College Library and University Research Library reference desks and at a number of other counseling locations (AAP, Academic Resources Coordination, Dean of Students Office, Division of Honors Office, Orientation Office, Psychological and Counseling Services, and Undergraduate Admissions & Relations with Schools).

Update is a yearly publication that lists student evaluations of courses offered during the previous academic year and biographies of professors. By reviewing *Update* you can see what students thought about a particular course and professor. This may or may not influence your selection of classes. *Update* is available at the Information Desk (1st Floor) and the Students' Store (B Level) in Ackerman Union, at the North Campus Student Store and at the Information Desk on the 3rd Floor of Kerckhoff Hall.

If you need more information, the College of Letters and Science provides informal counseling of students at sites across campus through the ASK counselors program. Call 825-3470 for details.

Additionally, Academic Resources Coordination in Murphy Hall, Psychological and Counseling Services in 4223 Math Sciences and the Placement and Career Planning Center—located just south of Powell Library—can provide face to face, informal advice.

Lastly, if you are planning to apply to a professional school, it is a good idea to get a copy of its announcement; in most cases, these publications give a much more detailed picture of educational philosophy and admissions procedures and offer more information than is possible here.

School of Engineering and Applied Science

The undergraduate curriculum in the UCLA School of Engineering and Applied Science leads to a single degree, the Bachelor of Science in Engineering. The program provides a deep and broad education in the various fundamental branches of science and engineering while offering specialization in one of the major fields of engineering. The Bachelor of Science is intended to be a terminal, professional degree and/or to provide a basis for entering into graduate studies, not only in engineering but also in other professional schools such as medicine, law, dentistry and business management.

Fields of Instruction

Instruction is offered in: acoustical engineering, aerospace engineering, bioengineering, ceramic engineering, chemical engineering, civil engineering, computer engineering, control systems engineering, earthquake engineering, electrical and electronics engineering, general engineering, environmental engineering, fluid mechanics, geotechnical engineering, information and communications theory, manufacturing engineering, materials science, mechanical engineering, metallurgy, nuclear engineering, plasma engineering, soil mechanics, solid mechanics, structural engineering, systems science, and water resources.

Admission

Applicants for admission to the School of Engineering and Applied Science must satisfy the general admission requirements of the University as outlined in the section entitled "Admission" earlier in this catalog. In the future, entrance to the School may be based on the results of a further examination of student grades and test scores.

Applicants are encouraged to apply either at the freshman or junior level. Students who begin their college work at a California community college are expected to remain at the community college to complete the lower division requirements in chemistry, mathematics, physics and the recommended engineering courses before transferring to the University. Experience indicates that transfer students who have completed the recommended lower division program in engineering at California community colleges are able to complete the remaining requirements for the bachelor's degree in six quarters (two academic years) of normal full-time study.

Admission as a Freshman

While many students will take their first two years in engineering at a community college, an applicant may qualify for admission to the School of Engineering and Applied Science in freshman standing. It is anticipated that admission to the School will require that the following subjects be taken when satisfying the University admission requirements:

Algebra	2 years
Plane geometry	1 year
Trigonometry	½ year
Chemistry and physics with laboratory	2 years

It is also highly recommended that the student take a course in technical drafting while in high school.

Admission as a Junior

Applicants for admission to the School in junior standing should have completed 21 to 23 courses (84 to 92 quarter units) in good standing, including the following minimum subject requirements:

(1) Two and one-fourth courses in chemistry, equivalent to UCLA's Chemistry 11A, 11B, 11BL; (2) six courses in mathematics, equivalent to UCLA's Mathematics 31A, 31B, 32A-32B, 33A, 33B; (3) four courses in physics, equivalent to UCLA's Physics 8A, 8B, 8C, 8D.

Students transferring to the School from institutions which offer instruction in engineering subjects in the first two years, in particular, California community colleges, will be given credit for certain of the degree requirements (see the upper division segment).

Students who have been admitted to senior standing in the School on the basis of credit from another institution, from University Extension or from another College or School of the University must complete, subsequent to such admission, eight upper division courses which shall be used to satisfy part of their approved major field elective sequence.

Requirements for the Bachelor of Science Degree

The School of Engineering and Applied Science at UCLA awards the Bachelor of Science degree to students who have satisfactorily completed a program of four years of engineering studies.

The curricular requirements for the Bachelor of Science degree consist of the lower division and upper division segments (46¼ courses, 185 units) and the University requirements in scholarship, Subject A (English composition), American History and Institutions, and senior residence. You can find these requirements discussed in detail in the "Undergraduate Degree Requirements" section earlier in this catalog. At least a 2.0 grade-point average must be achieved in all University courses of upper division level offered in satisfaction of the subject requirements and required electives of the curriculum. The lower division and upper division requirements are described below.

Study Lists require approval of the Dean of the School or a designated representative. It is the responsibility of the student to present Study Lists which reflect satisfactory progress toward the Bachelor of Science in Engineering degree according to standards set by the faculty. Study Lists or programs of study taken by students which do not comply with these standards render the student liable to enforced withdrawal from the University or other disciplinary action.

After 213 quarter units, enrollment may not normally be continued in the School. The Dean may be petitioned for special permission to continue work required to complete the degree. This regulation does not apply to Departmental Scholars.

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

No credit will be allowed toward the bachelor's degree for Chemistry 2 or its equivalent after one year of high school chemistry has been completed with a grade of "C" or better.

No credit will be granted toward the bachelor's degree for college foreign language courses equivalent to quarter level 1 and 2 if the equivalent of course level 2 of the same language was completed with satisfactory grades in high school.

The Curriculum

The Engineering Curriculum is accredited by the Accreditation Board for Engineering and Technology, Inc. (formerly the Engineers' Council for Professional Development), the nationally recognized accrediting body for engineering programs.

Lower Division

Freshman Year	Units First Quarter	Units Second Quarter	Units Third Quarter
Chemistry 11A, 11B, 11BL	4	5	—
Mathematics 31A, 31B, 32A	4	4	4
Physics 8A, 8B	—	4	4
English 3	4	—	—

Freshman Year (cont)	Units First Quarter	Units Second Quarter	Units Third Quarter
Engineering 10*	—	—	4
Electives**	—	4	4
	12	17	16

*The Computer Science Department offers a placement examination each quarter during registration week to permit students to demonstrate proficiency in the subject area of Engineering 10 based on outside work experience and/or courses completed elsewhere. Satisfactory performance on the placement examination will exempt students from the Engineering 10 subject requirement and will allow them to select another technical or major field elective course of their choice to satisfy the unit requirement.
Normally, Engineering 10S will not satisfy the Engineering 10 requirement.
**The lower division electives shall include the following: one course in the life sciences, three courses in the humanities-social sciences-fine arts area and one free elective.

Sophomore Year	Units First Quarter	Units Second Quarter	Units Third Quarter
Mathematics 32B, 33A, 33B	4	4	4
Physics 8C, 8D	4	4	—
SEAS Core*	4	4	8
Electives**	4	4	4
	16	16	16

*The SEAS core requirement consists of 8 courses (32 units) to be chosen from 5 subject areas. The core is described immediately following the upper division segment of the curriculum. For courses to be taken in the sophomore year, students should consult their major field advisors.
**The lower division electives shall include the following: one course in the life sciences, three courses in the humanities-social sciences-fine arts area (all chosen from an approved list) and one free elective.

Upper Division

Prerequisite for junior status: satisfactory completion of the minimum subject requirements specified under admission to the School at the junior level.

Junior Year	Units First Quarter	Units Second Quarter	Units Third Quarter
SEAS Core*	8	4	4
Mathematics Elective**	4	—	—
Electives†	—	12	12
	12	16	16
Senior Year			
Electives†	16	16	16

*The SEAS core requirement consists of 8 courses (32 units) selected from five subject areas subject to the unit restrictions indicated in the table below.
**Upper division course to be chosen from a School-approved list.
†The upper division elective courses shall include the following: (1) Four courses in the humanities-social sciences-fine arts area; (2) two free electives; (3) twelve major field electives. For specific requirements within the humanistic and major field areas, please refer to the section entitled "Electives."

SEAS Core

The student is to select 8 courses (32 units) from the 5 subject areas listed below. The minimum and maximum number of units allowed in each of the 5 subject areas is also given.

Subject Areas (5)	Courses (12)	Unit Range Min.	Max.
Electrical Sciences	Engineering 100 — Electrical and Electronic Circuits (4) Engineering 100B — Engineering Electromagnetics (4)	4	8
Thermal and Materials Sciences	Engineering 14* — Science of Engineering Materials (4) Engineering 105A — Introduction to Engineering Thermodynamics (4) Engineering 105D — Transport Phenomena (4)	8	12
Mechanics	Engineering 102 — Mechanics of Particles and Rigid Bodies (4) Engineering 103 — Elementary Fluid Mechanics (4) Engineering 108 — Introduction to Mechanics of Deformable Solids (4)	8	12
Systems	Engineering 106B — Introduction to Design and Systems Methodology (4) Engineering 121C — Systems and Signals (4) Engineering 127B — Elements of Probability and Information (4)	4	8
Computer Processes	Engineering 124A — Applied Numerical Computing (4)	0	4

*Not open for credit to students with credit for Engineering 107B.

Credit for Transfer Students

A course in digital computer programming, using a higher-level language such as FORTRAN IV, PASCAL or PL/1, will satisfy the Engineering 10 requirement.

Certain lower division technical courses such as surveying, engineering drawing, engineering measurements and descriptive geometry will be given credit as free electives (a maximum of three courses may be free electives). See "Electives" below.

Many sophomore courses in circuit analysis, strength of materials and properties of materials may satisfy Engineering 100, Engineering 108 and Engineering 14 respectively.

Check with the Undergraduate Office, 6426 Boelter Hall.

Electives

The Engineering and Applied Science curriculum for the bachelor's degree includes provision for 24 elective courses to be chosen within the following categories.

(1) Free electives, 3 courses, 12 units

Any course yielding credit acceptable to the University of California except CLEP, certain remedial courses, and special courses designated by the School and posted in the Undergraduate Office, 6426 Boelter Hall, may be selected. It is, however, strongly recommended that you select additional technical courses for some of these units.

(2) Humanities, social sciences and/or fine arts, 7 courses, 28 units; to be chosen from an approved list

Of the seven courses, at least three (12 units) must be upper division courses. Students from California community colleges (only) may reduce this to two upper division courses (8 units) *provided* they are in the same field; however, *all* students, including California community college transfers, must have a minimum total of 7 humanities courses.

To provide some depth, at least three courses (12 units) must be in the same academic department or must otherwise reflect coherence in respect to subject matter. This group must contain at least two upper division courses.

With few exceptions, courses intended primarily to develop specific skills should be avoided (e.g., dexterity in performance on a musical instrument, ability to manipulate people, grammatical and composition skills, etc.). An exception is effective when the particular "skill" course is prerequisite to another upper division course which is strictly in the humanities or social sciences (e.g., foreign language and literature courses taught in the language, etc.).

A list of courses which are normally acceptable individually as humanities-social sciences-fine arts electives is available in the Undergraduate Office, 6426 Boelter Hall.

(3) Engineering and science in society, 1 course, 4 units

One of the seven humanities-social sciences-fine arts courses or one of the free electives shall be a course (4 units) dealing primarily with engineering and science in society in the 100, 200 or 596 series (to be chosen from an approved list).

(4) Life science, 1 course, 4 units; to be chosen from an approved list

(5) Mathematics, 1 course, 4 units (upper division); to be chosen from an approved list and appropriate for the student's major field of study

(6) Major field, 48 units (upper division)

The major field elective program shall be chosen so as to reflect coherence with respect to subject matter and to prepare the student for an area of specialization (including unified engineering). The twelve courses shall include (a) at least 8 units of laboratory experience to be satisfied by designated laboratory courses or a 4-unit laboratory course and two courses each including 2 units of laboratory experience and (b) one upper division course (4 units) in economics chosen from the SEAS approved list.

(7) The engineering design content of the student's program (major field electives, core courses, technical electives, free electives, etc) must total at least 23 units.

(8) The engineering science content of the student's program (major field electives, core courses, technical electives, free electives, etc) must total at least 46 units.

Lists of courses approved to satisfy the elective categories specified above are posted on the bulletin board in the Undergraduate Office, 6426 Boelter Hall.

Proposed Changes Effective 1982-83

The following proposed additions and changes in regulations and policies of the School of Engineering and Applied Science will be voted upon by the faculty. Subject to approval by the faculty and by the Academic Senate (if required), these revisions will be implemented in 1982-83:

(1) Engineering undergraduate students having met all the other conditions will be allowed to take one course per quarter on a Passed/Not Passed basis provided they are enrolled in at least 12 units for the quarter (this includes the course taken Passed/Not Passed).

(2) A student must pass English 3 with a grade of "C" or better. The English 3 requirement must be satisfied before completion of 90 quarter units.

(3) After completing 26 and ¼ courses (105 quarter units) in all institutions attended, including work completed at UCLA, students will be allowed no further unit credit or subject matter credit for courses completed at a community college.

(4) Of the last 48 units completed for the bachelor's degree, 36 must be earned in residence in the School of Engineering and Applied Science on this campus. Not more than 16 of the 36 units may be completed in Summer Session on the Los Angeles campus.

(5) For graduation, a minimum 2.0 grade-point average must be achieved in all University courses in the combined upper division SEAS core, major field electives and upper division mathematics elective.

Advising and Program Planning

It is mandatory for all students entering the undergraduate program to have their courses of study approved by an Engineering advisor. After the first quarter, curricular and career advising will be accomplished on a formal basis.

Students will be assigned to faculty advisors matching their major fields of interest whenever possible. A specific advisor or an advisor in a particular Engineering Department may be requested by submission of a "Request for Change of Undergraduate Advisor" form available in the Undergraduate Office. A list of faculty members and their specialties is posted on the Undergraduate Office bulletin board located in 6426 Boelter Hall. Your regular faculty advisor is available to assist you in planning your electives and for discussions regarding your objectives.

Choose the curriculum under which you wish to graduate. You will use the curriculum in effect when you begin full-time continuous study in engineering at UCLA. However, any student has the option of selecting the curriculum in the *UCLA Undergraduate Catalog* in effect at graduation. Community college transfers have the additional option of choosing the curriculum in the catalog in effect at the time they began their community college work in an *engineering* program, providing attendance has been continuous since that time.

Attend the Junior Conference conducted by the School of Engineering and Applied Science for the purpose of helping you to plan your curriculum. The conference usually is held during the fourth week of each quarter. For time and place consult the Undergraduate Office, 6426 Boelter Hall.

Plan your electives. The "Elective Selection" form approved by the major field advisor must be submitted for approval by the Assistant Dean, Undergraduate Studies, Undergraduate Office, 6426 Boelter Hall, during the first quarter of the junior year. The deadline for juniors to submit their elective selections is announced each term in the *Undergraduate Enrollment Instruction* brochure, School of Engineering and Applied Science.

Members of the Undergraduate Office staff are available to assist you with University procedures and to answer any questions which you may have in regard to general requirements. Pay them a visit.

Passed/Not Passed

Engineering undergraduate students may take one course per quarter on a Passed/Not Passed basis if the following conditions are met:

(1) You are in good academic standing, i.e., not on academic probation or subject to academic dismissal.

(2) You are enrolled in at least 3½ courses (14 units) for the quarter including the course taken on a Passed/Not Passed basis.

(3) Only humanities-social sciences-fine arts and free electives may be taken on a Passed/Not Passed basis.

(4) If you have not elected the Passed/Not Passed option in the preceding quarter and you were eligible by virtue of units and scholastic criteria (items 1 and 2 above), you may take two courses Passed/Not Passed. You must submit a petition to the Dean for approval to take two courses on a Passed/Not Passed basis in one term.

(5) A student who has received two Not Passed grades shall be excluded from electing Passed/Not Passed for the next term in residence.

A grade of Passed shall be awarded only for work which would otherwise receive a grade of "C" or better.

Honors

Departmental Scholars

If you are an exceptionally promising junior or senior, you may be nominated as a Departmental Scholar to pursue bachelor's and master's degree programs simultaneously.

Minimum qualifications include the completion of 24 courses (96 quarter units) at UCLA or the equivalent at a similar institution, a 3.4 grade-point average and the requirements in preparation for the major. To obtain both the bachelor's and master's degrees, the Departmental Scholar will fulfill the requirements for each program and maintain a minimum average 3.4. The student may not use any course to fulfill requirements for both degrees.

Interested students should consult the Assistant Dean, Undergraduate Studies, 6426 Boelter Hall, well in advance of application dates for admission to graduate standing.

Dean's Honor List

Students following the engineering curriculum are eligible to be named to the Dean's Honor List each term. They must have carried a minimum load of 16 units, 12 units minimum of letter grade, with a grade-point average equal to or greater than 3.7.

Honors with the Degree

Students who have achieved scholastic distinction in upper division studies may be awarded the bachelor's degree with honors. Students eligible for Honors at Graduation must have completed 90 or more units (for a letter grade) at the University of California and must have attained a grade-point average which places them in the top five percent of the School for *Summa cum laude*, the next five percent for *Magna cum laude* and the next ten percent for *Cum laude*.

For all designations of honors, engineering students must have a minimum 3.25 grade-point average in their major field elective courses to qualify.

Tau Beta Pi

The UCLA chapter of *Tau Beta Pi*, the national engineering honor society, encourages high scholarship, provides volunteer tutors, and offers many services and programs "to foster a spirit of liberal culture in engineering colleges."

Student Activities

You will find an abundance and variety of extracurricular activities at UCLA which provide many opportunities for valuable experiences in leadership, service, recreation and personal satisfaction. The faculty of the School strongly encourages students to participate in such activities, especially those of most relevance to engineering. Among the latter are the student engineering society (the Engineering Society, University of California), the student publications, and the student-oriented programs of the many technical and professional engineering societies in the Los Angeles area.

The student body takes an active part in shaping policies of the School through elected student representatives, two for each of the faculty's three major policy committees.

Women in Engineering

Women make up 20.2 percent of the undergraduate and 12.5 percent of the graduate enrollment in the School of Engineering and Applied Science. Today's opportunities for women in engineering are excellent, as both employers and educators try to change the image of engineering as a "males only" field. Women engineers are in great demand in all fields of engineering.

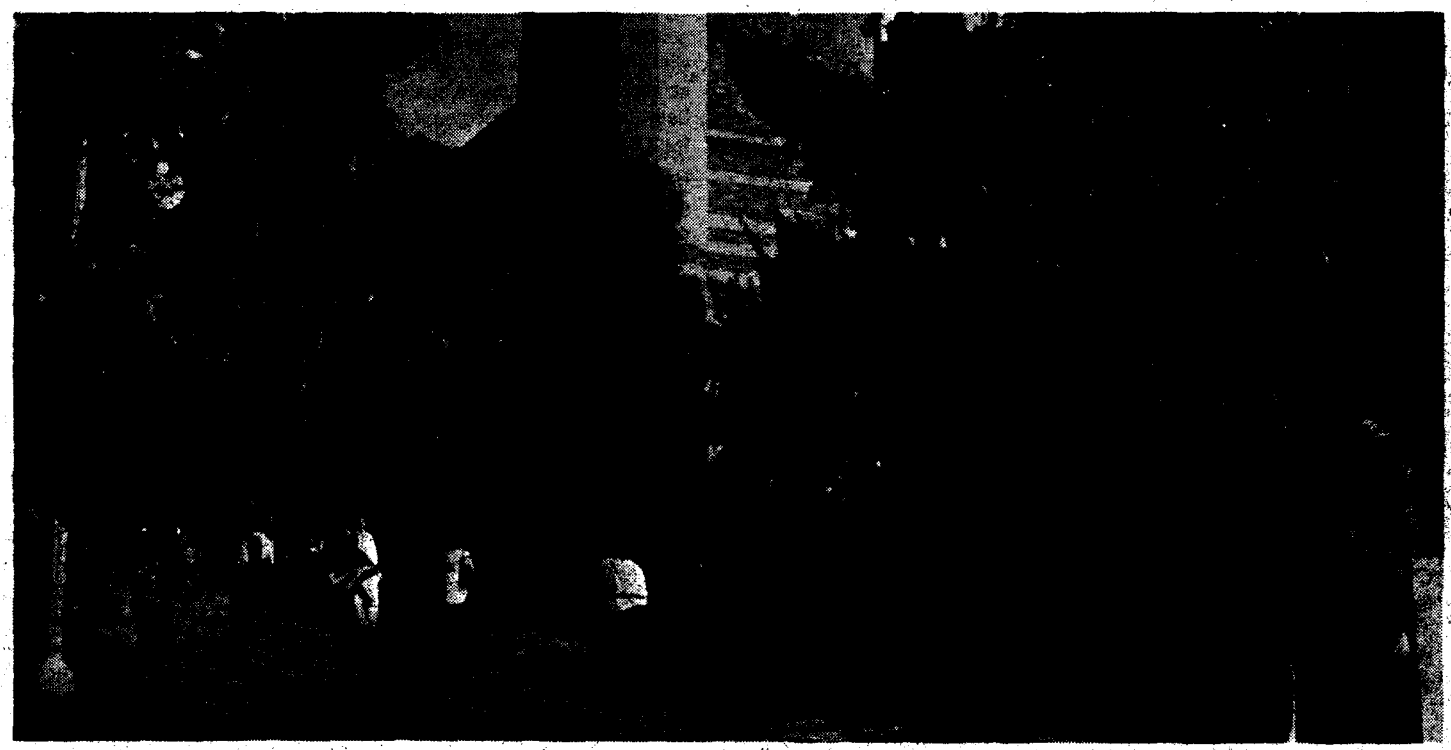
The Society of Women Engineers (SWE), recognizing that women in engineering are still a minority, has established a UCLA student chapter to provide for their interests. This student section of SWE sponsors field trips and engineering-related speakers (often professional women) to provide an introduction to the various options available to engineers. The UCLA chapter of SWE, in conjunction with other Los Angeles schools, also publishes an annual resumé book to aid women students in finding jobs.

Continuing Education

The Department of Continuing Education in Engineering and Mathematics, UCLA Extension, maintains an Evening Information Center in 6266 Boelter Hall which is open from 5 to 7 pm Monday through Thursday throughout the year (except for the month of August and during Christmas and New Year's weeks).

Need to Know More?

The *Announcement of the UCLA School of Engineering and Applied Science*, available by writing to the Undergraduate Office, School of Engineering and Applied Science, University of California, Los Angeles, CA 90024, gives an expanded version of the program described in this section.



College of Fine Arts

The UCLA College of Fine Arts is a young, dynamic center for higher education in the arts. Its goal is to educate the artist who is connected to society.

The College of Fine Arts consists of four departments: Art, Design and Art History; Dance; Music; and Theater Arts. The curriculum is designed to provide the fine arts student with intensive training in his major within the broader liberal arts education of the University. The creative or performing artist, as well as the historian or critic, is provided an outstanding academic program.

Fine arts majors explore, through research and practice, the unique creativity of world cultures. Nonmajors are offered an educational program intended to foster a better understanding of the visual and performing arts. The College continues to support extracurricular programs in the arts for the benefit not only of the University community, but for the public as well. Such efforts include art gallery and museum exhibits, plays, films, and music and dance concerts.

An informative brochure on the UCLA College of Fine Arts is published annually. To obtain a free copy, contact the Student Services Office, A239 Murphy Hall, UCLA, 405 Hilgard Avenue, Los Angeles, CA 90024.

Majors Offered

Majors leading to the degree of Bachelor of Arts are offered in the following areas:

Art

Art History

Dance

Design

Ethnic Arts: Interdisciplinary Studies

Motion Picture/Television (juniors and seniors only)

Music, with specialization in Composition and Theory, Ethnomusicology, History and Literature, Music Education, Performance, Systematic Musicology

Theater

Students interested in obtaining teaching credentials for California elementary and secondary schools should consult the Graduate School of Education.

Admission

In addition to the "University of California Undergraduate Admission Application," some departments in the College of Fine Arts may require auditions, portfolios or evidence of creativity. Detailed information on departmental requirements will be mailed to the student upon receipt of the application. Deadline date for applications is November 30, 1982, for admission in Fall Quarter 1983.

The Study List

Each quarter the student Study List must include from twelve to seventeen units. Petitions for more than seventeen units must be filed and approved by the Dean of the College prior to the deadline dates published by the Registrar's Office.

If you have not filed your Study List by the end of the second week of classes, you must secure the permission of the Dean of the College to continue for that quarter.

Concurrent Enrollment: Concurrent enrollment in courses at another institution or in University Extension (including correspondence courses) is permitted only in extraordinary circumstances, and no credit is given for such courses unless the approval of the Dean has been obtained by petition *prior to enrollment.*

Passed/Not Passed Courses: See A-310 in the "Grading Regulations" section of this catalog.

Graduate Courses

Undergraduate students who wish to take courses numbered in the 200 series must petition for advance approval of the departmental Chair and the Dean of the College prior to enrollment and must meet the specific qualifications. Courses numbered in the 400 and 500 series are not applicable toward the degree.

Requirements for the Bachelor's Degree

Each student must meet the University, College and major requirements, and the unit, scholarship and residence requirements as follows:

University Requirements

For information on the Subject A: English Composition and American History and Institutions requirements, see the "Undergraduate Degree Requirements" section earlier in this catalog.

College Requirements

The general requirements of the College of Fine Arts must be completed with a grade-point average of 2.0 or better.

For specific courses that will fulfill the general College requirements, students should consult the College Office before enrolling. Courses listed below are used only as a guideline for 1982-83.

English Grammar and Rhetoric (4 Units)

English 3 with a grade of "C" (2.0) or better; must be completed by the end of the freshman year. This course may *not* be taken on a Passed/Not Passed basis.

English Composition and Literature (4 Units)

English 4 with a grade of "C" (2.0) or better; must be completed by the end of the sophomore year. This course may *not* be taken on a Passed/Not Passed basis.

Foreign Language (12 Units)

(1) Three quarters of one college language other than high school language or (2) level 3 (4 units) of the same language taken in high school, with the other 8 units made up from courses below in science, social science or humanities. A student whose entire secondary education has been taken in a language other than English may petition to be exempt from the foreign language requirement.

Proficiency examinations may not be used to complete the foreign language requirement. Some majors may require completion of the language prior to entry into the major.

Science/Mathematics (8 Units)

One course in physical or biological science and one course in another natural science or in mathematics.

Physical and Biological Science Courses:

Astronomy

Atmospheric Sciences

Biology (except 10, 11, 30)

Chemistry (except 2)

Earth & Space Sciences (except 8, 20)

Honors Collegium, Module III

Kinesiology 12, 13, 14 only

Microbiology

Physics (except 10)

Other Natural Science and Mathematics Courses:

Anthropology 1, 2, 11, 124 only

Biology 10

Earth & Space Sciences 8, 20

Geography 1, 2, 5 only

Mathematics (no remedial, historical or statistical)

Physics 10

Psychology 15, 115, 116 only

Social Science (12 Units)

Two courses from the Department of History, one in any period prior to 1600 and one in any period after 1600; one other social science course.

Other Social Science Courses:

Anthropology (except 1, 2, 11, 124, 156)

Economics (principles, history and theory only)

Geography (except 1, 2, 5)

History (except medical or geological)

Honors Collegium (4 units from Module I or 4 units from Module II)

Near Eastern Languages (Ancient Near East 163A-163B, Jewish Studies 140A-140B, 141, 142)

Political Science (except courses dealing with civil rights and law)

Psychology (except 15, 115, 116, education, counseling, family life or child care)

Sociology (except mass communications, civil rights, education, law, criminology, marriage, family life or child care)

Note: Survey courses in history which cover "antiquity to present" will be applied only on history after 1600 or on other social science courses.

Humanities (12 Units)

One course in the arts, one course in literature, one course in philosophy and/or religion. Performance, studio or movie/film courses do not meet this requirement. Courses in your major department may *not* apply on this requirement.

The Arts Courses:

Architecture 189, 191

Art 50 series or 101A to 122

Classics 151B, 151C, 151D (except Art History majors)

Dance 140-146, 151A, 151B

Folklore and Mythology 118, 124

Music 2A-2B, 113A-113B, 130-135, 138-148, 151-153, 157-159, 188, 189

Theater Arts 5A, 5B, 5C, 102-105, 189

Literature Courses:

Selected courses in English, ethnic, American or foreign literature, including works in translation

Classics 10, 20

Folklore and Mythology 15, 101, 108

Germanic Languages (Old Norse and Medieval Scandinavian 40)

Honors Collegium (4 units from Module V)

Humanities, except those that are cross-listed ("C" courses)

Near Eastern Languages (Iranian 140, Jewish Studies 150A-150B, 151A-151B)

Oriental Languages 129

Philosophy/Religion Courses:

Anthropology 156

Near Eastern Languages (Iranian 170, Islamics 110)

Oriental Languages 139, 172-174, 183, 184

Philosophy (all courses)

A course may be used to satisfy only one requirement, i.e., College or University or major requirement.

A few course areas that DO NOT APPLY on the general College requirements are: business, communications, creative writing, criminology, education, engineering, family life, marriage and child care, field studies, home economics, independent studies, interdisciplinary studies, journalism, law, mass media, public health and speech. Also no 198, 199 or CED courses and no seminars, proseminars or freshman seminars may be applied on the general requirements of the College. Courses which are multiple-listed (numbers preceded by "M") may not be applied on these requirements.

Additional Nonmajor Department Requirements for the Degree

Three upper division courses (12 units) completed outside your major department. These courses may not apply toward the general College requirements. Studio, performance, activity and 199 (Independent Studies) courses or field studies (400 courses) *may not apply as additional nonmajor courses.*

Unit Requirements

The candidate for the Bachelor of Arts degree shall have completed for credit no less than 180 units or no more than 208 units, of which at least 64 units shall be upper division courses (numbered 100-199). No more than one course (4 units) of physical education activities courses may be counted toward the degree. No more than 16 units of CED courses and no more than 8 units of Freshman Seminars will be counted toward the degree. Credit for 199 courses is limited to 16 units, 8 units of which may be applied to the major. All 199 courses must be taken for a letter grade.

Only work of passing quality will apply toward degree requirements.

University Extension courses with the prefix "X" on those numbered in the 1-199, 200, 300, 400 or 800 series do not apply toward the degree.

Credit earned through the CEEB Advanced Placement Tests may be applied on the general College requirements. It is important to note that portions of Advanced Placement Test credit may be evaluated by corresponding UCLA course numbers, e.g., History 1C. If you take the equivalent UCLA course, *deduction of unit credit for such duplication will be made prior to graduation.*

Residence Requirements

A student is "in residence" only while enrolled and attending classes at UCLA as a major in one of the departments of the College of Fine Arts. Of the last 45 units completed for the bachelor's degree, 35 must be earned in residence in the College of Fine Arts (28 units must be upper division — 16 of which must be in the major department). Not more than 18 of these 35 units may be completed in Summer Session at UCLA.

University Extension: Courses in University of California Extension (either class or correspondence) may not be used to fulfill any part of the residence requirements.

Major Requirements

A major is composed of not less than 14 courses (56 units), including at least nine upper division courses (36 units). Most majors include both lower and upper division courses, arranged and supervised by the department and approved by the Executive Committee of the College.

Your attention is directed to the courses listed as *preparation for the major* in the "Majors and Courses of Instruction" section of this catalog. It is essential that these courses be completed before upper division major work is undertaken.

Each candidate for the bachelor's degree is required to complete a major in the College of Fine Arts with a scholarship average of at least a 2.0 ("C" average) in all courses and must be recommended by the Chair of the student's major department. All courses in your major department must be taken for a letter grade.

Any student failing to attain a scholarship average of at least 2.0 in his major department may be denied the privilege of a major in that department. A department may also submit to the Dean of the College the name of any student who cannot profitably continue in the major.

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

Any department offering a major in the College of Fine Arts may require from candidates for the degree a general final examination in the department.

Ethnic Arts: Interdisciplinary Studies

An intercollege, interdepartmental major is offered in Ethnic Arts. It is open to students in both the College of Fine Arts and the College of Letters and Science. You enroll in the College of your choice and fulfill the breadth requirements of that College. Counseling is available in the department of your concentration.

The major includes a core of seven courses from the Departments of Anthropology, Art, Dance, Folklore and Mythology, Music and Theater Arts; a concentration in one of the six disciplines; at least three courses in one foreign language; a senior colloquium; and electives selected by the student.

Ethnic Arts is at present only an undergraduate program.

Admission to the major will be by special application to the Committee in Charge. For details of the major, see "Ethnic Arts" in the "Majors and Courses of Instruction" section of this catalog.

Scholarship Requirements

A "C" average (2.0) is required in all work attempted at the University of California, exclusive of courses in University Extension and courses attempted on a Passed/Not Passed basis. A "C" average (2.0) is also required in all upper division courses in the major attempted at the University, as well as in all courses applying to the general College requirements and the general University requirements.

The following minimum progress requirements apply to undergraduate students in the College of Fine Arts. You are expected to complete satisfactorily at least 36 units during three consecutive quarters in residence. You will be placed on probation if you fail to pass at least 36 units over three consecutive regular quarters in residence. You will be subject to dismissal if you fail to pass at least 32 units in three consecutive regular quarters in residence.

Honors

Dean's Honors will be awarded at the end of each quarter according to criteria established by the Dean of the College..

Honors at Graduation will be awarded to students with superior grade-point averages. Students eligible for honors must have completed 80 or more units for a letter grade at the University of California. The levels of honors and the requirements for each level are: *Cum laude*, an overall average of 3.55; *Magna cum laude*, 3.65; *Summa cum laude*, 3.8.

Counseling and Program Planning

The College of Fine Arts offers services in preadmission advising, program planning in the major and general degree requirements and individual meetings with departmental counselors and faculty, including a yearly degree check sent to each student. Prior to registration and enrollment in classes, each new student is assigned to a counselor in his major department. Any inquiry about these services should be directed to the Student Services Office, College of Fine Arts, A239 Murphy Hall, UCLA, 405 Hilgard Avenue, Los Angeles, CA 90024 (825-9705).

Need to Know More?

In addition to the counseling available in the College, Academic Resources Coordination in Murphy Hall, Psychological and Counseling Services in 4223 Math Sciences and the Placement and Career Planning Center located just south of Powell Library can provide informed guidance.

The following publication offers you added information about UCLA in general:

Finders Keepers is a handbook to UCLA with sections on general academic planning. Reference copies are available through all departmental, College, School and ASK counselors, at the College Library and University Research Library reference desks and at a number of other counseling locations (AAP, Academic Resources Coordination, Admissions, Dean of Students Office, Division of Honors Office, Placement and Career Planning Center and Psychological & Counseling Services).

School of Nursing

If you are interested in the academic program offered by the UCLA School of Nursing — on the graduate or baccalaureate level — you are urged to request a copy of the *Announcement of the UCLA School of Nursing* by writing to the School of Nursing, Student Affairs Office, University of California, Los Angeles, CA 90024.

You can find a detailed description of the School of Nursing curriculum in the "Majors and Courses of Instruction" section of this catalog. For information on graduate studies in the School of Nursing, please consult the *UCLA Graduate Catalog*.

Description and Philosophy

Schools of nursing differ in their professional focus on education and research. It is therefore pertinent to state this School's view of the profession which serves as a basis for its undergraduate and graduate programs. Basic to the philosophy of the School is the belief that it is the right of all individuals to receive optimal health care. Fundamental to this belief is the fact that all individuals possess a unique culture that influences their response to illness and their contribution and involvement in the delivery of health care. Nursing shares with other health sciences the goal of promoting health for individuals and communities, as well as the responsibility for the care, comfort and dignity of patients in acute, chronic and terminal illness.

To accomplish this goal, nurses function as independent practitioners in collaboration with other members of the health team and in a medical supportive role. Based on scientific knowledge and technical skill, the practice of nursing focuses on promotion of health, prevention of illness and support of the resources of the person who is ill.

The programs provide for an understanding of the social and cultural systems in which living and care-giving take place and for an understanding of man's psychology and physiology under normal and pathological conditions. Nursing research is stressed throughout the programs as the means for the development of new knowledge.

History and Accreditation

The School of Nursing was authorized by the Regents of the University in 1949 as one of the Professional Schools of the Center for Health Sciences at UCLA. This action paved the way for the development of an undergraduate basic program in nursing and made possible the establishment of a graduate program leading to the Master of Nursing degree. The baccalaureate program has been continuously approved by the California Board of Registered Nursing since 1949. The School of Nursing became an agency member of the Department of Baccalaureate and Higher Degree Programs of the National League for Nursing in 1952. The Accrediting Service of the National League for Nursing has granted full accreditation to both programs since 1954.

The Baccalaureate Program

The baccalaureate program leading to the Bachelor of Science degree provides for a close interweaving of general and professional education. The physical, social and emotional health aspects of nursing are emphasized throughout the curriculum. Clinical nursing experience under the guidance of faculty members is provided in hosptials, outpatient clinics, homes and community health centers.

Credit by examination is available to qualified students upon review of previous education.

The School of Nursing offers a curriculum sequence which affords students the opportunity to sit for the California Registered Nurse licensing examination at the conclusion of the junior year. Interested students must maintain each quarter a minimum GPA of 3.0 and must petition the Dean to enroll beyond the four quarter courses usually permitted. Students are reminded that many states do not reciprocally honor California nursing licenses obtained prior to completion of a baccalaureate degree. Students who plan to follow this sequence should contact the Assistant Dean of Student Affairs before the beginning of the freshman year to receive more complete details.

Requirements for the Bachelor of Science Degree

The degree of Bachelor of Science will be granted upon fulfillment of the following requirements:

(1) The candidate shall have completed the required 45 courses (180 quarter units) of college work and shall have satisfied the general University requirements.

(2) The candidate shall have included in the required 45 courses at least 21 courses in general education.

(3) The candidate shall have completed at least 25 quarter courses (100 quarter units) of upper division course work toward the degree, including Nursing 101, 104A, 104B, 104C, 109, 120A, 120B, 120C, 120D, 120E, 120F, 184, 190A, 190B, 193, 195, four electives, Physiology 105N, Public Health 100A, 180.

(4) The candidate shall have maintained at least an overall grade-point average of "C" (2.0) in all courses taken while a student in the School of Nursing.

(5) The candidate shall have completed all required nursing courses in the School of Nursing and shall have received a grade of "C" or better in the following clinical nursing courses: 101, 109, 120A, 120B, 120C, 120D, 120E, 120F, 190A, 190B, Physiology 105N.

(6) The candidate is required to have been enrolled in the School of Nursing during the final three quarters of residence; the last nine courses must be completed while so enrolled.

Honors

The faculty of the School of Nursing, or a duly authorized committee thereof, shall recommend for honors and awards bachelor's degree candidates who meet the criteria determined by the faculty of the School of Nursing and the University.

Admission Criteria

The School of Nursing strives to attain a culturally and ethnically diverse student population. Admission is based on scholarship, diverse life experiences and disadvantagement. Completion of a minimum of 84 quarter units with an overall grade-point average of 2.8 or above and three letters of recommendation are required. Diverse life experiences, including previous employment, volunteer work and community service which reflect leadership, responsibility, multicultural involvement, multilingual abilities, and other unusual skills and knowledge are evaluated. Consideration is also given to social and economic disadvantagement such as educational background, heavy work schedule during school, housing conditions, family responsibilities and mastery of physical handicaps.

Completed applications should reflect clearly identified career goals and documentation of the applicant's potential in nursing.

Application Process

Applications for acceptance to the baccalaureate program in the School of Nursing must be filed no later than November 30 for the next Fall Quarter. The School of Nursing admits 50 students each Fall Quarter. The School of Nursing does not admit in Winter or Spring Quarters. Two separate applications are required.

(1) Application for admission to the University in undergraduate status (accompanied by a $25 application fee) must be filed with the Office of Undergraduate Admissions, University of California, Los Angeles, CA 90024.

(2) Application for acceptance to the School of Nursing must be filed with the School of Nursing by November 30. This application is available directly from the School of Nursing, Student Affairs Office, 2-137 Louis Factor Building, University of California, Los Angeles, CA 90024.

You can find a discussion of the prenursing curriculum and prehealth advising in "Preparing for a Professional School," listed under the "College of Letters and Science."

School of Public Health

If you are interested in the programs offered by the School of Public Health at UCLA, you are urged to get a copy of the *Announcement of the UCLA School of Public Health* by writing to the Office of Student Affairs, School of Public Health, University of California, Los Angeles, CA 90024.

Detailed descriptions of undergraduate course offerings are listed in the "Majors and Courses of Instruction" section later in this catalog. Graduate courses are described in the *UCLA Graduate Catalog*.

Description and Purpose

Public health is a broad, multidisciplinary field directed toward the 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. Public health relies on research methods to identify important health relationships and is concerned with health, prevention of disease and care in social communities. The concerns of public health cut across national boundaries and include both voluntary and governmental agencies, research and teaching institutions and health care facilities.

There are many areas of emphasis in the field, and five may be singled out as follows: (1) nature, extent and distribution of disease; (2) quantitative methods of description and analysis; (3) environmental hazards, their identification and control; (4) organization and administration of community health services; (5) basic biological and psychosocial processes that affect the health and well-being of populations.

Instructional programs in public health provide opportunities to understand the theoretical foundations and philosophy of the field, and to permit specialization in fields of professional service or research. Required and elective courses stress broad exposure to basic issues, as well as intensive study in selected specialties.

Students may prepare themselves for careers in basic specialties such as epidemiology, biostatistics, nutritional science and environmental health sciences, or they may prepare themselves for the challenges of community work such as the operation of hospitals, health maintenance in industry, the health education of the public, organization of medical care, behavioral sciences in public health and community health administration.

Degrees Offered

The School of Public Health offers the following degrees: Bachelor of Science in Public Health, Master of Public Health, Doctor of Public Health, Master of Science in Public Health, Doctor of Philosophy in Public Health, Master of Science in Biostatistics and Doctor of Philosophy in Biostatistics. Combined MPH degrees are available with the African Studies and Latin American Articulated Degree Programs, Graduate School of Management, School of Law, School of Medicine and School of Dentistry. For information on graduate programs, please consult the *UCLA Graduate Catalog*.

Admission

Admission to the Bachelor of Science program is limited to undergraduate students in good standing within the University of California who have satisfactorily completed at least 84 quarter units of work in one of the Colleges of the University or who have transfer credits evaluated as equivalent.

Counseling

Each division office offers open counseling. The Counseling and Recruitment Center in 41-240 Public Health (825-7449) provides further assistance during walk-in hours or by appointment.

Requirements for the Bachelor's Degree

(1) The candidate shall have completed at least 45 courses (180 quarter units) of college work, of which at least the last 9 courses (36 quarter units) must have been completed while enrolled in the School of Public Health. Not more than 18 of the above 36 quarter units may be completed in Summer Session on the campus of residence.

(2) The candidate shall have completed at least 16 courses (64 quarter units) in upper division (numbers 100 through 199). At least 6 courses must have been completed while enrolled in the School of Public Health, 4 of which must have been in the major.

(3) The candidate shall have maintained a "C" (2.0) average in all courses taken and shall have satisfied all of the course requirements in preparation for the major, as well as those required in the major.

(4) The candidate is not normally expected to take more than 180 quarter units to obtain the bachelor's degree. Approval of the Assistant Dean is required for a candidate, in rare cases, to continue after completing 208 quarter units.

(5) Credit limitations:

(a) Prior approval by the advisor and the Assistant Dean is required before a student may enroll in a course for Passed/Not Passed credit; courses in the major may not be taken on a Passed/Not Passed basis.

(b) Only 4 quarter units of physical education courses may be counted toward degree credit.

(c) Public Health 199: open to seniors who must petition before enrolling; limited to 4 units each quarter; no more than 16 units may be counted toward degree credit.

(d) Courses in the 200 or 400 series: candidate must secure approval from the faculty advisor, instructor and Assistant Dean before enrolling in these courses.

(e) Concurrent enrollment in University Extension or at another institution is permitted only under extraordinary circumstances and with prior approval from the faculty advisor and the Assistant Dean.

(f) After completing 105 quarter units toward the degree (in all institutions attended), the student will be allowed no further unit credit for courses completed at a community college.

(g) Enrollment limitations: the candidate must enroll in no less than 12 nor more than 18 quarter units each quarter. Exceptions require approval of the faculty advisor and Assistant Dean. A student on probation may be given other limitations.

(h) The same course cannot be used to satisfy two distinct course requirements.

Major in Public Health

A student majoring in Public Health selects an area of concentration from one of the following: Biostatistics, Consumer Health Information and Education or Nutritional Science.

Preparation for the Major

Preparation for the major consists of the following:

(1) Subject A

(2) American History and Institutions

(3) Foreign language: two years of one language in high school or through course 3 at college level

(4) Two years of high school mathematics

(5) One course from English 3, 4, Humanities 2A, 2B

(6) Physical sciences: Chemistry 11A, 11B, 11BL, 11C, 11CL (Consumer Health Information and Education students take Chemistry 11A, 15 and an elective course in a physical science)

(7) Mathematics 1B or 3A

(8) Life sciences: Biology 5 and 7 (Nutritional Science students may take Biology 7 after admission to the program) and, for Consumer Health Information and Education students, Microbiology 10 or 101

(9) Social sciences: three courses

(10) Humanities: three courses

(11) Additional courses may be recommended by the student's advisor

General Requirements for the Major

Required are:

(1) Public Health 100A—Introduction to Biostatistics

(2) Public Health 110—Introduction to Medical Science or Public Health 111—*Human Disease and Public Health*

(3) Public Health 112—Principles of Epidemiology

(4) Public Health 150—Environmental Health or Public Health 155—Introduction to Environmental Health

(5) Public Health 180—Introduction to Public Health (Nutritional Science students may substitute Public Health 130)

(6) Public Health 153—Public Health and Environmental Microbiology and Microbiology 101 (not required for Consumer Health Information and Education students)

Field of Concentration Requirements

Biostatistics

The Biostatistics program prepares students in the application of biostatistics to the broad field of public health and the evaluation of health programs. Required courses include: Mathematics 31A, 31B, 32A-32B, 152A-152B or 150A-150B-150C; Public Health 101A, 101B, 100C (or 100A-100D), 405. Every student will be required to study an additional subject area at the upper division level as a basis for application of statistical methods and theories.

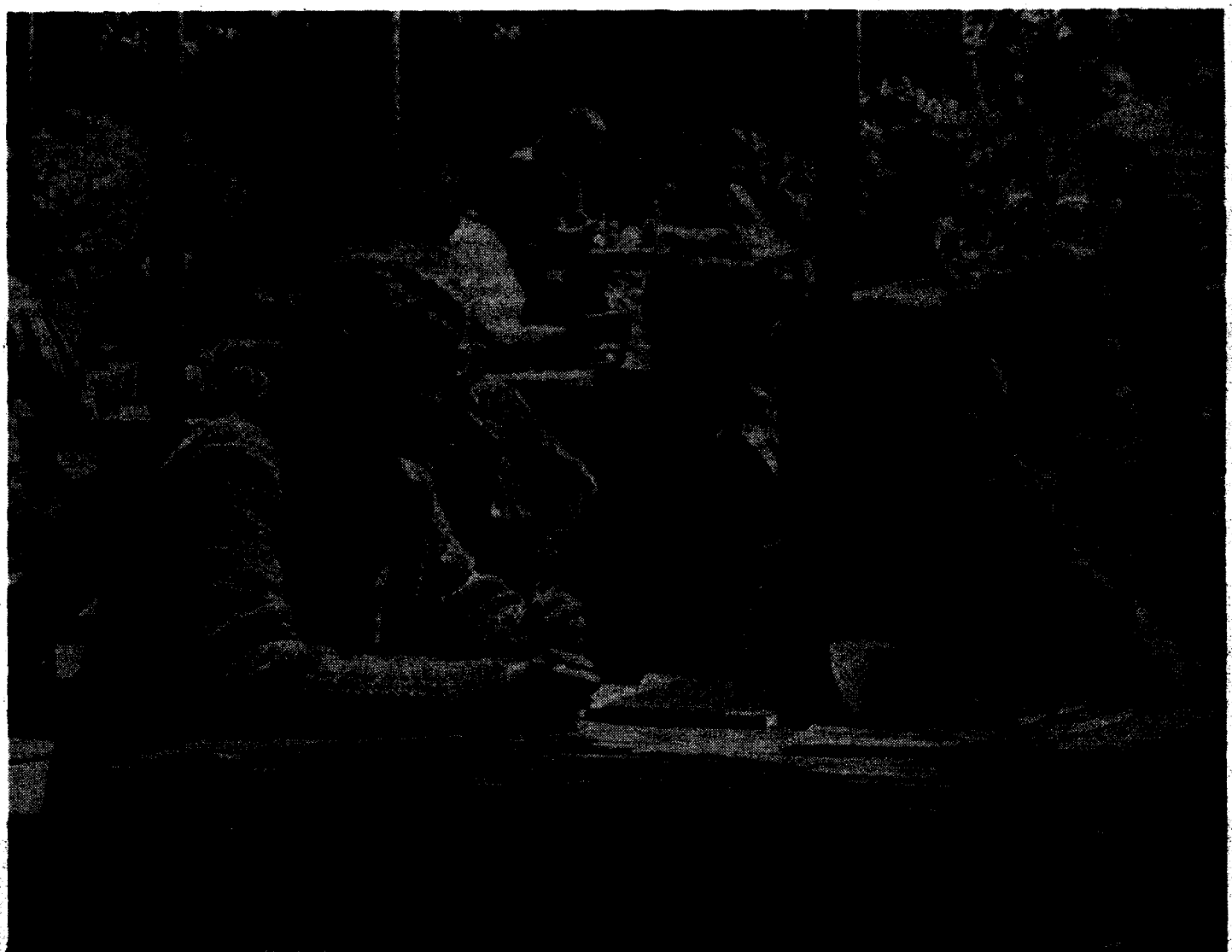
Consumer Health Information and Education

This program prepares a student to be a consumer health advocate and health information and promotion specialist.

A minimum of four courses (16 units) are to be selected from among: Public Health 130, 160, 170, 182, 183, 184. In consultation with the faculty advisor, a minimum of four additional upper division courses are to be selected as a minor from one of the following fields of concentration: Communications, Organizations or Behavior.

Nutritional Science

This program prepares students for advanced study in nutrition and related health fields. Required courses include: Mathematics 3B, 3C; Chemistry 21, 23, 25; Physics 3A, 3B, 3C (or 6A, 6B, 6C); Public Health 162, 163, 165, 167. Electives will be chosen in consultation with the faculty advisor.



PART III:
Social and Economic Aspects

Money at UCLA

In this section you will find a detailed discussion of various fees and other financial obligations — as well as some of the ways to meet them.

Finding out about financial aid is a worthwhile investment of your time. Don't assume that you don't qualify. Or that you do. Either of those guesses can be costly. The Financial Aid Office publishes a guide which gives more information about aid. You can get a copy from your high school counselor or from the Financial Aid Office, A129B Murphy Hall, University of California, 405 Hilgard Avenue, Los Angeles, CA 90024 (825-4531).

A further note: all fees outlined here are subject to change without notice. Payment of registration fees is part of the registration process; you can pay other fees at the Main Cashier's Office, 1125 Murphy Hall, from 8:30 am to 5 pm any weekday.

Fees Assessed Undergraduates

As an undergraduate, you must pay a Registration Fee of $168 per quarter and an Ackerman Student Union Fee of $4, both payable when registering.

In addition, you are assessed an Education Fee of $209 per quarter, an Associated Students Fee of $6 per quarter and a Wooden Recreation Center Fee of $4 per quarter. All fees are approximate and subject to change without notice.

The Registration Fee covers certain expenses of students for counseling service, for athletic and gymnasium facilities and equipment, for lockers* and washroom, for registration and graduation, for such consultation, medical advice and hospital care or dispensary treatment as can be furnished on the campus by the Student Health Service, and for all laboratory and course fees. Membership in the Associated Students is covered by the Associated Students Fee. No part of these fees is remitted to those students who may not desire to make use of any or all of these privileges. If you withdraw from the University within the first five weeks of the quarter, a part of these fees will be refunded. Any refund for withdrawal will be based on the date the completed notice for withdrawal is actually submitted. No claim for refund will be considered unless presented within the fiscal year to which the claim is applicable.

*Lockers are issued, as long as they are available, to registered students who have purchased standard locks. Locks are sold by the Campus Activities Service Office, 130 Royce Hall, for $2.50 each and may be used as long as desired or may be transferred by the purchaser to another student.

Residence for Tuition

All entering students and students returning to the University after a period of absence are required to submit a "Statement of Legal Residence" form upon acceptance of admission or readmission. The form will be provided by the admitting office and must be returned with the "Statement of Intention to Register" form. 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 by the Residence Deputy are charged, in addition to all other fees, a quarterly tuition fee of $1050 which is payable with other registration fees. See the "Calendar" at the beginning of this catalog for the deadline.

Residence for Tuition Purposes at the University of California

Students who have not been residents of California for more than one year immediately prior to the residence determination date for each term in which they propose to attend the University are charged, along with other fees, a Nonresident Tuition Fee. The residence determination date is the day instruction begins at the last of the University of California campuses to open for the quarter, and for schools on the semester system, the day instruction begins for the semester.

Law Governing Residence

The rules regarding the establishment of legal residence for tuition purposes at the University of California are governed by the California Education Code and by Standing Orders of The Regents of the University of California. Under these rules residence for tuition purposes can be established by adult citizens or by certain classes of aliens. There are also particular rules applicable to the residence classification of minors (under 18) in that such residence is generally regarded as being derived from the parent or parents with whom the minor last resided.

Who Is a Resident?

In order to be classified a resident for tuition purposes, an individual must have established his or her residence in California for more than one year immediately preceding the residence determination date for the term during which he or she proposes to attend the University and relinquished any prior residence. An individual must couple his or her physical 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 durational period will be extended until both presence and intent have been demonstrated for one full year. Indeed, physical presence within the state solely for educational purposes does not constitute the establishment of California residence under state law, regardless of the length of 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 evidence 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 if 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 is established; establishing an abode where one's permanent belongings are kept within California; licensing for professional practice in California; and the absence of this evidence in other states during any period for which residence in California is asserted. Documentary evidence may be required. All relevant evidence will be considered in the classification determination.

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.

General Rules Applying to Minors

The residence of the parent with whom an unmarried minor (under age 18) child maintains his or 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 or 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 or Separated 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.

(3) **Parent of Minor Moves from California** — A student who remains in the state after his or her parent, who was theretofore domiciled in California for at least one year immediately prior to leaving and has, during the student's minority and within one year immediately prior to the residence determination date established residence elsewhere, shall be entitled to resident classification until the student has attained the age of majority and has resided in the state the minimum time necessary to become a resident so long as, once enrolled, he or she maintains continuous attendance at an institution.

(4) **Self-Support** — Nonresident students who are minors or 18 years of age and who have demonstrated the intent to make California their permanent home and can evidence that they have been self-supporting and actually present within California for the entire year immediately prior to the residence determination date may be eligible for resident status.

(5) **Two-Year Care and Control** — A student shall be entitled to resident classification if immediately prior to the residence determination date, he or she has lived with and been under the continuous direct care and control of any adult or adults other than a parent for not less than two years, provided that the adult or adults having such control have been California residents during the year immediately prior to the residence determination date. This exception continues until the student has attained the age of majority and has resided in the state the minimum time necessary to become a resident student, so long as continuous attendance is maintained at an institution.

Exemptions from Nonresident Tuition

(1) **Member of the Military** — A student who is a member of the United States military stationed in California on active duty, except a member of the military assigned for educational purposes to a state-supported institution of higher education, may be exempted from the Nonresident Tuition Fees until he or she has resided in the state the minimum time necessary to become a resident. He or she must provide the Residence Deputy with a statement from the commanding officer or personnel officer stating the assignment to active duty in California is not for eductional purposes and must include the dates of assignment to the state.

(2) **Spouse or Other Dependents of Military Personnel** — Exemption from payment of the Nonresident Tuition Fee is available to a spouse or to a natural or adopted child or stepchild who is a dependent of a member of the United States military stationed in California on active duty. Such exemption shall be maintained until the student has resided in California the minimum time necessary to become a resident. The student must petition for this exemption each term he or she is eligible. If a student is enrolled in an institution and (a) the member of the military is transferred on military orders to a place outside this state where he continues to serve in the Armed Forces or (b) 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.

(3) **Child or Spouse of Faculty Member** — The unmarried, dependent child under age 21 or the spouse of a member of the University faculty who is a member of the Academic Senate may be eligible for a waiver. Confirmation of the faculty member's membership on the Academic Senate shall be secured each term before this waiver is granted.

(4) **Child of University Employee** — The unmarried, dependent child under 21 of a full-time University employee whose assignment is outside California (e.g., Los Alamos Scientific Laboratory) and who has been employed by the University for more than one year may be entitled to a waiver of the nonresident fee. The parent's employment status with the University shall be ascertained each term that the student requests the waiver.

(5) **Children of Deceased Public Law Enforcement or Fire Suppression Employees** — Children of deceased public law enforcement or fire suppression employees who were California residents and who were killed in the course of fire suppression duties or law enforcement duties may be entitled to an exemption of the nonresident fees.

Maintaining Residence During a Temporary Absence

A student's temporary absence from the state for business or educational purposes will not necessarily constitute loss of California residence unless the student has acted inconsistently with the claim of continued California residence during his or her absence from the state. The burden is on the student to show retention of California residence during an absence from the state. Steps a student (or parent of a minor student) should take to retain California resident status for tuition purposes include:

(1) Continue to use a California permanent address in all records — educational, employment, etc.

(2) Satisfy California resident income tax obligations. It should be noted that individuals claiming permanent California residence are liable for payment of income taxes on their total income from the date they establish California residence. This includes income earned in another state or country.

(3) Retain California voter's registration, voting by absentee ballot.

(4) Maintain California driver's license and vehicle registration. If it is necessary to change driver's license and/or vehicle registration while temporarily residing in another state, these must be changed back to California within the time prescribed by law, i.e., within 10 days for the driver's license and within one year or when registration expires (whichever comes first) for vehicle registration.

Reclassification Petitions

Students MUST PETITION IN PERSON at the Registrar's Office for a change of classification from nonresident to resident status. All changes of status must be initiated prior to the late registration period for the term of attendance for which the student seeks reclassification.

In addition to the criteria listed above, a student seeking reclassification must be financially independent of parents domiciled outside of California. For detailed information regarding classification, contact the Campus Residence Deputy in 1134 Murphy Hall (825-3447).

Time Limitation on Providing Documentation

If additional documentation is required for either an initial residence classification or reclassification but is not readily accessible, the student will be allowed a period of time no later than the end of the applicable term to provide such documentation.

Incorrect Classification

All students classified incorrectly as residents are subject to reclassification and to payment of all nonresident fees not paid. If incorrect classification results from false or concealed facts by the student, the student is also subject to University discipline. Resident students who become nonresidents must immediately notify the Residence Deputy.

Inquiries and Appeals

Inquiries regarding residence requirements, determination and/or recognized exceptions should be directed to the CAMPUS RESIDENCE DEPUTY, Office of the Registrar, 1134 Murphy Hall, 405 Hilgard Avenue, Los Angeles, CA 90024 (825-3447) or to the Legal Analyst-Residence Matters, 590 University Hall, 2200 University Avenue, Berkeley, CA 94720. NO OTHER UNIVERSITY PERSONNEL ARE AUTHORIZED TO SUPPLY INFORMATION RELATIVE TO RESIDENCE REQUIREMENTS FOR TUITION PURPOSES. The student is cautioned that this summation is NOT a complete explanation of the law regarding residence. A copy of the regulations adopted by the Regents of the University of California is available for inspection in the Registrar's Office. Please note that changes may be made in the residence requirements between the publication date of this statement and the relevant residence determination date. Any student, following a final decision on residence classification by the Residence Deputy, may make a written appeal to the Legal Analyst within 120 days of the notification of the final decision by the Residence Deputy.

Privacy Notice

All of the information requested on the "Statement of Legal Residence" form is required (by the authority of Standing Order 110.2 (a)-(d) of The Regents of the University of California) for determining whether or not you are a legal resident for tuition purposes. Your registration cannot be processed without this information. The Registrar's Office on campus maintains the requested information. You have the right to inspect University records containing the residence information requested on the form.

Reduced Programs

If you meet the standards described here, you may be eligible for a fee reduction, as indicated.

Fee assessment for the cases discussed below is based on the total units enrolled as of the 15th day of classes.

For the purpose of determining reduced University Registration Fee charges and refunds, where applicable, partial dollar amounts greater than 50¢ are rounded to the next higher dollar amount. Amounts below 50¢ are dropped.

Nonresidents

The Nonresident Tuition Fee is $1050 per quarter. For an undergraduate student with College/School approval for enrollment in 10 units or less, the Nonresident Tuition Fee is half of the amount listed above. File a "Request for Fee Reduction" form with your academic Dean's office for the applicable quarter. Refunds for courses dropped from the Official Study List are made according to the "Schedule of Refunds" discussed later in this section.

Residents

Certain qualified undergraduate students, when properly approved by the Dean of their College/School for enrollment in 10 units or less, may be eligible for a $50 reduction in their Education Fee. The "Request for Fee Reduction" form must be filed by the tenth day of instruction. Except for those qualified and approved part-time students, there is no reduction in the Registration, Education, Student Union or ASUCLA Fees.

Other Fees

The following is a list of what might be called "Miscellaneous Fees" charged undergraduate students at UCLA:

Application Fee, $25 — this nonrefundable fee is charged every undergraduate applicant for admission, readmission or intercampus transfer to the University.

Acceptance of Admission Fee, $50 — for undergraduates only. The fee is nonrefundable, but is applied toward the University Registration Fee in the first term of registration.

Returned check collection, $5

Late payment of registration fees, $50 — when permitted (on or after the first day of instruction)

Duplicate Registration and/or other cards in "Registration Packet," $3 each order

Change in Official Study List after the tenth day of instruction, $3 each petition when dropping, changing grading basis or adding a course within published period

Late filing of Study List (Study List card), $50 — when permitted

Removal of grade "E" or "I", $5 each petition

Late filing of Degree Candidate card for the bachelor's degree, $3

Payment of fees after a published deadline, $10

Credit by Examination, $5 per petition

Duplicate diploma, $25 (replacement cost upon presentation of evidence that original is lost or destroyed)

Transcript of Record, $3 for the first copy and $1 for each additional copy ordered at the same time

Late return of athletic supplies**, $1 for each 24 hours until full purchase price of article is reached

Failure to empty locker within specified period, $5

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

"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 third party will be honored, and if the student withdraws from the University with a fee refund due, such refund will be paid to the student.

Refund of Fees

The "Schedule of Refunds" listed below refers to calendar days, beginning with the first day of instruction (day 1). See the current *Schedule of Classes* for specific refund dates. The effective date for determining a refund is the date of filing the official "Notice of Withdrawal" form with the University, and it is presumed that no University services will be provided to the student after that date.

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

New Undergraduate Students

Prior to Day 1—Registration Fee you have paid is refunded except for the $50 Acceptance of Admission Fee, and other fees paid are refunded in full.

Day 1 and After—The $50 Acceptance of Admission Fee is withheld from the Registration Fee, and the "Schedule of Refunds" (see below) is applied to the balance of fees assessed.

All Continuing and Readmitted Undergraduate Students

There is a service charge of $10 for cancellation of registration or withdrawal 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.

Schedule of Refunds*

This schedule applies to the procedures described above:

1—14 days	15—21 days	22—28 days	29—35 days	36 days & over
80%	60%	40%	20%	0%

*If no credit for courses is received, a full refund of the Registration Fee of the regular session will be granted to all students entering the Armed Forces prior to the sixth week of the quarter. No refund thereafter.

Estimated Yearly Budget

The estimated budget presented here was put together based on expense diaries maintained for us by students, the Consumer Price Index, the Student Expenses and Resources Survey, and surveys of local costs for books, rent, transportation, food and clothing — your usual school-related expenses. It is designed to serve as a guide only.

Please note that financial aid awards are based on "need," which is defined as the difference between allowable school-related expenses (budget) and the contribution expected from you and your family. Budgets do vary, depending on circumstances.

The budget below was estimated for a single student living in a shared room in a UCLA residence hall, co-op, fraternity, sorority or the YWCA. Other standard budgets are estimated for commuters (living with parents), single students living off campus, married or single-parent students living in Married Student Housing, and married or single-parent students living off campus.

1982-83 Estimated UCLA Budget*

Registration Fee	$504
Education Fee	625
Student Union Fee	12
ASUCLA Membership Fee	18
Books and Supplies	350
Residence Hall Room and Board (19-meal plan)	2200-2860
Additional expense of holiday recesses and extra meals	315
Personal (clothing, cleaning, medical insurance, recreation, etc.)	840
Local Bus Transportation	180
Total Budget for California Resident	$5044-5704
Nonresident Tuition Fee	3150
Total Budget for Nonresident of California	$8194-9854

*You should estimate that living off campus will increase this budget by approximately $600-1200. All fees remain subject to change and will increase according to the cost of living for 1983-84. Alternatives to Residence Hall living are discussed in the "Housing and Transportation at UCLA" section of this catalog.

Financial Aid Programs

An underlying principle in the determination of financial need is that students and parents have an obligation to help finance the students' education. Expected student and parental contributions are determined from information supplied by you in the "Student Aid Application for California (SAAC)." UCLA uses a nationally approved, nonprofit system of need-analysis to determine what amount your parents are expected to contribute toward your education. If you are an independent student, your financial circumstances are analyzed rather than those of your parents.

Student Financial Independence

The desire of you or your parents to claim financial independence for you does not necessarily release your parents from their responsibility to provide you with financial assistance to meet your college expenses.

The Financial Aid Office is required to use two distinct definitions of independence to determine whether you are financially dependent on your parents.

California Definition

To qualify as independent for State and University grant aid in 1982-83, you must meet **one** of the following criteria:

(1) You have been determined financially independent by an educational institution prior to June 30, 1977 **or**

(2) You have not lived with either parent for six consecutive weeks or received more than $1000 from your parents in any of the last three tax years — 1979, 1980, 1981 — and you have not been claimed as an income-tax deduction by anyone except yourself or your spouse during that period **or**

(3) You have been a ward of the court **or**

(4) You are an orphan, not claimed as a tax exemption this year except by yourself or your spouse **or**

(5) You have been part of an extremely adverse home situation, documented by responsible community personnel, and without family assistance for the last full year.

Federal Definition

To qualify as independent for 1982-83 Federally funded aid programs including grants, you must meet **all** of these criteria:

(1) You may not be claimed as a tax deduction by your parents for the calendar years 1981, 1982 and 1983 **and**

(2) You may not live with your parents more than six consecutive weeks during calendar years 1981, 1982 and 1983 **and**

(3) You may not receive more than $1000 per year assistance from your parents in 1981, 1982 and 1983.

These definitions may change for 1983-84. Contact the Financial Aid Office for current information.

As an independent student, you must also demonstrate that you have been self-supporting during the calendar year prior to the academic year for which you are accepting aid.

Various financial aid programs administered or coordinated by the Financial Aid Office are outlined below. You may be eligible for several types of financial aid, and your financial aid "package" usually honors your preference. All Federal-, California-, University- and agency-funded programs are subject to legislative and administrative change.

Scholarships

Scholarships are categorized as either need-based or non-need-based. A *need-based* scholarship is awarded to outstanding students with financial need. *Non-need-based* (honorary) scholarships are awarded on merit alone and normally carry only a nominal monetary award, except in the case of Alumni Scholarships. No financial information is required of students who apply for honorary scholarships. Scholarship awards range from a $100 honorarium to the amount of the applicant's financial need.

All UCLA scholarship awards are made on a competitive basis. Consideration is given to academic excellence, achievement and scholastic promise. Scholarships are awarded to entering and continuing undergraduates. The terms and amounts of the awards vary. Students are expected to maintain academic excellence in course work. Eligibility for a scholarship is determined by the University Committee on Undergraduate Student Support, Honors and Prizes. Although most scholarships are open to all undergraduate applicants, some are restricted by their donors to students who meet prescribed criteria. Students will be considered for all scholarships for which they are eligible. Awards are based on grade-point average and financial need. Read the scholarship instructions sent to all undergraduate financial aid applicants for grade-point average requirements and special eligibility requirements.

Regents Scholarships

Unlike other University scholarships, Regents Scholarships are awarded for four years to students entering from high school, and for two years to continuing students and those transferring from another university or college who will have completed their sophomore year by the end of Spring Quarter. Students who have achieved an outstanding academic record and show a high degree of promise are eligible to apply for Regents Scholarships. Financial need is not a criterion for this award but students who wish to be considered for this stipend must file the "Student Aid Application for California (SAAC)" each year. Regents Scholars receive an honorarium of $100 regardless of need. If you are eligible for financial assistance, you may receive a stipend to cover the difference between your resources and the cost of your education at UCLA.

Chancellor's Scholarships

The Chancellor has established this honorary scholarship, with a nominal honorarium, to recognize superior achievement among UCLA's entering freshmen.

UCLA Alumni Association Scholarships

Alumni Scholarships are limited to California residents who will be *freshmen in the Fall Quarter.* No financial need is involved and no financial information is required to apply for Alumni Scholarships. They are merit based and competitively awarded. Academic promise is required of all Alumni Scholarship winners. The Ralph Bunche Scholarship, also awarded by the UCLA Alumni Association and named in honor of the famed Nobel Peace Prize-laureate and UCLA alumnus, is awarded with consideration given to the awardee's financial status and ethnic background.

Prizes

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

Grants

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

Pell Grant ("Basic Grant")

Undergraduate students who are U.S. citizens, permanent residents or refugees are eligible to apply for the Federal Pell Grant. The award amounts for 1982-83 range from $200 to $1800. If you apply for UCLA "need-based" financial aid, the "Student Aid Application for California (SAAC)" also serves as your Pell Grant application. The University of California requires that all eligible undergraduates apply for a Pell Grant.

California Student Aid Commission Cal Grants A and B

Undergraduate California residents who have not completed more than six semesters or nine quarters of college work prior to September 1982 are eligible to apply for a Cal Grant award. The "Student Aid Application for California (SAAC)" and "Cal Grant Supplements" are the official applications for these programs. You can get them from the UCLA Financial Aid Office, A128 Murphy Hall (825-4531); college financial aid offices; high school counselors; or the California Student Aid Commission, 1410 5th Street, Sacramento, CA 95814. The SAAC and Supplements must be filed in February of 1983.

"Cal Grant A" awards are applied toward Education and Registration Fees and are based on need and academic achievement. They are renewable each year.

"Cal Grant B" awards are intended to assist low-income families and are renewable annually. The State sends renewal applications to continuing Cal Grant recipients.

Grants-in-Aid

Grants-in-Aid provide eligible students with financial assistance from University funds. Awards range from $100 to $5010.

Supplemental Educational Opportunity Grants (SEOG)

These awards are Federally funded and are granted only to undergraduate students with financial need.

Education Fee Grants

To qualify for this grant you must demonstrate need and be a California resident and an undergraduate in your first year at the University. The maximum Education Fee Grant is equal to the amount of your Education Fee per quarter for your first three consecutive quarters of attendance. This grant is awarded to pay your Education Fee (if it has not been paid by another fee-paying agency).

Work-Study Programs

Work-study is a need-based "award" that allows you to work a maximum of 20 hours per week while attending school and 40 hours per week during vacation periods. An academic year's work-study award may range from $600 to $4500. Your gross earnings *may not* exceed the amount awarded to you. You can obtain more information from the Financial Aid Work-Study Office on A Level in Murphy Hall.

College Work-Study (Federal)

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

President's Work-Study (University of California)

This program is administered in the same manner as College Work-Study, except that funding is provided by the Regents of the University and the employer, and you are limited to on-campus jobs. All students are eligible to apply for President's Work-Study awards.

Loans

All loans described below are need-based.

Education Fee Loan

Students who are *residents* of the State of California qualify for a deferral loan of the Education Fee. Every continuing resident student who is eligible for financial aid and whose fees are not paid by an outside agency will be offered an Education Fee Loan. Repayment, including interest of four percent per year, begins six months after you terminate at least half-time enrollment. The repayment period may not exceed ten years. Minimum repayment is $30 plus interest per calendar quarter.

National Direct Student Loans (NDSL)

These low-interest loans are available to all students, undergraduate and graduate, who are *citizens, permanent residents or refugees* and who are carrying at least one-half the full-time academic workload. Students under 18 years of age are required to obtain a cosigner. Repayment begins nine months after you terminate at least half-time study. Minimum repayment is $90 per quarter including interest. The maximum routine repayment period is ten years. Loans made subsequent to June 30, 1972, include principal-and-interest-cancellation provisions up to 100 percent of their total debt for those who serve as full-time teachers of low-income or handicapped students in certain nonprofit elementary or secondary schools, as defined by Federal guidelines.

Nursing Loans

To be eligible for a Nursing Loan, you must be a citizen, permanent resident or refugee and a student in the School of Nursing. Up to $2500 is available per academic year. For more information, contact the School of Nursing financial aid counselor.

Student Loan Obligations

If you receive a loan offer as part of your financial aid award, you should carefully evaluate your total educational indebtedness and your ability to repay your loans. All UCLA-administered loan funds are revolving funds: money repaid by former borrowers is immediately reloaned to current students. The University will make every effort to assist you during the repayment of your obligation, but University services, including registration and the release of official transcripts, will be withheld if your loan becomes delinquent. Seriously delinquent accounts are referred to a professional collection agency for action (which may include litigation). You should be aware of your obligations when you accept a student loan.

The Exit Interview for Loan Recipients

All loan recipients are required to come to the Student Loan Services Office (A227 Murphy Hall) for a Loan Exit Interview before leaving UCLA for any reason. The purpose of the Exit Interview is to help you understand your loan agreement and to explain to you your rights and your responsibilities as a loan recipient. Failure to participate in an Exit Interview with the Student Loan Services Office will result in a hold on your academic records and registration materials.

Please call the Student Loan Services Office (825-9864) for an Exit Interview appointment.

Emergency Educational Loans

You *need not be* a financial aid recipient to apply for emergency loans. Up to $75 may be borrowed for immediate emergency needs. Students under 18 years of age are required to obtain a cosigner. Emergency loans are repayable within five weeks from the day they are issued. Applications are available in A227 Murphy Hall at the Student Loan Services Office. You must be a registered UCLA student with a satisfactory loan repayment record to qualify for emergency loan privileges.

Guaranteed Student Loans

Federal and California Guaranteed Student Loans are long-term budget-based loans made by banks, savings and loan associations and credit unions.

These loans are available to graduate and undergraduate students who are citizens, permanent residents of the U.S. or refugees and who are enrolled in at least a half-time program. Applications are processed by the Financial Aid Office and are submitted to a lending institution by the student. You should check with various lending institutions to determine their particular loan policies.

You are required to submit a special application for a Guaranteed Student Loan (GSL). Applications are available at the Financial Aid GSL Office, A217 Murphy Hall.

Repayment of the Guaranteed Student Loan begins within a year after completion of, or withdrawal from, school. Eligible students receive a Federal or State interest subsidy: the loan is interest-free during the time you are a student and for six to nine months thereafter. You have up to ten years to repay the loan at an interest rate of 7% or 9% per year.

Undergraduate students may borrow a total of $12,500 if dependent; graduate students $25,000 (including any amount borrowed as an undergraduate). It takes approximately ten to twelve weeks to process a Guaranteed Student Loan.

Regulations of the Guaranteed Student Loan Program require that student borrowers be notified of (1) their institution's fee refund policy and (2) the percentage of its students who find employment after obtaining a degree. The University of California's refund procedures and schedule will be found under the "Schedule of Refunds" earlier in this section. The following salary and employment information for UCLA is derived from an annual survey conducted by the UCLA Placement and Career Planning Center for UCLA 1981 graduates:[1]

	Degree Level of Graduates			Probable or Definite Job Commitment
	Bachelor's	Master's	Doctorate	
Field of Study	Average Monthly Salary			
Architecture		$1541		67.7%
Education		1500	$2004	83.3
Engineering	$2021	2575	2367	86.6
Fine Arts	1000	1259		77.7
Humanities	1179	1238	1625	74.1
Law			2346[2]	82.4
Library Science		1337		86.4
Life Science	1184	1676	1840	74.5
Management		2273	3000	92.0
Physical Science	1633		1974	88.8
Social Science	1262	1243	1752	73.4
Social Welfare		1644		68.4
Dental			2433	81.3
Medical			1423	100.0
Nursing	1614	2112		95.8
Public Health	1050	1828	2500	86.6

[1] Source: *The Job Market for UCLA's 1981 Graduates.* Percentages are based only upon those students who planned to work immediately after graduation. All salaries are shown as means.
[2] J.D.

Application Procedures for Financial Aid

If you are a prospective undergraduate student, you will find descriptive material and instructions for requesting financial aid information in the 1983-84 "Undergraduate Admissions and Financial Aid Packet." Continuing students may obtain "UCLA Scholarship and Financial Aid Application Packets" at the Financial Aid Office, A128 Murphy Hall, in December of each year.

Continuing students from foreign countries may obtain a 1983-84 "Financial Aid Application for International Students" at the Financial Aid Counseling Window B. No financial aid can be awarded to foreign students in their first year of attendance at UCLA.

The 1983-84 deadline date for all undergraduate and continuing graduate financial aid applications will be in early February 1983. The deadline for entering graduates will be September 1, 1983. These dates are vitally important to you because applications accepted after the deadline date will be classified as LATE. Late applications for financial aid will be considered ONLY after all complete on-time applications have been processed and ONLY if funds are still available. The deadline will be announced in the *Daily Bruin* and other campus media.

ROTC Financial Assistance

Funds for students in the Reserve Officers' Training Corps *are not administered* by the Financial Aid Office; the subsistence allowances and scholarships available are briefly described below:

Air Force ROTC

Four-year scholarships are available to high school students; two-year and three-year scholarships to college students. Scholarships include full

tuition, books and fees plus $100 a month. All cadets receive $100 per month during the last two years of the program and one-half the pay of a second lieutenant during the summer training period. Call 825-1742 or contact the Department of Aerospace Studies, 251 Dodd Hall, UCLA, 405 Hilgard Avenue, Los Angeles, CA 90024, for full information.

Army ROTC

Cadets receive $100 per month subsistence allowance for ten months during each of the last two academic years of the ROTC Program (Advanced Course). There are also four-year Army ROTC Scholarships which provide financial assistance to outstanding students (normal tuition, books and fees plus $100 per month for the four academic years). During the six-week summer training period at the end of the junior year, cadets receive one-half the pay of a second lieutenant. Also available are 3-year, 2-year and 1-year scholarships for students enrolled in Army ROTC. Call 825-7381 or contact the Department of Military Science, 127 Men's Gym, UCLA, Los Angeles, CA 90024, for full information.

Navy ROTC

Four-year scholarships are available to high school students who are accepted as freshmen at the University; two- and three-year scholarships are available to college students. Scholarships are competitive and are based on merit and achievement. Deadline for application is December 1 for Fall Quarter. Scholarships include full tuition, educational expenses, books and fees plus $100 per month during the academic year. *All* midshipmen (scholarship winners and nonscholarship students) receive $100 per month during the last two years of the program and full midshipman pay while on summer cruise training. Call 825-9075 or contact the Commanding Officer, Department of Naval Science, UCLA, 405 Hilgard Avenue, Los Angeles, CA 90024, for full information.

Employment Opportunities

There is a fairly wide spectrum of choice and challenge for part-time employment at UCLA.

On campus, ASUCLA has regular job openings in several areas (see the "Student Services at UCLA" section of this catalog), while the Placement and Career Planning Center (located just south of Powell Library) lists jobs in a variety of categories.

Room and board in exchange for work situations are also kept on file at the Center, which is described more completely in the "Student Services at UCLA" section of this catalog.

It is a good idea to also check the *Daily Bruin* and local newspapers for advertisements of potentially appealing part-time opportunities.

Housing and Transportation at UCLA

Where you live while attending UCLA can play an important role in your total college experience. Housing options available to students include: UCLA Residence Halls (Dormitories and Residential Suites), University-Owned Apartments, UCLA Married Student Apartments, cooperatives, fraternities, sororities and off-campus rentals. **Student demand for available on-campus and near-campus housing far exceeds the available supply.** If you plan to live off campus, it is advised that you arrive early to make your housing arrangements for the coming academic year. Some students even pay rent year round (and try to sublet during the summer months to minimize costs) in order to assure accommodations for the academic year.

Eligibility to Use Services

You must present a current quarter's Registration Card or a letter of acceptance and a valid photo identification each time you use the services of the UCLA Housing Office.

UCLA Housing Office

The UCLA Housing Office, located in 78 Dodd Hall (825-4491), provides information on available on- and off-campus housing, as well as transportation information, bus schedules, area maps and counselors to aid in landlord-tenant conflict resolution.

University Residence Halls

Four coed dormitories and two coed residential suite complexes accommodate undergraduate students. Graduate students (21 to 29 years of age) are accommodated in a coed graduate dormitory.

Dormitory rooms (shared by two students) are furnished with studio beds, desks, draperies and pillows. Students must furnish blankets, bed linens, bedspreads and towels.

Each residential suite consists of two bedrooms, a full bathroom and one common living room. Four students of the same sex are assigned to a suite, which is fully furnished with beds, storage space, couches, tables, chairs, lamps, desks, draperies and pillows. Students must furnish towels, linens and blankets.

The 1982-83 full academic year rate (Fall, Winter and Spring Quarters exclusive of vacation periods) is approximately $2300 for dormitories and approximately $2900 for suites, plus a membership fee of $15 in the Residence Hall Student Association. For portions of the year, the rate is prorated. Contracts are issued from the date occupancy is authorized through the end of Spring Quarter 1983.

Three cafeteria-style meals are served daily with the exception of Saturdays, Sundays and University holidays when two meals are served. Special diets are not available, nor are "room only" contracts.

Application

The *UCLA Housing Options and Information* booklet, which includes an application for Residence Halls, is mailed to all undergraduate students who apply to the University. Graduate students receive this same booklet from the Graduate Admissions Office upon acceptance of admission. Further information pertaining to the application process is contained in the booklet.

Assignment

Residence Hall assignments are mailed in late April for Fall Quarter, mid-November for Winter Quarter and mid-February for Spring Quarter.

Meals

Students can obtain moderately priced meals at the University Residence Halls on an individual basis or by contracting for meals on a quarterly nonresident meal plan. For further information, contact the Residence Halls Cashier's Office, Sproul Hall, 350 DeNeve Drive, Los Angeles, CA 90024 (825-6131).

In addition, meals may be purchased on an individual basis from the various Associated Students food service facilities and from full-service vending areas located on campus. These are listed in the "Student Services at UCLA" section of this catalog.

University Married Student Apartments

The University maintains 643 unfurnished one-, two- and three-bedroom apartments for married students and single student parents. These units are located on Sawtelle and Sepulveda Boulevards, approximately five miles from campus.

Rental rates for 1981-82 ranged from $220 to $305 per month. Due to the ever-increasing costs of maintaining these facilities, it is anticipated that the above quoted rates will be increased for 1982-83. Utilities are not included in the rental rate.

Application

Due to the limited number of facilities, applicants can anticipate an average wait of 18-24 months for any apartment. **Early application is important!** An application is contained in the *UCLA Housing Options and Information* booklet mailed to all undergraduate students who apply to the University. Graduate students receive this same booklet from the Graduate Admissions Office upon acceptance of admission.

Assignment

Assignments are made only to the full-time student member of the family and are not transferable to another member of the family. Verification of marriage or birth certificates are required for assignment.

To remain eligible for housing, assigned students must be enrolled in all quarters of the academic year (i.e., Fall, Winter and Spring Quarters). Only the student and his or her immediate family may live in the apartment. Extension students are not eligible. Call the Married Student Housing Office (391-0686) for up-to-date information.

University-Owned Apartments

UCLA maintains 216 off-campus apartments for single students located within walking distance to the campus and in the Mar Vista area serviced by University trams. Contact the UCLA Housing Office for availability and further information.

Off-Campus Living Groups

You may find accommodations providing a group living experience within walking distance of campus in privately operated cooperatives, in fraternities and in sororities.

Cooperatives

There are five privately-owned, nonprofit, member-controlled student living groups located adjacent to campus. Each student is required to work three to six hours per week as part payment for room and board. The Cooperative Housing Association is for men and women; the YWCA and Stevens House are for women only; Westwood Bayitt is a coed Jewish co-op; and Asher House is a coed Christian Science co-op. For 1982-83 room and board rates will vary from $400-$660 per quarter. Cooperatives normally have long waiting lists, so **early application is important!** To obtain applications and information, write directly to each cooperative. A list of cooperatives is available from the UCLA Housing Office.

Fraternities and Sororities

Most fraternities and sororities own or lease homes near the campus and provide lodging and meals for a number of their members. However, housing is not guaranteed with membership as each group has more members than live-in spaces. If you are interested in affiliating with a fraternity or sorority, contact either the UCLA Interfraternity Council (for fraternities) or the Panhellenic Council (for sororities) in the Dean of Students Office, 2224 Murphy Hall, 405 Hilgard Avenue, Los Angeles, CA 90024 (825-3871).

Off-Campus Listings

Up-to-date listings are maintained of apartments, houses, rooms, part-time work in exchange for room and board, and "share" situations (for people looking for roommates). These listings are available to students who come in person to the UCLA Housing Office (78 Dodd Hall). **Listings cannot be mailed** as they change daily. The office is open 8 am to 4:30 pm Monday through Friday (call 825-4491 for the expanded summer hours).

The University does not inspect rental accommodations and does not make rental or other arrangements on behalf of students. Student transactions must be made individually and directly with landlords. You are advised to have a clear understanding, preferably in writing, of the terms and conditions of tenancy. The UCLA Housing Office offers a handbook on tenant rights, model lease and rental agreements, other appropriate documents and advice on landlord-tenant problems.

Rental rates are relatively expensive in and around the Westwood area. The farther you get from campus, the less expensive the rental accommodations. Cost balances convenience. Average rental rates listed with the UCLA Housing Office for 1981-82 varied from $200 up per month for rooms in private homes, from $275 up per month for furnished bachelors and singles, from $425 up per month for one-bedroom apartments and from $500 up per month for two-bedroom apartments. Rental rates depend upon the furnishings and location of the lodgings. Reasonably priced housing listings are scarce, and rental prices for houses are appreciably higher. For most rentals utilities are extra. A few homes offer room and board in exchange for work.

Temporary Housing

Motels are located from one to five miles from campus with varying rates and accommodations. It is sometimes advisable for students to accept these accommodations temporarily until more permanent lodging can be located. Motel listings are available from the UCLA Housing Office.

Office of Residential Life

The Office of Residential Life, located in 1172 Placement and Career Planning Center (825-3401), provides professional and student staff to assist residents in the Residence Halls and in Married Student Housing with counseling, programming and advising needs. Primary attention is given to creating an environment which promotes positive relationships, provides maximum support to students in support of educational goals and offers a wide variety of opportunity for personal growth.

Transportation

There are several alternatives for personal transportation to and from the campus. Alternatives such as carpooling, public transportation and bicycling are described in the brochure entitled *How To Get To UCLA Without Using Your Car,* distributed by the Transportation Services Administration. This brochure is available at the 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. Students who wish parking permits may obtain a "UCLA Student Parking Request" at the Campus Parking Service. Parking assignments will be based on infor-

mation on the completed requests. Not all students who request parking permits receive parking assignments. Students with physical disabilities which preclude walking long distances may apply for parking permits through Student Health Service. Only those who have parking permits are assured that they may bring automobiles to campus. 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*. 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, by contacting the Campus Parking Service at 825-9871.

Need to Know More?

Finders Keepers is a handbook to UCLA, with sections on housing and transportation. Reference copies are available through all departmental, College, School and ASK counselors, at the College Library and University Research Library reference desks and at a number of other counseling locations (AAP, Academic Resources Coordination, Admissions, Dean of Students Office, Division of Honors Office, Placement and Career Planning Center and Psychological & Counseling Services).

Student Services at UCLA

This section works in concert with two other parts of the catalog: "Resources to Help You" and "Recreation and Participation at UCLA." Together, this trio of services sections describes the range and variety of programs to help you.

Academic Advancement Program (AAP)

The Academic Advancement Program (AAP), formerly EOP, is the primary student affirmative action program at UCLA. AAP is designed to provide academic support to students from ethnic and low-income communities who have been historically underrepresented at UCLA. The program seeks to assist these students in achieving their goal of graduation from the University of California. Applicants must be citizens or permanent residents of the United States and residents of the State of California. This requirement is waived for Native Americans who can document their tribal affiliation. Prospective applicants must meet regular University requirements for undergraduate admission as freshmen or in advanced standing. A limited number of exceptions are made each year. Special-action admission consideration is given on an individual basis. AAP, located in 1209 Campbell Hall (825-1481), offers orientation to campus resources; peer counseling for all entering students; extensive personal counseling services; individual and group tutorial sessions; career and graduate/professional school advisement; and seminars and preparation sessions for all graduate school entrance examinations.

Office of Academic Resources Coordination (ARC)

Students will find a comprehensive academic support system with advising and referral, Learning Laboratory and tutorial services at the Office of Academic Resources Coordination (ARC), located in Murphy Hall (206-6681). ARC's goal is to help students identify and use the campus resources that will meet their needs.

Advising and Referral

Students are invited to discuss their questions, needs and concerns with an ARC counselor. Experienced counselors are available to respond to initial requests for assistance and to provide informed direct referrals for continued service within ARC or to other campus resources. Referrals will be followed up to assure that they were appropriate and the students' needs were met. Requests for initial assistance are handled on a walk-in basis; continued service usually requires appointments. In addition to the services offered to all students, ARC's Counseling Assistants work with a selected group of entering students. This program aims to improve the students' chances of academic success by providing them with regularly scheduled counseling, advising and referrals.

Learning Laboratory

In the Learning Laboratory students who wish to improve their academic skills can work at their own pace on a variety of self-instructional materials. Students may see a Learning Lab counselor for diagnosis of academic skills problems and appropriate placement into learning programs, or they may be referred by course instructors for specific programs designed to complement and supplement classroom instruction. The self-paced instructional programs include audio, video and written modules for improving reading comprehension and rate, English and mathematics skills, writing approaches, and study and test-taking techniques. The atmosphere in the Learning Laboratory is warm and personal, with counselors always available to guide students in program selection, to assist them in using materials and to record their progress.

Tutorial Services

ARC is particularly concerned with helping students develop the verbal and quantitative skills required for success at the University. Peer tutoring programs staffed by qualified, trained undergraduates have proved to be one of the most effective means of addressing these needs. In collaboration with UCLA Writing Programs, ARC has developed the Composition Tutoring Lab to serve students enrolled in English composition and ESL classes. With ARC's assistance, the Mathematics Department offers the Math Tutoring Center for students who need more intensive guidance than the Math Labs can provide. ARC is in the process of initiating other tutorial programs. Students interested in being tutored may inquire at ARC about the availability of tutors in subjects other than mathematics and composition.

Mentors

UCLA Mentors ease the transition of new students into the University, provide an avenue to explore different fields and help create a sense of community on campus. Staff and faculty members, seniors and graduate students are matched with entering undergraduates based on academic or career interests. The Mentors serve voluntarily as both friends and resources, taking a personal interest in their students by exploring students' concerns and providing referrals to other campus offices and services. Call 825-8425 or visit the ARC Office for more information.

Campus Activities Service Office (CASO)

The Campus Activities Service Office, located in 130 Royce Hall (825-8981), administers and operates most campus public assembly facilities, classrooms and auditoriums. CASO offers technical advice in the public events area to groups holding events on campus. Groups must be registered through the Organizational and Inter-Organizational Relations Office (161 Kerckhoff Hall, 825-7041) to be eligible to use CASO services. CASO administers the Official and General Purpose Bulletin Boards on campus, as well as the General Assignment Lockers, and handles the sale of UCLA padlocks.

Department of Campus Community Safety (Police)

Aside from providing general law enforcement, the Department of Community Safety (Police), located at 601 Westwood Plaza (825-1491), offers a number of services to the University community:

Bicycle Licensing

Bicycles and mopeds can be registered and licensed free of charge either at 601 Westwood Plaza (Monday through Friday 8 am-3:30 pm) or at the Information and Services Booth on Bruin Walk (11 am-3 pm two days a week). Call 825-9800 for more information.

Crime Prevention

Seminars are held periodically throughout the year. For more information, contact the Crime Prevention Office at 825-7661.

Escort Service

The Department of Community Safety provides an escort service between campus buildings and/or local living areas within walking distance for students, faculty and staff from dusk to 1 am daily. Radio-equipped, uniformed Community Service Officers patrol the campus during those hours. To obtain an escort, call 825-1493 twenty minutes **before** you need an escort.

Information and Services Booth

The booth, located on Bruin Walk and open 11 am-3 pm two days a week, is staffed by Community Service Officers who provide a number of services free of charge, such as advice on rape prevention, and information on the Escort Service and on avoiding bicycle thefts. The Officers also distribute handbooks and maps showing bike rack locations on campus, demonstrate bicycle safety and security equipment, and register and license bicycles and mopeds. For more information, call 825-9800.

Lost and Found

The Lost and Found Office, located at 601 Westwood Plaza, is open Monday through Friday 7 am-3:30 pm (825-1227).

Night Tram Service

The night tram is a free shuttle service that circles the campus approximately every fifteen minutes from 6 pm to midnight (12:30 am during finals) Sunday through Thursday. The tram makes eighteen stops, including the dorms and sorority row. For more information, contact the Escort Service at 825-1493.

Operation Identification

"Operation Identification" is a property engraving program to increase the chance of recovery of lost or stolen valuables. Engraving tools may be checked out weekdays from 9 am to 5 pm at 601 Westwood Plaza. Call 825-7661 for more information.

UCLA Rape Prevention Education Program

The program offers lectures, workshops, films and discussion groups about various aspects of rape in an attempt to reduce the incidence of sexual assault within the campus community. It also presents women's self-defense classes. Call 206-6915 for more information.

Campus Parking Service

Please refer to the "Housing and Transportation at UCLA" section of this catalog for a description of this service.

Central Ticket Office

The Central Ticket Office serves the UCLA community through two locations:

James E. West Alumni Center (ground floor)

This location (325 Westwood Plaza, 825-2101) offers tickets to all UCLA athletic and cultural events; student tickets to athletic events at reduced prices; Ticketron and Mutual Ticket Agency tickets to off-campus events; bus tickets and tokens for the RTD and Santa Monica bus systems (discount rides for students); and special student discount tickets for local motion picture theaters.

650 Westwood Plaza

This location (trailer across from the University Police Department, 825-2953) also offers tickets to all UCLA athletic and cultural events. It also sells student tickets for on-campus cultural events at reduced prices, subsidized by the Student Committee for the Arts (you must show your Registration Card and Student Photo ID Card, and there is a limit of two tickets per person; watch the *Daily Bruin* ads for ticket sale dates).

Child Care

Child Care Services

Child Care Services (825-5086) offers two child care programs to University students, staff and faculty.

Child Care Center

Part-time and full-time care, depending upon parents' needs, is offered for children two months to six years of age. Fees range from $146-$292

per month depending on age of child and full- or part-time care. The Child Care Center is located in Parking Lot 1, behind the Credit Union and the BRI trailers (10833 Le Conte Avenue, 825-5086).

Outreach Program

Parent Orientation Sessions are held each Monday at noon in the Women's Resource Center (2 Dodd Hall). These sessions provide information about child care options, costs and how to make a child care arrangement. Assistance with immediate child care needs is available. The program also provides homes in the West Los Angeles community which are licensed by Los Angeles County and which participate in training and enrichment by the Child Care Services staff. Full- and part-time care is available; fees and hours are arranged with the individual care providers. Call 825-8474 for more information.

UCLA Parent Toddler School

Located in the Married Student Housing complex four miles south of campus at 3327 S. Sepulveda Boulevard (391-9155, 398-8739), this is a cooperative preschool open to all members of the UCLA community (students, faculty and staff).

The program is designed to help toddlers from 18 months to three 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 School operates Monday through Friday 9 am to noon.

University Parents Cooperative Nursery School

Located in the Married Student Housing complex four miles south of campus at 3327 S. Sepulveda Boulevard (397-2735), the school offers a warm, supportive educational environment to children of the UCLA community. The nature of the school also provides parents of varied cultural backgrounds the opportunity to gain insights and skills in parenting. Care is provided for children ages 3-6 years. The hours are Monday through Friday 9 am to noon and/or noon to 3:45 pm for kindergartners from Clover Avenue School, with extended care available from 3:45 to 5:30 pm. After-school care for first and second graders who attend Clover Avenue School is available from 3 to 5:30 pm Monday through Friday, with pickup service at the school.

Computer Services

Registered students can obtain an account free of charge on the IBM 4341 interactive computer operated by the Office of Academic Computing. This resource is designed to give students the opportunity to familiarize themselves with the use of computing equipment as a tool to assist in studies. You may use the computer to do homework, edit term papers, conduct independent research, teach yourself programming, or in connection with specific courses that make use of the computer as a learning aid. Terminals to access the computer are available at locations throughout the campus. Principal locations are in the Graduate School of Management, the Math Sciences building and Boelter Hall. Apply in 4302 Math Sciences from 8 am to 5 pm Monday through Friday (825-7548).

Cultural and Recreational Affairs Office

For detailed information on the programs offered by this office, please refer to the section of this catalog on "Recreation and Participation at UCLA."

Dean of Students Office

The Dean of Students Office (2224 Murphy Hall, 825-3871) is one of the few generalists left in these days of specialization. It exists to help students with whatever needs they might have, either directly or by referral.

The direct services offered by the Dean of Students Office include: emergency locating of and emergency messages to students; fraternities and sororities; general counseling; "good student automobile insurance discount" verification; honorary societies, including Phi Eta Sigma and Alpha Lambda Delta (freshmen honor societies), Pi Gamma Mu (social science honor society), Mortar Board (senior honor society); letters of recommendation; tie-line for business calls to other UC campuses; and assistance in understanding grievance procedures regarding student records, discrimination and student debts.

The Dean of Students Office also plays a role in the administration of campus discipline. This role is discussed in more detail in the "Student Conduct" section of this catalog.

Field Studies Development

Please refer to the "Resources to Help You" section of this catalog for a complete description of this office.

Financial Aid Office

The Financial Aid Office is located in A129 Murphy Hall. Walk-in counseling hours are 8:30 am to 5 pm Monday through Friday at Counseling Window B. Counselors are also available by appointment from 9 am to 4 pm Monday through Friday (825-4531). Please refer to the *UCLA Financial Aid Handbook* and the "Money at UCLA" section of this catalog for a complete look at the services of the Financial Aid Office.

Office of International Students and Scholars

The Office of International Students and Scholars and the International Student Center provide services and programs specifically for foreign students and postdoctoral scholars.

The staff, which includes professional and peer counselors, is uniquely prepared to respond to the questions and concerns of persons from other cultures. These include immigration, employment and other government regulations; financial aids; interpreting local customs; and personal problems. In addition, the Office serves as an advocate for the interests of foreign students, individually and collectively. The Office programs focus on facilitating an exchange within the academic setting between foreign and American students.

The Center, located on the south edge of campus at 1023 Hilgard Avenue (208-4587), operates with a small professional staff and several hundred volunteers. Its services include English language conversation groups, other language groups, assistance with locating housing, and special assistance for the family members of students and postdoctoral scholars. The Center's programs focus on student-community relations and include discussion groups, nationality dinners, international celebrations, tours of the local area and social activities.

Together the Office and the Center provide a comprehensive orientation program for entering foreign students. Both are committed to providing assistance to foreign students and scholars in their pursuit of the academic objectives for which they came to UCLA, and then to providing the means by which they can share their viewpoints with the American students and community. The Office is located in 297 Dodd Hall (825-1681).

Ombudsman

The Ombudsman is responsible for listening to grievances from any member of the campus community, i.e., students, faculty, administrators and staff; for investigating those grievances where resolution has not been to the satisfaction of the concerned individual or where there are no established guidelines for resolution; and for resolving where possible, through mediation, those grievances in which the Ombudsman is requested to assist by the individual involved. The office, located in 274 Kinsey Hall (825-7627), is independent in operation, and all matters are handled

confidentially. The Ombudsman is empowered to recommend changes to the University Policies Commission and/or to the Chancellor regarding University policies and practices. However, no action will be taken without approval of the individual(s) concerned.

Organizational and Inter-Organizational Relations Office

The Organizational and Inter-Organizational Relations Office, located in 161 Kerckhoff Hall (825-7041), services existing organizations and encourages the development of new groups; assists registered organizations with advice on program planning and development (including the graduate and undergraduate student governments); aids in securing program funding; registers all campus organizations; has primary responsibility for interpreting and applying University rules and regulations to and for organizational programs and unscheduled activities. The office acts as a clearinghouse for information on the programs and activities of registered organizations and as a referral agency for events occurring on campus.

Orientation

Orientation at UCLA is one aspect of the Office of Academic Resources Coordination. It is more than just a summer program — it is part of a process that begins with admission, extends throughout the first year and seeks to provide support to students' academic endeavors at UCLA. During the summer and prior to the beginning of the Winter and Spring Quarters, special programs are offered for new students. These programs bring extensive academic counseling and educational planning to all new undergraduates entering the University. At these sessions, students work in small groups with peer counselors and discuss what will be required of them in order to be successful at UCLA. They also plan their schedules for the upcoming quarter and learn of the educational opportunities open to them. In addition, undergraduates can learn about student services and the University's facilities and activities. Each student receives individual time with a counselor, fulfilling the academic advising recommended for all students (required by some Colleges and Schools). These sessions provide opportunities for dealing with the problems of adjusting to University life. Sessions for parents are also offered. For further information, contact the Orientation Office in Murphy Hall (206-6681).

Placement and Career Planning Center

The Placement and Career Planning Center offers career guidance and placement services to students of all disciplines at 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 (825-2981) and in two satellite locations: 1349 GSM (specializing in management, 825-3325) and 5289 Boelter Hall (specializing in engineering and the physical sciences, 825-4606).

Career Development

A staff of career counselors is available to assist you in career exploration, choice and the job search. The Career Resources Library furnishes information on planning further education and alternative careers. The Campus Interview Program provides convenient access for student interviews with employers and graduate school representatives. A more diverse selection 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 nonpaid 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.

Psychological and Counseling Services

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

Behavioral Division

The Behavioral Division (4223 Math Sciences, 825-4207) offers counseling for students who want to increase their effectiveness in handling specific problems encountered in the course of University life. Typical concerns which can be resolved through a self-management learning process include overcoming test-taking anxiety, fear of oral exams or participating in classroom discussions, public speaking anxiety, tension or inexpressiveness in difficult interviews and procrastination in studying. Other personal problems in which excessive anxiety or inappropriate learned behaviors interfere with performance can also be relieved, such as lessening difficulty in meeting people, learning to express oneself more directly and honestly in interpersonal relationships, and finding ways to increase self-confidence and self-control. Emphasis is placed upon the learning of techniques and abilities to help students implement decisions they have made and to realize their goals more effectively.

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.

Counseling Division

The Counseling Division (4223 Math Sciences, 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. Difficulties related to the process of making decisions, the clarification of values or long-range personal and career goals, the resolution of conflict in expectations, the handling of intense emotional experiences and other concerns affecting the personal growth of students are among those to which the Counseling Division frequently responds. 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 are also available. Emphasis is placed on the exploration and clarification of feelings, choices, expectations and alternatives, and the resolution of indecision or inability to act.

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 when there is a pressing need) or to receive further information.

Registration Fee Advisory Committee

The RFAC (126 Royce Hall, 825-7906) functions as the primary agency for channeling student input into decisions regarding the level and use of Registration Fee funds. The voting membership consists of four undergraduate students, four graduate students, three administrative representatives and a faculty representative.

The committee conducts budget reviews annually for all deparments and programs receiving Registration Fee funds and advises the Chancellor on funding for those areas, as well as the overall level of the Registration Fees. In addition, the Capital Outlay Task Force of the RFAC reviews

funding requests for proposed Registration Fee Capital projects. The findings are forwarded to the RFAC for review and approval and are transmitted to the Chancellor thereafter.

Religious Programs

The University Religious Conference is located at 900 Hilgard Avenue (at Le Conte, 208-5055). URC membership is held by the Baptist, Catholic, United Church of Christ, Disciple, Episcopal, Jewish, Lutheran, United Methodist and United Presbyterian organizations. The Assembly of God is an associate member. The URC serves as the headquarters for various campus ministries and programs which are carried out on the campus and within the building. Other facilities of the URC members include the Catholic Center, 840 Hilgard Avenue; Campus Baptist Chapel, 668 Levering Avenue; and University Lutheran Chapel, 10915 Strathmore Drive.

Other campus-related religious facilities include the L.D.S. Institute of Religion, 856 Hilgard Avenue; Christian Science Organization, 500 Hilgard Avenue; the YWCA, 574 Hilgard Avenue; and Chabad House, 741 Gayley Avenue.

In these facilities worship services, religious discussion groups, lectures, Bible classes, social gatherings, luncheons, dinners, social action conferences and other meetings dealing with campus religious life are held. In addition, the URC student religious organizations hold regular meetings and occasional services on campus.

ROTC

In accordance with the National Defense Act of 1920 and with the concurrence of the Regents of the University, a unit of the Senior Division Reserve Officers' Training Corps (ROTC) was established on the Los Angeles campus of the University in July 1920.

Air Force

Air Force ROTC, through its Aerospace Studies offerings, enables students to develop, demonstrate and apply the knowledge and leadership qualities requisite for an officer's commission in the U.S. Air Force. Students who demonstrate dedication to their assignments, who willingly accept responsibility, who think critically and who have the ability to communicate with clarity and precision will, upon completing the curriculum and graduating from the University, receive an officer's commission. See the "Aerospace Studies" listing in the "Majors and Courses of Instruction" section of this catalog for more details.

Army

The purpose of the Army ROTC is to prepare selected male and female students as leaders in their chosen fields, as far as the requirements of the service permit. These fields include: engineering; communications; administration; logistics; personnel management; intelligence; and many others. The ROTC Program qualifies graduates for commissions as officers in the United States Army Reserves, National Guard and Active Army. Distinguished graduates may qualify for a commission in the Regular Army.

Options now available include two-, three- and four-year programs leading to an Army commission. Cross-enrollment is available through UCLA Extension from community colleges or other colleges that do not offer Army ROTC. You can check the "Military Science" listing in the "Majors and Courses of Instruction" section of this catalog for details of the program.

Navy

Navy ROTC at UCLA offers subsidized and nonsubsidized programs for college students who wish to serve their country as commissioned officers in the U.S. Navy or Marine Corps. NROTC enables college graduates to utilize their academic education in such military fields as marine engineering, nuclear propulsion engineering, aviation, and Marine Corps infantry and aviation. It also provides an opportunity to develop leadership and management skills in a challenging environment of high responsibility. Two-, three- and four-year programs and scholarships are available. Successful completion of the curriculum and graduation from the University with a bachelor's degree will lead to a commission in the U.S. Navy or Marine Corps and active duty aboard the Navy's aircraft, surface ships and submarines or with U.S. Marine Corps aviation or infantry units. You can check the "Naval Science" listing in the "Majors and Courses of Instruction" section of this catalog for more details.

Financial Assistance

In addition, each of these programs offers financial assistance to participating students. Turn to the "Money at UCLA" section of this catalog for more information.

Office of Special Services/Veterans Affairs

The Office of Special Services/Veterans Affairs, located in A255 Murphy Hall (825-1501), provides numerous counseling and support services for veterans and physically disabled students. The office also verifies enrollment for Social Security purposes. Services include:

Information

Information for veterans and their dependents about V.A. Educational Benefits, tutorial assistance, V.A. work-study and loan programs is provided.

Fee Waivers

Fee Waivers are issued to dependents of California veterans who are deceased or disabled because of service-connected injuries and who meet the income restrictions in Education Code Section 10652.

Services for Disabled Students

Any physically limited student may obtain services and assistance, including help with registration and enrollment, parking permits, fee deferments authorized by the California Department of Rehabilitation, readers for the blind, interpreters for the deaf, note takers, examination proctors and minor repairs to wheelchairs.

Status Certification

Certification of student status is given to recipients of Social Security benefits.

Student Health Service

The services of the UCLA Student Health Service are available to registered students at little or no cost. This on-campus facility is designed to provide the health care and information students may require while attending UCLA.

General Description

Three areas of service are integrated by the Student Health Service to provide a comprehensive approach to meeting health care concerns. These are:

(1) **Clinical Care** by the SHS professional staff, designed to provide a broad range of services, both preventive and medical, to meet most health care needs, and referral services to professional care elsewhere for services not otherwise provided.

(2) A low-cost **Supplemental Health Insurance Plan** which may be purchased to provide substantial financial coverage for the costs of necessary care which cannot be obtained in Student Health, such as hospitalization, surgery, specialized treatment or care at facilities other than Student Health.

(3) **Programs and Learning Opportunities,** including a strong self-help component, to assist students in achieving an awareness of their own health and in assuming responsibility for their own health care, and several programs in which students may participate as active health workers.

The Student Health Service's resources are organized to meet the anticipated health care needs of the majority of students which may arise during active attendance at the University. Student Health offers comprehensive coverage for most conditions. In selected cases, limited direct care is available for predictably chronic or recurring needs. For most long-term conditions, however, the student will be assisted in locating resources other than Student Health.

Benefits, Locations and Hours

Direct clinical care is available to students at the UCLA Student Health facilities, as well as at other UC campuses.

General and Emergency Care is available at the Student Health Clinic in A2-130 Center for Health Sciences. Office hours are Monday through Friday 8 am to noon and 1 to 5 pm, EXCEPT TUESDAY, when service begins at 9 am. Emergencies *only,* as determined by the staff, are seen from 11:30 am to 1 pm and from 4:30 to 5 pm.

Emergency care is also available at the Pauley Pavilion Station located at the northwest corner of Pauley Pavilion (Gate 10) from 1:30 to 6 pm Monday through Friday. Specifically staffed to provide prompt, expert care for athletic injuries, Pauley Pavilion is open to all students for urgent care.

The Student Health Service facilities in the Center for Health Sciences are open Monday through Friday throughout the year, except on official University holidays. The Pauley Pavilion Station is open Monday through Friday during the academic year only, except on official University holidays.

When the Student Health Service facilities are closed, students in need of urgent care must seek that care elsewhere, such as in the UCLA Hospital Emergency Room or Acute Care Clinic. Charges for all emergency room services are *not* the responsibility of the Student Health Service and remain the financial responsibility of the student. Additionally, the Student Health Service is *not* responsible for inpatient hospital costs at UCLA or elsewhere, nor for ambulance fees.

Benefits and charges are subject to change at the discretion of the UCLA campus administration, with appropriate official prior notice.

General Medical and Surgical Services

The Student Health Clinics include: (a) **Primary Care Clinics** which provide outpatient diagnosis, treatment and consultation for general health care needs. The clinics are organized to provide services on a walk-in basis as well as on an appointment basis. Students are encouraged to make an appointment by calling 825-2463 or by visiting the appointment desk in person; (b) a wide variety of **Specialty Clinics** to provide medical and/or surgical consultation of a specialized nature upon referral from the Primary Care Clinics. Specialty services include Dermatology, Orthopedics, Surgery, Gynecology, Internal Medicine, Allergy, Chest, Ear, Nose and Throat, Ophthalmology, Urology and Neurology; (c) **ancillary services,** such as a professionally staffed Clinical Laboratory, Radiology Unit and Pharmacy, are available in Student Health to provide support to the Primary and Specialty Clinics.

Moderate fees are currently charged for pharmaceuticals, contraceptive devices and medications, routine physicals and required health evaluations, dental care, orthopedic supplies, immunizations and missed appointments. All other services provided within the Student Health Clinics are available at no additional cost to fully registered or prepaid students during the academic year and are available to some categories of other students at fee-for-service rates (see "Conditions of Eligibility").

Gynecology and Contraceptive Services

The Women's Health Clinic provides care for routine women's health needs and treatment of gynecology problems. Family planning (birth control) services are available, as are testing, counseling and referrals for pregnancy. Counseling for sexuality and relationship concerns is also provided. Students wishing to use the contraceptive services are encouraged to first attend one of the educational orientation classes (CCEC classes) offered by the Clinic. These classes are scheduled several times each week, and men are invited to attend.

All services of the Women's Health Clinic are available to eligible students free of charge during the academic year, with the exception of contraceptive devices and medications. No direct service or coverage is provided by Student Health for abortions, except for counseling and referrals. For additional information, for scheduled class hours or for appointments, call 825-0854 or come in person to Student Health.

Dental Clinic

Services of the Student Health Dental Clinic are available by appointment without the need of a referral. While the primary function of the Dental Clinic is to treat dental emergencies, a limited amount of general dentistry and dental hygienic services is available. Dental examinations, X rays, prophylaxis, hygiene instructions, and advice and consultation on dental problems are provided. Fees are charged for all services of the Dental Clinic, and students are required to pay for care at the time of treatment. For additional dental information, call 825-5858.

Mental Health Service

Individual and group psychotherapy, as well as diagnostic and psychotherapeutic techniques, are available free of charge through the Mental Health Service located in Student Health and through the Psychological and Counseling Services located in 4223 Math Sciences. The respective staffs of psychiatrists, psychologists and clinical social workers provide help with situational stresses, such as school pressures, family conflicts or relationship problems, as well as with other emotional or psychological concerns. Student visits to these services are strictly confidential, and, in an emergency, a student will always be seen immediately. Call 825-7985 for more information or for an appointment in the Mental Health Service; call 825-4207 for information and appointments in the Psychological and Counseling Services.

Student Involvement Programs

Many students enjoy and benefit from the opportunity to become involved in the health care system. Benefits include increased awareness and understanding of health and health care, peer involvement in health counseling and care, student input and participation in health care administration, and increased exposure to a variety of health care careers and professions.

If a student is interested in becoming involved, Student Health offers several ways for him or her to do so. Self-care clinics encourage students to play an active role in their own health care. Student outreach programs such as the **Student Health Advocates** and the **Peer Health Counselors** give students the opportunity to become involved in providing health care for other students. Committees such as the **Student Health Advisory Committee** and the **Student Health Insurance Committee** represent formalized student input into health care administrative decisions.

For more information on the student involvement programs, please call 825-6385.

Hospitalization

The University and the Student Health Service *do not* provide any coverage for the costs of hospitalization or inpatient care at UCLA or at any other hospital. *All* such hospital and related costs are the student's responsibility.

To assure protection against unexpected and sometimes severe financial losses, students should be certain that they are adequately covered either through private hospital/medical insurance or through purchase of the UCLA Supplemental Health Insurance Plan (see "Supplemental Health Insurance" below).

Financial Support of Health Services

Student Health is supported principally by allocations from the Registration Fee paid by all fully registered students, by the voluntary Optional Health Service Fee paid by some categories of students and by the fees paid by students for certain services. Those students paying the Registration Fee or the Optional Health Service Fee have standard eligibility status and receive all benefits as described above at no additional cost, except for moderate service charges for pharmaceuticals, contraceptive devices and medications, routine physicals and required health evaluations, dental care, immunizations, orthopedic supplies and missed appointments.

Summer Session Fees, Filing Fees and any other monies advanced for special study categories short of full Registration Fees *do not in themselves provide any support to or eligibility for Student Health Service,* but may make such persons eligible for benefits either by paying the Optional Health Service Fee or on a Fee-for-Service basis as explained below. Benefits not directly provided through the UCLA Student Health Service or exceeding stated limits are the student's personal financial responsibility, with or without the aid of any health insurance he or she may have. Such insurance, including the UCLA Supplemental Health Insurance Plan (see below), effectively extends the student's overall health care coverage beyond the limits of direct care at Student Health Service.

Conditions of Eligibility

(1) *Students paying full Registration Fees in any quarter of the regular academic year of any School, College or Division of UCLA are entitled to full benefits as set forth above with official verification of registration.* This privilege extends from the first day of the quarter or semester (as officially published) through the last day of the same, except in the case of withdrawal or dismissal (see below for limitations following withdrawal or dismissal). If the student intends to register for the next immediately following quarter or semester, his or her coverage extends through the break between quarters or semesters. On the basis of a reciprocal arrangement between UC campuses, students currently registered at other UC campuses may receive care on the same basis as those at UCLA. In the case of an officially confirmed transfer to UCLA as a fully registered student, the student will be entitled to full benefits during the regular academic year, for the period between the last day of official registration at another UC campus and the first day of the UCLA quarter immediately following.

(2) *Some categories of students who pay less than the full Registration Fee* may receive Student Health benefits during any quarter (including summer months) in which their eligibility applies by electing one of the two following payment methods:

— They may receive full benefits by prepayment of the Optional Health Service Fee at the beginning of the quarter or initial Summer Session or

— They may utilize the Student Health Service on a Fee-for-Service basis between the last official day of the academic session just preceding and the opening day of the next session following such periods.

The specific categories of students eligible for these options are as follows:

(a) *Continuing students* (including those from other UC campuses transferring to UCLA) during summer months, whether attending Summer Session or not.

(b) *Accepted candidates for any UCLA degree* including undergraduates who have filed an Intent to Graduate during any one quarter of nonregistration, for any reason except withdrawal, provided that they have been fully registered or under academic department sponsorship in the previous quarter, and that they have satisfactory evidence of intent to reregister.

(c) *Graduate students actively researching and/or writing dissertations* who have no need to take classes or to register for this purpose, and who are not ready to submit their theses and pay Filing Fees. Service is contingent upon presentation of any official written confirmation of current sponsorship and continuing *bona fide* degree candidacy for the quarter from the responsible senior faculty member or department head.

(d) *Graduate students paying a Filing Fee* for dissertations, but not otherwise registered for that quarter or summer period in which that fee is paid.

(e) *Postdoctoral fellows and trainees,* properly identified as such by their sponsors, working full time toward additional credentials in any quarter or summer period.

(f) *Foreign students* not yet registered, but living near campus and working under University sponsorship to meet language and/or other academic prerequisites to full registration, when approved by the Office of International Students and Scholars.

(g) *Medical and dental students,* technically "registered" for purposes of medicolegal coverage during elective or "free" quarters, but paying no Registration Fee, with appropriate confirmation.

(h) *Visiting Scholars,* when officially designated as such by their sponsoring department.

In all of the above situations service charges incurred prior to the eligible period are *not* automatically cancelled by subsequent payment of the Optional Health Service Fee.

(3) Some other categories of students having only intermittent, partial or qualified University status may be eligible for Health Service use, but **solely** on a Fee-for-Service basis as follows:

(a) *Students enrolled in Summer Sessions only* who were not, and will not be, fully registered or enrolled in the preceding or following quarters.

(b) *Students whose reregistration in the next regular quarter is in any doubt* following withdrawal. In such cases, the Fee-for-Service use privilege extends only to the opening day of the next regular quarter or the initial Summer Session, whichever is sooner. Thereafter, eligibility on any basis terminates until official confirmation of reregistration or summer enrollment is presented.

(c) *Special scholars,* specifically sponsored part-time and exchange students and researchers primarily based elsewhere, when officially designated as such by the sponsoring department, may use the Health Service, but only for emergency care of acute illness and injury apparently arising in connection with their scheduled study and activities on the UCLA campus, on a Fee-for-Service basis.

(4) *Students who graduate* may use the Student Health Service during the quarter or Summer Session immediately following graduation.

(5) *Prospective students* arriving from significant distances and students required for any University-connected reasons to be on campus prior to the first day of the quarter will be entitled to full benefits during such periods with reasonable documentation of their status and intent to register; if later they fail to register, they will be charged for services actually received.

In some unusual situations, if in the best interest of the student and the University, the Director may approve eligibility as an exception to the foregoing conditions on a case-by-case basis.

Supplemental Health Insurance

The cost of necessary hospital inpatient care is not covered by Student Health nor is the cost of any care obtained outside of Student Health. Students treated within Student Health following withdrawal from school or during an unregistered quarter are liable for Fee-for-Service charges for care received. Since such costs are the student's responsibility and may cause serious financial hardship, each student *should be certain* that he or she has adequate health insurance coverage. The University requires *as a condition of registration* that all foreign students attending UCLA on nonimmigrant visas supply written proof of adequate health insurance to the Student Health Service at the beginning of their first quarter or semester of registration and thereafter *annually* at the beginning of Fall Quarter. Additionally, the University reserves the right to require adequate health insurance of *all* students as a condition of registration.

If not already covered by health insurance, students are encouraged to purchase the Supplemental Health Insurance Plan developed jointly by

the UCLA Student Health Insurance Committee and the Student Health Service. This plan is available only through the Student Health Service and *only* at the beginning of each quarter. The specific enrollment periods for the insurance appear at the front of this catalog.

The Supplemental Health Insurance Plan is negotiated annually and is typically as follows:

It is an "excess" plan providing benefits only after all benefits available from other insurance coverage have been exhausted.

It is a "supplemental" plan which is intended to provide coverage ONLY for those services not available to students through the Student Health Service facilities. Consequently, no benefits will be payable under this policy should expenses be incurred for services which could have been obtained in Student Health.

"Preexisting" conditions are not covered. These are conditions for which professional advice or treatment was previously received or which were manifest prior to purchase of the plan.

The plan will also have other specific benefit exclusions. Students are urged to carefully review the policy prior to purchase. Assistance is available at the Student Health Insurance Office or by calling the Insurance Coordinator at 825-1856.

The Supplemental Health Insurance Plan is not automatically renewed and students are not automatically enrolled in it. Students must reapply for the plan on or before the date the coverage period expires. Renewal notices are not mailed.

Care of Students' Dependents

Due to limitations of staff and space, no care for students' dependents can be provided within the Student Health Service. The Supplemental Health Insurance Plan may be purchased at Student Health for the dependents of any student who has purchased the plan for himself or herself. Dependents' benefits under the insurance plan are identical to those available to the student.

Confidentiality of Medical Records

To protect individual privacy, no information whatsoever will be given to any person regarding a student's medical condition without his or her prior written consent or a legal court order, except in cases of extreme emergency when not to do so would, in the Director's opinion, endanger the student's life or the lives of others, and as otherwise required by law. Students have the right to examine and review the contents of their medical records in the presence of Student Health professional staff members by appointment and according to established rules. The record itself, however, is the property of the University and may not be removed from the custody of Student Health by any person, except under court order.

Care Off Campus

When visiting another University of California campus, a UCLA student is eligible for services at that campus Student Health Service under the same conditions that apply to students enrolled on that campus. Verification of student registration at UCLA will be required. While a student is off campus participating in an officially sponsored event, necessary medical expenses incurred because of injury are covered by insurance carried by the Regents of the University. This policy does not cover any care which the student could reasonably have obtained through the UCLA Student Health Service.

Third-Party Liability and Subrogation

When a student is treated under Student Health Service auspices for illness or injury resulting from third-party negligence or intent, the University reserves the right to recover the actual costs of such care as the "prime insurer" by assignment or subrogation from any subsequent legal settlements and/or awards to the patient.

Federal Income Tax Deduction

For Federal income tax purposes, the amount allocated to Student Health from each quarterly Registration Fee paid during the taxable year may be taken as a deduction for medical care. This amount changes each year, and the exact figure for the most current taxable year may be obtained by contacting the Information Desk at Student Health.

Health Requirements at Entrance

Before beginning course work at the University, all students are urged to have their own physician and dentist examine them for fitness to perform University work. Students are encouraged to have any health problems capable of being remedied, such as dental cavities, impaired hearing or defective eyesight, corrected before coming to the University.

All new and reentering students in the Graduate Schools of Dentistry, Education, Medicine, Nursing and Social Welfare must complete and return to the Student Health Service the health registration and history forms mailed to them with their registration materials. These individuals are required by the respective Schools to have a thorough physical examination and selected tests and immunizations prior to registration. The required health evaluation procedures are offered by appointment through the Student Health Service at a low cost. Charges for such procedures are the responsibility of the individual student.

All new and reentering foreign students attending UCLA on nonimmigrant visas must complete and return to the Student Health Service the health registration and history forms mailed to them with their registration materials. These individuals are required by University policy to supply written proof of adequate health insurance to the Student Health Service *annually* at the beginning of the Fall Quarter. Additionally, all new and reentering foreign students are required to be cleared by Student Health for freedom from active tuberculosis. These students must have a chest X ray or tuberculin test performed at Student Health Service.

Other students are not required to complete a health evaluation form as a condition of registration. However, students who would like to participate in a special campus medical program for the physically disabled are urged to contact the Disabled Students Medical Program Coordinator in the Student Health Service at 206-6216.

Additional Information

Metered parking for students visiting the Student Health Service is available on the A Level of the Center for Health Sciences parking structure. Students and others may obtain additional information about the Student Health Service by calling 825-4073 or by writing to: Director, UCLA Student Health Service, A2-130 Center for Health Sciences, Los Angeles, CA 90024. The following telephone numbers may be useful for obtaining specific information regarding services at Student Health:

SHS Information	825-4073
Insurance Coordinator	825-1856
Appointments:	
General Care	825-2463
Specialty Clinics	825-1163
Women's Health Service	825-0854
Mental Health Service	825-7985
Dental Clinic	825-5858
Social Services	825-4076
Pauley Pavilion Station	825-5704
Health Evaluations	825-0861
Health Education	825-6385
Health Advocates	825-4730
Peer Health Counselors	825-8462
Cold Clinic	825-8462
Nutrition Clinic	825-8462
Student Health Advisory Committee	206-6842
Campus Information	825-4321
If On Campus	33
Campus Police	825-1491
If On Campus (Emergencies Only)	35

Escort Service	825-1493
UCLA Emergency Room	825-2111

Deaf and hard of hearing students may communicate with the Student Health Service via the UCLA Hospital Interpreter/Translator Service at 825-7275 or via the Office of Special Services at 206-6083.

The Student Health Service encourages students to share their reactions, expectations and health care needs with the Student Health staff or with the Student Health Advisory Committee in order that the Health Service may better serve them. The following suggestions are provided so that students may receive the maximum benefits from the Student Health Service:

- Participate actively in your own health care, including the self-help and student-run programs.
- Become knowledgeable about all the services and informational materials offered through the Student Health Service and take advantage of them.
- If possible, make an advance appointment for services. Remember though, fees are charged for missed appointments, so cancel ahead of time.
- Ask to be seen by a specific clinician if you like and respect that person.
- For walk-in service, come early in the day.
- Be certain that you are adequately covered by health insurance. If not, consider purchasing the UCLA Supplemental Health Insurance Plan.
- Don't hesitate to ask questions about any diagnosis or treatment you may receive or about any costs incurred. Be sure you understand the answers you are given.
- Use the suggestion forms available in Student Health to make known any comment, complaints or compliments you may have about the Health Service.
- Be a responsible patient and complete the course of treatment prescribed for you, including any follow-up visits or tests that may be necessary.

Student Legal Services

Registered students with legal problems may obtain assistance free of charge in the resolution of their difficulties in such diverse areas as landlord/tenant relations, domestic relations, accident and injury problems, criminal matters and contract and debt problems. Students will be seen on a walk-in basis Monday through Friday from 9 am to 12:30 pm in 70 Dodd Hall (825-9894) by an attorney or by a law student participating in a clinical program of the UCLA School of Law under the direct supervision of an attorney.

UCLA Alumni Association

The UCLA Alumni Association, an organization of former students and friends, provides services to its members, the University and community. Students are invited to become involved with the Alumni Association through a variety of programs and activities.

Advisory and Scholarship

The Advisory and Scholarship Program awards approximately $190,000 annually to entering freshmen and continuing students. **Freshmen Scholarships** range from $1000 to $9500. Eligibility for these awards is a minimum 3.5 GPA and California residency. Continuing students compete with other departmentally nominated students for **Distinguished Scholar Awards**. All Alumni Association awards are conferred on a competitive basis, and financial "need" is not a requirement. Recipients of these awards, known as **Alumni Scholars**, form a club and engage in a number of University services and recreational activities. In addition, the Advisory and Scholarship Program provides training for alumni who would like to serve as advisors to outstanding high school seniors and their families.

Student/Alumni Relations

Among the various programs sponsored by Student/Alumni Relations is **UCLA's Homecoming**. Students can serve on the Homecoming Committee and work with alumni in planning the weekend's festivities. Another program, **"Dinners for Twelve Strangers,"** brings together students, alumni and faculty for an evening of exchanging ideas and experiences. Students are invited to either attend a dinner or host one themselves. In addition, Student/Alumni Relations serves to support student events such as the Chancellor's Freshman and Graduate Receptions, Spring Sing and Mardi Gras.

Young Alumni

UCLA's Young Alumni organization serves the needs of recent graduates. Activities include sporting events, credit and career seminars, and various social and service programs.

Outstanding Senior Awards

Each year the Alumni Association honors outstanding seniors for their excellence in academics and service to UCLA and the community.

Gradpak

In June **free Gradpaks** are available for graduating seniors. Each Gradpak contains bluebooks, grade cards, and chances to win trips and major athletic event tickets. Seniors who become members of the Alumni Association receive discounts on cap and gown rentals, on diploma "Perma Plaquing," on one Extension class of their choice and much more.

More Information

You can get more information about the activities of the UCLA Alumni Association in the James E. West Center (across Westwood Plaza from Ackerman Union, 825-3901).

University Policies Commission

The University Policies Commission functions as a deliberative body to study and, when appropriate, to recommend innovations or policy changes which would enhance the quality of the campus environment. Representing all segments of the campus community, its membership includes three students, three faculty members, three nonacademic staff members and three administrators.

Students, faculty, staff and administrators are encouraged to contact the office in 126 Royce Hall (825-7906) with policy items of concern to them and the campus community.

Visitors Center

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

Campus tours for the public are offered weekly, and personalized campus tours are arranged upon special request for visitors and guests of University staff and faculty.

Reservations for the UCLA Japanese Garden are handled by the Visitors Center (825-4574), and guided tours of the Mildred E. Mathias Botanical Garden are conducted for groups.

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

Women's Resource Center

The Women's Resource Center (WRC), located in 2 Dodd Hall (825-3945), offers services to the entire campus community, with special focus on women's needs, including:

— Drop-in and telephone referrals both on and off campus for child care, counseling, health care, legal aid and employment.

— Ongoing and new support groups and workshops for women and men focused around a wide variety of topics.

— Boards with listings on women-related events on and off campus, jobs, housing and more.

— An information system and library covering topics such as women in history, health care, aging, legislation, violence against women, politics, career preparation and assertion training.

The Women's Resource Center also offers internships in creative writing, editing, library science, graphic art, legislative research, women's issues, publicity, program development and administration. Internships involve a six-hour per week commitment for eight to ten weeks.

The Women's Resource Center is a unique student service committed to the improvement of the status of women on campus by providing opportunities for women to develop their full potential. To this end, WRC works cooperatively with a wide variety of individual staff, faculty and students, as well as campus units, organizations and student groups to provide supplemental programs, workshops and resources that will enrich the educational, personal, career and leadership development of women at UCLA.

About ASUCLA

ASUCLA (Associated Students of UCLA) combines four diverse vital campus functions within one organizational structure. Its basic goal is to enhance the quality of UCLA campus life for students and the entire UCLA community by providing meaningful programs and activities through the undergraduate (SLC) and graduate (GSA) student governments and the Communications Board, and by providing commercial services and facilities through its professional staff. ASUCLA operates and manages Ackerman Union, Kerckhoff Hall and the North Campus Student Center.

You will find information about student government in the "Recreation and Participation at UCLA" section of this catalog; a description of ASUCLA services follows below:

Food Service

ASUCLA operates the general campus food service for UCLA with a number of menu options at a variety of locations:

THE TREEHOUSE — Located on the first floor of Ackerman Union (825-0611, ext 271), the Treehouse is open for breakfast, lunch and dinner and features the **Butcher Block** and the **Salad Bowl** where you can find carved-to-order hot roast beef sandwiches, barbecued chicken and ribs, and make-your-own salads, in addition to traditional cafeteria fare. **La Quicherie** serves spinach salads, fresh breads and a variety of quiche. Treehouse hours are Mon-Thu 7 am-7 pm, Fri 7 am-5 pm.

Adjacent to the Treehouse is the **Sandwich Room** where you can find a variety of low-cost made-to-order sandwiches, including Italian-style hot or cold submarine sandwiches. The Sandwich Room is open Mon-Fri 8 am-4 pm.

THE COOPERAGE — Replacing the Coop on the A Level of Ackerman Union (825-0611, ext 323) is the Food Service Department's newest restaurant, offering Mexican food, made-to-order pizza, grill items, filled croissants and special salads. There are plans to serve beer and wine in the near future. The Cooperage features an innovative menu, a warm atmosphere, a stage and sound system for live entertainment and a large screen TV for major events. Hours are Mon-Thu 10:30 am-10 pm, Fri 10:30 am-7 pm, Sat 11 am-6 pm, Sun noon-6 pm.

NORTH CAMPUS STUDENT CENTER — This food service facility (825-0611, ext 331) is located just south of the Research Library and offers a full range of menu options, including full-course entrees, a variety of pastas, deli-type sandwiches, a salad bar, hamburgers and french fries, and special garden sandwiches. The newest addition is an outside hot dog cart offering a variety of specialty hot dogs, including Polish sausages and knockwurst. North Campus is open for breakfast, lunch and dinner. Hours are Mon-Thu 7:30 am-11 pm, Fri 7:30 am-8 pm, Sat 10 am-6 pm, Sun 11 am-9 pm.

THE BOMBSHELTER DELI AND BURGER BAR — This unique food service is located in the center of the Court of Sciences (825-0611, ext 281). It offers an assortment of deli sandwiches and salads at low prices. In addition, you can get hamburgers and fries or a genuine falafel for lunch. "Gypsy breakfasts" are served in the morning. It is open Mon-Fri 7:30 am-5 pm, Sat 10 am-3 pm.

CAMPUS CORNER — The oldest of the ASUCLA facilities, the Campus Corner is located just across Bruin Walk from Meyerhoff Park (825-0611, ext 275). Pita bread pocket sandwiches, soft frozen yogurt, hamburgers and french fries are available. Hours are Mon-Thu 8 am-5 pm, Fri 8 am-4 pm.

The **KERCKHOFF COFFEE HOUSE** is located on the second floor of Kerckhoff Hall (825-0611, ext 283) and offers ice cream specialties, a variety of teas and coffees, plus an assortment of potages. Live entertainment is featured almost every night. The Coffee House is open Mon-Fri 7:30 am-1 am, Sat and Sun 11 am-midnight.

POTLACH is a lounge on the first floor of the Graduate School of Management (1323A GSM, 825-0611, ext 285) which offers sandwiches, snacks and beverages. Hours are Mon-Thu 8 am-9 pm, Fri 9 am-2 pm.

BANQUETS AND CATERING — The ASUCLA Food Service also provides catering service within the Student Centers. The staff will be delighted to discuss any banquet or catering needs and is prepared to offer attractive and innovative options. Visit the catering office in 1311 Ackerman Union or call them at 825-0611, ext 277.

Students' Store

The ASUCLA Students' Store is actually a "mini department store" with three locations on campus: Ackerman Union (B Level, 825-7711), the Center for Health Sciences (13-126 CHS, 825-7711, ext 218) and the North Campus Student Center (825-7711, ext 216). You can buy a wide variety of textbooks, general books, school and art supplies, dental and medical supplies, electronic items, sporting goods, UCLA merchandise (Bearwear), casual and fashion clothing, food, health aids, greeting cards and Lecture Notes. The main store is open Mon-Thu 7:45 am-7:30 pm, Fri 7:45 am-6 pm, Sat 10 am-5 pm, Sun noon-5 pm during the school session and Mon-Fri 8:30 am-5:30 pm, Sat and Sun noon-5 pm during school breaks.

Graphic Services

ASUCLA Graphic Services, located in 150 Kerckhoff Hall (825-0611, ext 295), is the campus center for photographic, printing, typographical and other graphic services. Services include Xerox and book copying, quick offset, custom printing, typesetting, commercial photography, color portraits, senior portraits (all academic apparel is furnished), identification and passport photographs, "Perma Plaques," film, photo and dark room supplies and discount photofinishing. Hours are Mon-Fri 8:30 am-6 pm, Sat 10 am-3 pm.

Check Cashing

Students, staff and faculty with current UCLA identification may cash a personal check for up to $50 a day, with a 20¢ service charge for each check at the Service Center in 140 Kerckhoff Hall (825-0611, ext 321). Postdated checks may also be cashed for up to $50 with a 45¢ service charge. The postdated check will be held for two weeks before being sent to the bank. Only one postdated check per two-week postdating period is allowed. Traveler's checks in amounts up to $50 per day may be cashed with a 20¢ service charge. Check cashing hours are Mon-Fri 9 am-4 pm. The Cashier's Office on the A Level of Ackerman Union will cash checks on Sat from 10 am to 5 pm. No postdated checks may be cashed during the weekend hours.

Money Orders

At the Money Order Window in 140 Kerckhoff Hall (825-0611, ext 321), 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 service charge of 50¢ for each money order. The Money Order Window is open Mon-Fri 8:30 am-4:30 pm.

Post Office Boxes

Boxes are available to students, staff and faculty in 140 Kerckhoff Hall (825-0611, ext 321) for $6 per quarter for a small box or $8 per quarter for a large box. The Post Office Box Rental Window is open Mon-Fri 8:30 am-4:30 pm.

Meeting Rooms and Lounges

The following lounging and meeting spaces are available for the use of the entire campus community: five meeting rooms, two 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; a lounge on the A Level of Ackerman Union; and a lounge in the North Campus Student Center.

Students may reserve a space for a meeting in Ackerman Union or Kerckhoff Hall by visiting the Student Union Operations Office on the A Level of Ackerman Union or by calling 825-0611 and may reserve space at the North Campus Student Center by visiting the information area at North Campus or by calling 825-0611, ext 331.

Travel Service

The ASUCLA Travel Service, located in A209 Ackerman Union (825-9131), offers a selection of domestic and international charter flights, land arrangements and charter packages, student tours, and scheduled air and rail tickets, as well as other travel-related services. The Travel Service is open Mon-Fri 8:30 am-6 pm, Sat 10 am-2 pm.

Job Opportunities on Campus

ASUCLA Personnel provides over 1300 part-time jobs, all reserved for registered UCLA students, and all conveniently located on campus. In many cases, no previous work experience is required. These jobs provide excellent background, training, promotional opportunities — and sometimes supervisory experience — for your future. ASUCLA is sensitive to arranging your work schedule around your academic schedule. Starting salaries for these jobs are competitive, and increases are given based on performance.

You can find the ASUCLA Personnel Office in 205 Kerckhoff Hall (825-7055). Hours are Mon-Fri 8 am-5 pm.

Need to Know More?

This section of the catalog has given you a spotlighted selection of available student services. It's designed to tell you that they're here—and how to find them. It is worth repeating, though, that the best way to learn more about each of them is to call or visit the offices mentioned here.

Reference copies of *Finders Keepers* also include information about student services. They are available through all departmental, College, School and ASK counselors, at the College Library and University Research Library reference desks and at a number of other counseling locations (AAP, Academic Resources Coordination, Admissions, Dean of Students Office, Division of Honors Office, Placement and Career Planning Center and Psychological & Counseling Services).

Recreation and Participation at UCLA

The phrase, "a college education," is an incomplete description of the opportunities available at UCLA. One of the most stimulating aspects of the UCLA experience is the fact that there is not just a single education here — "a college education" — but actually many different avenues to learning which, when taken all together, make up the components of your education at UCLA.

Most of the other sections of this catalog have focused on the academic aspects of UCLA. This section will attempt to describe the educational experiences which occur outside the classroom.

One other note — the information you find here is related to the "Student Services at UCLA" section of this catalog, as well as to the chapter called "Resources to Help You." And, like those other sections, this information will only be of real value if you actually use it.

Lastly, you should notice that the activities, places and experiences touched on here are open to people at all levels of skill or interest, with all levels of spare time or spare money.

Involvement outside the classroom can make a major difference in the quality of your education here — "a college education" enhanced by the collection of choices discussed below.

Athletics

A first look at UCLA — an impression of classrooms surrounded by a grassy sea of playing fields—is a fairly accurate picture of the relationship between athletics and academics here.

There is a wide assortment of athletic opportunities available for men and women, for intercollegiate team play or a solitary jog at dusk. If you already have a favorite sport, you will get plenty of chances to practice it. If you have always wanted to learn about a new one, there are lots of people to teach you how to do it.

Men's Intercollegiate Sports

UCLA is a member of the Pacific 10 Conference, which includes Arizona State University, University of Arizona, University of California, Berkeley, Stanford University, University of Southern California, University of Oregon, Oregon State University, Washington State University and the University of Washington. UCLA provides opportunities for participation on the varsity level in football, basketball, track, baseball, tennis, crew, volleyball, gymnastics, swimming, water polo, fencing, riflery, golf, soccer, rugby, cricket and cross-country.

For a player or a spectator, there is always something happening on the UCLA men's intercollegiate calendar.

Women's Intercollegiate Sports

The Department of Women's Intercollegiate Athletics sponsors twelve different varsity programs for women athletes under the jurisdiction of the National Collegiate Athletic Association (NCAA) and the Western Collegiate Athletic Association (WCAA). UCLA's women's teams have won many national, regional and conference titles and have nationally ranked teams in basketball, volleyball, swimming, tennis, track and field, cross-country and gymnastics. Athletic grants-in-aid are available on a selective basis in most sports.

UCLA is proud of its commitment to women's athletics and is equally proud of the athletes themselves, who have achieved distinction at the highest levels of national and international competition.

More Information

If you would like more information on the UCLA Intercollegiate Sports Program, contact the Men's Athletics Office at 825-3236 or 825-3326 and the Women's Athletics Office at 825-9541.

Office of Cultural and Recreational Affairs

The Office of Cultural and Recreational Affairs (600 Kerckhoff Hall, 825-3701) serves as the administrative center for the coordination of facilities, equipment, programming and supervision of campus recreational activities and services. All students who have paid the full Registration Fee are entitled to these services. Five professionally staffed divisions provide a variety of services and programs to accommodate the total campus community. Program information is contained in the *Recreation Release* brochure available at the beginning of each quarter in 600 Kerckhoff Hall, 164 Pauley Pavilion, Men's Gym, Women's Gym, Sunset Canyon Recreation Center, Ackerman Union Information Desk and/or posted in various places around the campus. Also watch the *Daily Bruin* for additional details.

Intramural Sports Office

There are teams formed for just about every sport during every season of the year. There are divisions for men and women, as well as participation on a coed basis. Some sports (i.e., basketball) are divided into size or skill divisions, so anyone who wants to can get involved, at whatever level they choose. You can join a team in your dorm or in your fraternity or sorority house, or you can form an independent team from among your friends. The office can help you form a team. Playoffs are set up in each sport and in each division to determine the "ALL-U" champs. The Intramural Sports Office is located in 118 Men's Gym (825-3267).

Recreation Instructional Program Office

This office, located in 164 Pauley Pavilion, organizes noncredit instructional courses in a wide range of activities. Classes are offered in dance, fine arts, outdoor skills, tennis, gymnastics, martial arts, physical fitness and many more. Call 825-4546 for enrollment details, schedules and course content information.

Recreation Services and Facilities Office

The purpose of this office, also located in 164 Pauley Pavilion (825-4546), is to schedule and supervise athletic facilities for informal and unstructured recreational play. Opportunities for informal participation in swimming, weight training, basketball, volleyball, badminton, tennis and field sports are available seven days a week at the two gymnasia, the Memorial Activities Center, the athletic fields and tennis courts. Locker and equipment checkout is also coordinated by this unit.

Sunset Canyon Recreation Center

The Sunset Canyon Recreation Center, located next to Hedrick Residence Hall at 111 De Neve Drive (825-3671), is a recreational and cultural facility aesthetically designed to serve the University community. It is open all year, seven days a week (10 am-7 pm; 10 am-8 pm in the summer), for formal and informal use on both an individual and group basis. The "Rec Center" features two swimming pools (one for children), picnic/barbecue areas, multipurpose play fields and an outdoor amphitheater. Rooms are available for meetings, receptions, symposia, dances, catered luncheons and dinners. It also sponsors poetry readings, informal concerts, exhibitions, art classes and an extensive aquatics program for adults and children. You need to bring your Registration Card to get in, and you can bring friends along for a nominal charge.

University Recreation Association

URA, located in 600 Kerckhoff Hall (825-3703), is an association of special interest clubs in the cultural and recreational area. There are over 40 clubs already in existence, and you may form a new one by gathering ten other people with the same interest. The types of existing clubs include water ski, chess, scuba, snow ski, etc (a complete list is available in 600 Kerckhoff Hall). To join a club, you may either sign up in 600 Kerckhoff Hall or simply attend the first meeting of the club (check the "What's Bruin" column in the *Daily Bruin*).

Cultural Opportunities

The geographical location of UCLA and its position as a leader in the arts combine to make a rich variety of cultural activities available.

On Campus

If you wish to be active beyond your field of study, there are clubs (see "Clubs" later in this section) and interesting classes offered to nonmajors by various academic departments.

UCLA offers you the opportunity for personal growth and development in a variety of programs and extracurricular activities.

The campus presents a changing variety of cultural and recreational events, many of which are free of charge or available to students with substantial discounts. For time and place you are urged to check the student newspaper — the *Daily Bruin* — and the campus announcement boards.

All that can be done in a catalog is to give you an overview of what happens on campus.

In the **Music Department** there are over twenty performance organizations, including fine choral groups, the Opera Workshop and the Musical Theater Workshop. Instrumentalists are invited to play with the University Symphony Orchestra, the Collegium Musicum, the Wind Ensemble, the Concert Band, the Marching Band, the Varsity Band and the Jazz Ensemble.

Since there is an extensive program in ethnomusicology on the UCLA campus, students also have the unique opportunity to participate with various non-Western performance groups, all playing on representative native instruments.

UCLA also offers students numerous opportunities in theater arts through the various programs of the **Theater Arts Department.** The creative and technical work on productions is done by major students in the department, but acting roles in all media are open to any student registered in the College of Fine Arts. Each year the Theater Division presents to the general public a series of major productions in the Ralph Freud Playhouse, the Little Theater and the "arena theater." Other activities of the division include the program of One-Acts written and directed by students; the productions of the puppet theater; and the Children's Theater program. The Motion Picture/Television Division produces about three hundred student-directed films each year, as well as numerous television programs. "Melnitz Movies" annually present over a thousand film screenings.

You will also find the opportunity to attend or participate in afternoon and evening dance concerts and demonstrations presented by the **Dance Department**. There are folk and ethnic performing groups which meet regularly. Students of dance may design and choreograph, as well as perform.

In addition, UCLA is one of the nation's leading university centers for the performing and graphic arts, presenting an average of more than 600 individual cultural events each year to both campus and community audiences. An extensive schedule of professional presentations of the **Committee on Fine Arts Productions** features performances by world-renowned artists both classical and popular. There is a full calendar of exceptional programs by the Music, Dance and Theater Arts Departments. Another aspect of the program, sponsored by ASUCLA and/or the **Student Committee for the Arts,** brings leading jazz and folk presentations and artists-in-residence to campus.

The **Committee on Public Lectures** sponsors free public lectures of general and scholarly interest by distinguished authorities, supplementing and stimulating the work of University departments and sharing with the community at large its resources and expertise.

In the graphic arts, the **Frederick S. Wight Art Gallery** and the **Grunwald Center for the Graphic Arts** in Dickson Art Center have established a national reputation for presenting and originating important exhibitions, including the distinguished annual UCLA Art Council Exhibition. The **Museum of Cultural History** presents regular exhibitions that include works from one of the world's foremost university collections of ethnic art.

A special Student Committee for the Arts subsidy program provides tickets for UCLA students at only $3 for a great many campus events. Tickets are obtainable at the Central Ticket Office, 650 Westwood Plaza. Public tickets to events sponsored by the Committee on Fine Arts Productions are also available at the 650 Westwood Plaza location, which makes a limited number of tickets available to all full-time students at reduced rates.

Off Campus

Westwood Village has become the entertainment magnet for the entire West Los Angeles area. There are 20 first-run movie theaters, many restaurants, several bookstores, discos and a pinball arcade. And Westwood has the advantage of being accessible from campus on foot.

In any one of the bookstores in Westwood, you will find an entire shelf of books devoted to the cultural attractions of the city beyond Westwood—Los Angeles. While these guidebooks attest to the impossibility of summarizing the vibrant cultural life of the city, they also indicate the virtually limitless list of "things to do." Los Angeles is home to major museums, motion picture studios, a world-renowned symphony orchestra and many other cultural focal points.

Two encouraging generalizations can be made, however: most cultural activities (Music Center, Los Angeles County Art Museum, etc) feature a student discount policy or student ticket performances. And a car isn't really necessary to get to most of the off-campus attractions (please see the "Housing and Transportation at UCLA" section of this catalog).

UCLA and the Natural Environment

UCLA is located in an urban setting, but the campus is also close to miles of coastline along the Pacific Ocean and acres of protected wilderness in the Santa Monica Mountains. The natural environment beyond Los Angeles offers the unmatched resources of the entire state, from uninhabited islands to popular ski resorts.

Travel

Various types of travel opportunities are available at UCLA. The ASUCLA Travel Service (see listing in the "Student Services at UCLA" section of this catalog) can arrange charter air fares to many major cities at the lowest possible cost; rail tickets are also on sale.

In addition, several clubs offer charters and tours.

Day trips to San Diego or weekend excursions to San Francisco are also popular outings.

Clubs and Organizations

The clubs and registered organizations on campus provide an added dimension to the UCLA experience. There are clubs for joiners and non-joiners, too, representing almost every interest. And, if your interest isn't covered by a club, you can start your own.

A full listing of registered student organizations is available in the Organizational and Inter-Organizational Relations Office, 161 Kerckhoff Hall (825-7041); clubs centering on sports and recreation are listed in the University Recreation Association Office, 600 Kerckhoff Hall (825-3703). Each of these offices can provide you with information on how to join—or start a club at UCLA.

Fraternities and Sororities

Fraternities and sororities offer their members more than simply a place to live. Serving as a small, cohesive community within the larger community of UCLA, each fraternity or sorority house provides a center for academics, athletics and social life.

You can find out more about the fraternities and sororities at UCLA by contacting either the Panhellenic Council (sororities) or the Interfraternity Council (fraternities) in the Dean of Students Office, 2224 Murphy Hall, 405 Hilgard Avenue, Los Angeles, CA 90024 (825-3871).

In the past few years, UCLA has witnessed a tremendous upsurge in the popularity of fraternities and sororities—otherwise known as the Greeks—whose members now number more than 4500.

There are 26 fraternities and 18 sororities, all chapters of their respective national organizations. The fraternities are bound together and overseen by the Interfraternity Council, the sororities by the Panhellenic Council.

Student Government

Student government at UCLA offers a chance for expression that students may feel is lacking in other parts of their university experience. Why not make an effort to become involved in the decision-making process here?

Students have control of more than $300,000 to run over 50 different programs.

In recent years the dimensions of student government have expanded in many directions, and there have been changing priorities for the utilization of the financial and human resources. The quality of the education students receive and student input into the educational process have become high priorities, and the question of safety on and off campus is an ever-increasing concern. Many student leaders have also realized that high-level decision making can be affected by approaching not only University administrators, but also officials at the local, state and national levels. This has led to the development of effective lobbies dedicated to meeting the needs of this unique community.

Additionally, the wide variety of student government programs offers invaluable service to the community and provides an opportunity for thousands of students to benefit from these endeavors. Some highlights include **Mardi Gras,** the world's largest collegiate charity activity, *Voter Awareness* (an objective voter information booklet) and outstanding guest speakers provided through the Campus Events Commission. The **Speakers Program,** enjoyed by over forty thousand students, faculty and staff each year, is a well-known forum where persons of significance, all political persuasions and all professions are invited to address the student body. Finally, over one thousand students participate voluntarily in community service programs such as **Amigos del Barrio** and the **UCLA Prison Coalition.**

For more information on undergraduate student government at UCLA, visit 304 Kerckhoff Hall (825-7068).

An Urge to Action

Through its commissions—and the people who serve on them—student government at UCLA offers a direct role in decision making at UCLA. Students hold membership on policy groups governing the use of the Registration Fee, ASUCLA Board of Control, Academic Senate and the Board of Regents, to name just a few. Additionally, student activities such as Mardi Gras, participation on student publications, and nearly every other facet of student life is sponsored or organized in some way by student government. Some 40 different committees, in fields ranging from the arts to general University policy, offer an opportunity for involvement outside the classroom.

Living groups (such as the dormitories) and many academic departments also encourage student activities. Whether on your dorm floor or at a meeting of the Board of Regents, students have a say in the actions which govern their lives at UCLA.

Remember, too, that any community tends to "get the government they deserve"—another way of saying that your participation (or lack of it) can make a difference.

Need to Know More?

Finders Keepers has more information about recreation and participation opportunities at UCLA. Reference copies are available through all departmental, College, School and ASK counselors, at the College Library and University Research Library reference desks and at a number of other counseling locations (AAP, Academic Resources Coordination, Admissions, Dean of Students Office, Division of Honors Office, Placement and Career Planning Center and Psychological & Counseling Services).

At the start of this section, it was indicated that unlike some other sections of this catalog, specific details covering every available cultural and recreational opportunity presents an impossible task. Checking daily newspapers, the *Daily Bruin*, campus bulletin boards or taking a stroll up Bruin Walk will help to keep you current with what is going on.

Resources to Help You

In this section of the *UCLA Undergraduate Catalog,* you will find a listing and description of the many resources—people as well as publications—available to help you get the most out of your undergraduate education at UCLA.

It is important that you recognize that the services discussed below are offered in addition to departmental or School/College programs of advice and counsel which are outlined in other sections of this catalog.

Advisors

Different types of advisors have different functions; it's useful to keep those more or less distinct roles in mind.

College or School Staff Members answer general questions about the College or School, as well as give out information about various petitions, filing procedures and deadlines.

College or School Counselors, on the other hand, can show you how College/School or University academic regulations apply to your individual situation.

Departmental Counselors provide you with information about the courses within their department; information on departmental and major requirements (and advice on meeting them) is also available.

Additionally, departmental counselors may be aware of study, reseach and employment opportunities in your area of academic interest.

Faculty Advisors can advise you on questions pertaining to course work and can offer guidance on research projects or independent study to supplement your courses.

Remember, too, that *each* UCLA faculty member is an advisor if you are having trouble in a course that professor is teaching. Professors keep office hours for students to ask questions and try out ideas. Those hours are one of the most valuable parts of your academic experience. Use them.

Peer Counselors are trained students who can give you an informed "students-eye" view on program planning.

Before You Need Them

Here's some advice about advisors: don't wait until you are in academic difficulty to seek them out—it may be too late. Advisors work with you to *avoid* problems, so see them *before* you need them.

Seeing Your Advisor

Here are some things to keep in mind when you see your advisor. Write down your questions as completely as possible.

Make sure you and your advisor understand the questions you're asking —and the answers you get. Then, write down the answer. With both your question and the answer to it, ask for clarification until you are sure you fully understand.

Keep a record of your visits, including any printed materials the advisor gives you. In the same way, you are urged to keep a record of your UCLA transactions in general. Save, and carefully store, copies of petitions, grade cards and so forth.

You also have the option to try various counselors to find the one you can relate to most easily.

Currently, UCLA offers the following opportunities for advice on academic questions.

College/School Counselors

College of Fine Arts A239 Murphy Hall, 825-9705

College of Letters and Science 1312 Murphy Hall, 825-3382

Division of Honors 1331 Murphy Hall, 825-1553, 825-3786

School of Engineering and Applied Science 6426 Boelter Hall, 825-2826

School of Nursing 2-137 Factor Building, 825-7181

School of Public Health 16-071 Public Health, 825-5524, 825-5516

Departmental Advisors/Counselors

Aerospace Studies 251 Dodd Hall, 825-1742; *Sally Ann Cohen, 251 Dodd Hall, 825-1742*

African Languages Linguistics, 2113 Campbell Hall, 825-5069, 825-0634; *see advisors in Linguistics*

African Studies Special Program, Interdepartmental; African Studies Center, 10244 Bunche Hall, 825-3686; *Christopher Ehret, 6265 Bunche Hall, 825-4093*

Afro-American Studies Interdepartmental; Center for Afro-American Studies, 3111 Campbell Hall, 825-7403; *Halford Fairchild, 3111 Campbell Hall, 825-7403, 825-2961*

American History and Institutions 6265 Bunche Hall, 825-4601; *Sylvia Dillon, 6248 Bunche Hall, 825-3720*

Analysis and Conservation of Ecosystems Geography, 1255 Bunche Hall, 825-1071; *Diana Sawyer, 1113 Bunche Hall, 825-1166; Stanley Trimble, 1180 Bunche Hall, 825-1314*

Ancient Near Eastern Civilizations Near Eastern Languages, 376 Kinsey Hall, 825-4165; *Departmental Chair, 376 Kinsey Hall, 825-4165*

Anthropology 341 Haines Hall, 825-2055; *Ann Walters, 341 Haines Hall, 825-2511*

Arabic Near Eastern Languages, 376 Kinsey Hall, 825-4165; *Departmental Chair, 376 Kinsey Hall, 825-4165*

Art/Art History 1300 Dickson, 825-3281; *Gayle Pica, 1300 Dickson, 825-3077*

Asian American Studies Special Program, Interdepartmental; Asian American Studies Center, 3232 Campbell Hall, 825-2974; *Tim Dong, 3232 Campbell Hall, 825-2974*

Astronomy 8979 Math Sciences, 825-4434; *Steven Grandi, 8923 Math Sciences, 825-4319*

Atmospheric Sciences 7127 Math Sciences, 825-1217; *James G. Edinger, 7101 Math Sciences, 825-3057*

Bacteriology See Microbiology

Berber Near Eastern Languages, 376 Kinsey Hall, 825-4165; *Departmental Chair, 376 Kinsey Hall, 825-4165*

Biochemistry Chemistry, 3034 Young Hall, 825-4219; *Dorothy Seymour, 4016 Young Hall, 825-1859; John Jordan, 655 MBI, 825-1500*

Biology 2203 Life Sciences, 825-3481; *Roxane Alkaslassy, 2312 Life Sciences, 825-1680*

Black Studies See Afro-American Studies

Bulgarian Slavic Languages, 115 Kinsey Hall, 825-2676; *Michael H. Heim, 115L Kinsey Hall, 825-7894*

Business and Administration Program, Interdepartmental; *see counselors in Letters & Science*

Caucasian Languages Near Eastern Languages, 376 Kinsey Hall, 825-4165; *Departmental Chair, 376 Kinsey Hall, 825-4165*

Chemistry 3034 Young Hall, 825-4219; *Dorothy Seymour, 4016 Young Hall, 825-1859; Kenneth Trueblood, 3042 Young Hall, 825-1259*

Chemistry/Materials Science Interdepartmental; Engineering/Materials Science, 6531 Boelter Hall, 825-5534; *John Mackenzie, 6531 Boelter Hall, 825-3539*

Chicano Studies Interdepartmental; Chicano Studies Research Center, 3121 Campbell Hall, 825-2363; *Carlos Haro, 3121 Campbell Hall, 825-2364*

Chinese Oriental Languages, 222 Royce Hall, 206-8235; *Kue-yi Pao, 212C Royce Hall, 825-2621*

Classics 7349 Bunche Hall, 825-4679; *Katherine C. King, 7365 Bunche Hall, 825-1101*

Also for:
Classical Civilization

Communication Studies Interdepartmental; 232 Royce Hall, 825-3303; *Diane Simpson, 232 Royce Hall, 206-8446*

Cybernetics Interdepartmental; Engineering Systems, 4731 Boelter Hall, 825-7482; *Joseph DiStefano, 4731K Boelter Hall, 825-7482, 825-4033*

Czech Slavic Languages, 115 Kinsey Hall, 825-2676; *Michael H. Heim, 115L Kinsey Hall, 825-7894*

Dance 205 Women's Gym, 825-3951; *Wendy Urfrig, 101 Women's Gym, 825-3951, 825-8537*

Danish Scandinavian Languages, 332 Royce Hall, 825-2432; *Mary Kay Norseng, 332 Royce Hall, 206-6858*

Design Art, 1300 Dickson, 825-3281; *Gayle Pica, 1300 Dickson, 825-3077*

Diversified Liberal Arts Certificate Program, Interdepartmental; *see counselors in Letters & Science*

Dutch-Flemish and Afrikaans Germanic Languages, 310 Royce Hall, 825-3955; *Robert S. Kirsner, 310 Royce Hall, 825-3955*

Earth and Space Sciences 3806 Geology, 825-3880; *Spring Verity, 3683 Geology, 825-3917; Clemens A. Nelson, 4686 Geology, 825-1363*

East Asian Studies Interdepartmental; *David M. Farquhar, 9381 Bunche Hall, 825-3078*

Economics 2263 Bunche Hall, 825-1011; *Lora Clarke, 2253 Bunche Hall, 825-5118*

Economics/Business Economics, 2263 Bunche Hall, 825-1011; *Sheryl Massis, 2256 Bunche Hall, 825-1011*

Economics/System Science Interdepartmental; Engineering/System Science, 4532 Boelter Hall, 825-6830; *Stephen E. Jacobsen, 4532E Boelter Hall, 825-2327; Lora Clarke, 2253 Bunche Hall, 825-5118*

Engineering and Applied Science Undergraduate Office, 6426 Boelter Hall, 825-2826; *Janet Elliott, 6412 Boelter Hall, 825-2941; Richard Stern, 6426 Boelter Hall, 825-2036*

Also for:
Chemical, Nuclear & Thermal Engineering
Computer Science
Electrical Engineering
Engineering Systems
Materials Science and Engineering
Mechanics and Structures
System Science

English 2225 Rolfe Hall, 825-4173; *Edith Lufkin, 4305 Rolfe Hall, 825-1389*

English/Greek Interdepartmental; *see advisors in English and Classics*

English/Latin Interdepartmental; *see advisors in English and Classics*

Ethnic Arts Interdepartmental; Dance, 205 Women's Gym, 825-3951; *Wendy Urfrig, 101 Women's Gym, 825-3951, 825-8537*

French 160 Haines Hall, 825-1147; *Madeleine Korol-Ward, 192 Haines Hall, 825-1210*

Geochemistry Earth & Space Sciences, 3806 Geology, 825-3880; *Spring Verity, 3683 Geology, 825-3917; Clemens A. Nelson, 4686 Geology, 825-1363*

Geography 1255 Bunche Hall, 825-1071; *Diana Sawyer, 1113 Bunche Hall, 825-1166; Richard Logan, 1181 Bunche Hall, 825-1818*

Geography/Ecosystems Geography, 1255 Bunche Hall, 825-1071; *Diana Sawyer, 1113 Bunche Hall, 825-1166; Stanley Trimble, 1180 Bunche Hall, 825-1314*

Geology Earth & Space Sciences, 3806 Geology, 825-3880; *Spring Verity, 3683 Geology, 825-3917; Clemens A. Nelson, 4686 Geology, 825-1363*

Geophysics and Space Physics Earth & Space Sciences, 3806 Geology, 825-3880; *Spring Verity, 3683 Geology, 825-3917; Clemens A. Nelson, 4686 Geology, 825-1363*

German Germanic Languages, 310 Royce Hall, 825-3955; *T. Craig Christy (A thru L), to be named (M thru Z), 310 Royce Hall, 825-3955*

Greek Classics, 7349 Bunche Hall, 825-4679; *Katherine C. King, 7365 Bunche Hall, 825-1101*

Hebrew Near Eastern Languages, 376 Kinsey Hall, 825-4165; *Departmental Chair, 376 Kinsey Hall, 825-4165*

History 6265 Bunche Hall, 825-4601, 825-1069; *Sylvia Dillon, 6248 Bunche Hall, 825-3720*

Humanities Interdepartmental; 334D Royce Hall, 825-7650; *Katherine C. King, 334 Royce Hall, 825-7650; Ross Shideler, 334A Royce Hall, 206-8155*

Hungarian Germanic Languages, 310 Royce Hall, 825-3955; *Marianna D. Birnbaum, 2221C Bunche Hall, 825-3330*

Indigenous Languages of the Americas Linguistics, 2113 Campbell Hall, 825-0634, 825-5069; *see advisors in Linguistics*

Intercollegiate Athletics 221 MAC-B, 825-3236, 825-3326; *Roland Almeida, 219 MAC-B, 206-6786*

International Relations Special Program; Political Science, 4289 Bunche Hall, 825-4331; *Vicki Waldman, 4256 Bunche Hall, 825-3862; David O. Wilkinson, 3280 Bunche Hall, 825-3450, 825-4331*

Italian 340 Royce Hall, 825-1940, 825-3055; *Althea Reynolds, 340A Royce Hall, 825-3055; Edward Tuttle, 354 Royce Hall, 825-3055*

Italian and Special Fields Interdepartmental; students wishing to major in the Italian and Special Fields major should see the undergraduate advisors in each department (Anthropology, Art History, Classics, English, French, History, Linguistics, Music or Theater Arts, as well as Italian)

Japanese Oriental Languages, 222 Royce Hall, 206-8235; *Robert C. Epp, 212J Royce Hall, 206-8235*

Jewish Studies Near Eastern Languages, 376 Kinsey Hall, 825-4165; *Departmental Chair, 376 Kinsey Hall, 825-4165*

Journalism 232 Royce Hall, 825-4501; *Hazel Richmond, 232 Royce Hall, 825-4501*

Kinesiology 206 Men's Gym, 825-3891; *Joan Carlson, 212 Men's Gym, 825-3891*

Latin Classics, 7349 Bunche Hall, 825-4679; *Katherine C. King, 7365 Bunche Hall, 825-1101*

Latin American Studies Interdepartmental; Latin American Center, 10343 Bunche Hall, 825-4571; *Linda Rodriguez, 10343 Bunche Hall, 206-6571; Carolyn Ramirez, 10347 Bunche Hall, 206-6571*

Linguistics 2113 Campbell Hall, 825-5069, 825-0634; *George Bedell, 2113 Campbell Hall, 825-5069*

Linguistics — Computer Science, English, French, Italian, Oriental Languages, Philosophy, Psychology, Scandinavian Languages, Spanish Students wishing to major in any of these interdepartmental majors should consult the undergraduate advisors in the Linguistics Department, as well as the undergraduate advisor in the other department involved

Mathematics 6364 Math Sciences, 825-4701; *Sally Yamashita, 6356 Math Sciences, 825-4701*

Also for:
Math/Applied Science, Math/Computer Science, Math/System Science

Meteorology See Atmospheric Sciences

Microbiology 5304 Life Sciences, 825-3578; *Evelyn Soo, 5304 Life Sciences, 825-3578*

Military Science 136 Men's Gym, 825-7381; *Bruce Lawson, Gregory Olson, Roy C. Wentrcek, 136 Men's Gym, 825-7381*

Motion Picture/Television Theater Arts, 2310 Macgowan Hall, 825-5761; *Steven Moore, 1319 Macgowan Hall, 825-1766*

Music 2539 Schoenberg Hall Annex, 825-4761; *Mary Crawford, Thomas Croyle, 2539 Schoenberg Hall Annex, 825-4768, 825-4761*

Naval Science 123 Men's Gym, 825-9075; *Thomas Farrell, 128 Men's Gym, 825-9075; Edward Messmer, 123 Men's Gym, 825-9075; Albert Schmidt, 122A Men's Gym, 825-9075*

Near Eastern Languages 376 Kinsey Hall, 825-4165; *Departmental Chair, 376 Kinsey Hall, 825-4165*

Near Eastern Studies Interdepartmental; Von Grunebaum Center for Near Eastern Studies, 10286 Bunche Hall, 825-1181; *Michael G. Morony, 6242 Bunche Hall, 825-1962*

Norwegian Scandinavian Languages, 332 Royce Hall, 825-2432; *Mary Kay Norseng, 332 Royce Hall, 206-6858*

Nursing School of Nursing, 2-137 Factor Building, 825-7181; *Helen Medlock, 2-137 Factor Building, 825-7181*

Old Norse and Medieval Scandinavian Germanic Languages, 310 Royce Hall, 825-3955; *Jesse Byock, 327 Royce Hall, 825-3434*

Oriental Languages 222 Royce Hall, 206-8235; *see Chinese or Japanese*

Philosophy 321 Dodd Hall, 825-4641; *Marilyn Adams, 351 Dodd Hall, 825-2322, 825-4641*

Physics 3-171 Knudsen Hall, 825-3440; *Julie Sturm, 3-145A Knudsen Hall, 825-2453; Robert Satten, 6-130H Knudsen Hall, 825-1522*

Polish Slavic Languages, 115 Kinsey Hall, 825-2676; *Michael H. Heim, 115L Kinsey Hall, 825-7894*

Political Science 4289 Bunche Hall, 825-4331; *Vicki Waldman, 4256 Bunche Hall, 825-3862*

Portuguese Spanish and Portuguese, 5303 Rolfe Hall, 825-1036; *Leslie Nord, 5327 Rolfe Hall, 825-1036, 825-1430; Eduardo Dias, 5328 Rolfe Hall, 825-1430*

Psychology 1283 Franz Hall, 825-2961; *Patti Ritzo, 1531 Franz Hall, 825-1603*

Also for:
Psychobiology, Quantitative Psychology

Public Health School of Public Health, 16-035 Public Health, 825-5140; *Josephine Q. Alvarez, 41-240 Public Health, 825-7449; John Schacher, 16-071 Public Health, 825-5516*

Religion See Study of Religion

Romanian Slavic Languages, 115 Kinsey Hall, 825-2676; *Michael H. Heim, 115L Kinsey Hall, 825-7894*

Russian Slavic Languages, 115 Kinsey Hall, 825-2676; *Michael H. Heim, 115L Kinsey Hall, 825-7894*

Also for:
Russian Civilization, Russian Linguistics

Scandinavian Languages 332 Royce Hall, 825-2432; *Mary Kay Norseng, 332 Royce Hall, 206-6858*

Serbo-Croatian Slavic Languages, 115 Kinsey Hall, 825-2676; *Michael H. Heim, 115L Kinsey Hall, 825-7894*

Slavic Languages 115 Kinsey Hall, 825-2676; *Michael H. Heim, 115L Kinsey Hall, 825-7894*

Sociology 264 Haines Hall, 825-1313; *Mary Jo Johnson, 254B Haines Hall, 825-1215*

Spanish Spanish and Portuguese, 5303 Rolfe Hall, 825-1036; *Leslie Nord, 5327 Rolfe Hall, 825-1036, 825-1430*

Speech See Communication Studies

Study of Religion Interdepartmental; *Kees Bolle, 5387 Bunche Hall, 825-3780, 825-4601*

Subject A 302 Royce Hall, 825-4515, 825-5796; *Pauline Ward, 302 Royce Hall, 825-4515*

Swedish Scandinavian Languages, 332 Royce Hall, 825-2432; *Mary Kay Norseng, 332 Royce Hall, 206-6858*

Theater Arts 2310 Macgowan Hall, 825-5761; *Steven Moore, 1319 Macgowan Hall, 825-1766*

Ukrainian Slavic Languages, 115 Kinsey Hall, 825-2676; *Michael H. Heim, 115L Kinsey Hall, 825-7894*

Urban Studies/Organizational Studies Special Program, Interdepartmental; *Robert Fried, 4289 Bunche Hall, 825-3660, 825-4331*

Urdu Near Eastern Languages, 376 Kinsey Hall, 825-4165; *Departmental Chair, 376 Kinsey Hall, 825-4165*

Women's Studies Special Program, Interdepartmental; 240 Kinsey Hall, 206-8101; *Mary M. Smith, 240 Kinsey Hall, 206-8101*

Yiddish Germanic Languages, 310 Royce Hall, 825-3955; *Janet R. Hadda, 310 Royce Hall, 825-3955*

Zoology See Biology

About ASK

ASK is a network of 18 academic peer counselors trained by the College of Letters and Science to advise you regarding College and University requirements and procedures and to make appropriate referrals to other campus resource offices. In addition, ASK sponsors information meetings on educational and career-related topics. Stop by one of the ASK tables and talk with a fellow student in a convenient informal setting.

You can find ASK counselors at these campus locations:

Ackerman Union (by the Treehouse), Monday-Friday 10 am to 2 pm

Court of Sciences, Monday-Friday 9 am to 1 pm

Murphy Hall, Monday-Friday 8 am to 5 pm

Powell Library, Monday-Friday 10 am to 2 pm

University Research Library, Monday-Friday 10 am to 2 pm

If You're a Prehealth Care Student

The Prehealth Care Advising Office is in 1332 Murphy Hall, Window 9 (825-1817). Here you can receive general information, as well as attend **open counseling sessions.** ASK counselors in the Court of Sciences can provide further information and referrals. They are available at a table by the steps of the Chemistry Building (Young Hall).

Finally, specific prehealth care advising resources include:

Predental: School of Dentistry, A3-042 Dentistry; Ann Beech, A3-042 Dentistry, 825-6141; also see counselors in Letters and Science

Predental Hygiene: See counselors in Letters and Science

Premed: See counselors in Letters and Science

Prenursing: School of Nursing, 2-137 Factor Building; Helen Medlock, 2-137 Factor Building, 825-7181; also see counselors in Letters and Science

Preoptometry: See counselors in Letters and Science

Prepharmacy: Pharmaceutical Services, A7-222 Center for Health Sciences; Robert LeWinter, Director, A7-222 CHS, 206-6555; also see counselors in Letters and Science

Prephysical Therapy: Kinesiology, 206 Men's Gym; Linda Powell, 212 Men's Gym, 825-3891; also see counselors in Letters and Science

Prelaw Advising

While individual prelaw counseling is not currently available, the College of Letters and Science holds **weekly drop-in counseling sessions** for those who need to know about application and selection procedures. These are advertised in the "What's Bruin" section of the *Daily Bruin.* For application and selection procedures and informational meeting times, call 825-3160 or 825-1965. Other campus resources (see "Student Services at UCLA") can also be quite useful to prospective law students.

Alternative Academics

UCLA has a variety of options that allow you to bring an added dimension to your academic program.

Designing Your Own Major

The requirements that allow you to be eligible for an individual major vary with each College or School at UCLA. If you qualify—usually after submitting a detailed course of study under the sponsorship of a regular faculty member, as well as maintaining the specified grade-point average in your College or School—the individual major allows you to tailor your interests and scholarly pursuits.

Designing Your Own Classes

Most departments offer the 199 or individual study course for seniors or juniors with a "B" average or better who want to pursue a particular research interest. Consult your department or the departmental listings in the "Majors and Courses of Instruction" section of this catalog for further information.

Programs for Freshmen and/or Sophomores

UCLA features several programs centering on the concerns of new students. Among them are:

Freshman/Sophomore Professional School Seminar Program

This program introduces students to the relationships which exist between various academic disciplines and professional practice. It also seeks to build upon the common characteristics which link various professions to one another. Students are introduced to these characteristics in the following way:

(1) In order to find answers to problems, professionals must bring together information from varying disciplines.

(2) Because of the way that social need often drives scientific investigation, all professionals must be sensitive to the complex interplay between basic research and social problems.

(3) Professionals must bring their creativity to the task of translating theoretical knowledge into practical application.

(4) Professionals are subject to high level and ethical standards because they exercise control over individuals and society.

Students seeking to define their own academic and career goals will find that these seminars provide a valuable opportunity to assess the role of professionals today and to understand the challenges and demands that stimulate professional activity. The program offers an unparalleled opportunity to be exposed to the views of professionals.

Professional School Seminars are offered in the Fall, Winter and Spring Quarters. Seminar enrollment is limited in an effort to allow lower division students closer contact with a member of a Professional School faculty. For selected students, internship or research opportunities are available after completion of work in specific seminars.

For further information, contact the Program Office, 2859 Slichter Hall (825-2480).

The Honors Collegium

The Honors Collegium is a unique and innovative educational alternative designed primarily for students in their freshman and/or sophomore years. Please refer to the section on the "College of Letters and Science" for a complete description of this program.

Council on Educational Development (CED)

The Council on Educational Development (CED) was created by the Los Angeles Division of the Academic Senate in May 1968. The Council's purpose is to promote academic enrichment and to encourage educational diversity and innovation. In fulfilling these objectives, the Council works closely with departments, Colleges, Schools and research centers on the UCLA campus. The Council is uniquely situated to offer special courses and programs, since it possesses modest funding which can be used for faculty released time or for the employment of outside lecturers and teaching personnel.

The Council seeks out and, upon approval, supports academic projects, programs and individual courses of scholarly excellence not otherwise available at the University, including courses of timely or topical importance. The Council can offer a course as many as three times, although in principle the Council seeks to encourage departments and Schools to adopt appropriate courses into their regular curriculum.

Many of these courses are on socially important issues which, because of their being new to the intellectual scene, are unavailable in existing academic departments. Many of them involve nontraditional pedagogy, interdisciplinary topics and subject matter that is at the leading edge of our faculty's interests.

For information about CED courses, consult the *Schedule of Classes* and the "Registration" and other selected issues of the *Daily Bruin*. If you want to find out about credit toward graduation for CED courses, consult your major department, College or School. The CED office is located in 246 Kinsey Hall (825-5467).

Education Abroad Program (EAP)

The Education Abroad Program provides opportunities for qualified UC students to earn a full year of academic credit while studying at overseas universities. Currently, there are EAP students enrolled on 44 campuses in 19 different countries. EAP students study with the local students of EAP-affiliated institutions in each country, giving them a unique opportunity to enhance greatly their language skills and to become involved in the culture of the host country.

EAP participating institutions currently include:

Austria — University of Vienna

Brazil — University of Sao Paulo

China — University of Peking

Egypt — American University (Cairo)

France — Universities of Bordeaux, Grenoble, Marseille, Montpellier, Paris, Pau, Poitiers

Germany — Georg-August University (Göttingen)

Hong Kong — Chinese University of Hong Kong

Israel — Hebrew University of Jerusalem; University of Haifa

Italy — University of Padua; G.B. Martini Conservatory of Music (Bologna); Academy of Fine Arts (Venice)

Japan — International Christian University (Tokyo)

Kenya — University of Nairobi

Mexico — Universidad Nacional Autónoma de México (UNAM)

Norway — University of Bergen

Peru — La Pontificia Universidad del Perú

Spain — Universities of Barcelona, Madrid

Sweden — University of Lund

United Kingdom/Ireland — Universities of Aberystwyth, Birmingham, Dublin, Edinburgh, Exeter, Kent, Lampeter, Leeds, London (Westfield College), St. Andrews, Stirling, Sussex, York

USSR — University of Leningrad

West Africa — Universities of Ghana, Benin (Togo)

Designed primarily for undergraduates, the program is open to students who have upper division standing in the University, an overall "B" average, seriousness of purpose and an indication of ability to adapt to a new environment. For the centers in Austria, France, Germany, Mexico, Peru and Spain, two years of university-level work in the language of the country with a "B" average (or equivalent thereof) are required. For all other centers, the language requirements are variable. Each UC Study Center abroad operates under the supervision of a UC faculty member.

Participants pay only the usual UC Registration and Education Fees. The full range of University financial aid is available. UC units and grade points are awarded for overseas courses. A complete range of orientation services is provided, including opportunities to meet with returned students and students attending UCLA from EAP-affiliated universities. Detailed information sheets about these campuses are available in the EAP office, 2221B Bunche Hall (825-4889, 825-4995).

Education at Home Program

Students with a specific interest in early American history and culture may have the opportunity to spend Winter Quarter 1983 "on location" in three Eastern cities. The Education at Home Program, conducted through the UC Riverside campus, is open to undergraduates from any campus in the UC system.

Those selected for participation will spend eight weeks in Williamsburg, one in Philadelphia and a concluding week in Washington, DC. Formal instruction consists of three American history courses (4 units each) comprising classroom work plus field trips to places of historical interest. Special arrangements for additional independent study (maximum 4 units) may be made through UCLA. For further information, brochures or applications, write to Education at Home Program, International Services Center, University of California, Riverside, CA 92521 or call (714) 787-3820.

EXPO Center

The EXPO (Extramural Programs and Opportunities) Center, A213 Ackerman Union (825-0831), is an office within the Division of Student Relations which provides programs and informational services and offers students access to a wide variety of off-campus, out-of-classroom learning experiences.

Internship Programs

Administered by the EXPO Center, the UCLA Los Angeles, Sacramento, Washington and International Internship Programs give students the opportunity to serve part- or full-time internships for one or more quarters on the staffs of elected officials, public interest groups, and government and government-related agencies. For more information, contact Alexander White (825-0831).

International Opportunity Counseling Service

The EXPO Center provides counseling on all aspects of study, travel and work opportunities outside the United States, including information about some 1800 overseas study programs which are open to UCLA students. EXPO also maintains a library of current materials related to study and travel opportunities abroad. International Student Identity Cards and Youth Hostel memberships are issued at the Center. For more information, contact Christie Dodson (825-0831).

Volunteer Income Tax Assistance Program (VITA)

VITA is also administered by the EXPO Center. Students receive extensive training in tax return preparation and provide tax counseling to fellow students and to a variety of disadvantaged people off campus. For more information, contact Julie Inouye (825-0831).

Model United Nations

The Model United Nations (MUN) Program offered by the EXPO Center gives students the chance to serve as delegates to week-long simulations of United Nations sessions and is held each spring in New York and on a west coast university campus. For more information, call 825-0831.

Field Studies Development

Field Studies Development, located in 50 Dodd Hall (825-2295), is a division of the Office of Instructional Development. This division provides coordination and support to students, faculty and academic departments who are interested in developing meaningful learning experiences outside the classroom. These experiences may come in the form of internships, field studies or research, community service-learning, practicum cooperative education programs and so on. Programs and services offered through the Field Studies Development division include the following:

Departmental Field Studies Development Program

The goal of this program is to enhance field opportunities for academic credit by encouraging the development of coherent field programs within relevant departments. Departmental coordinators work with students in developing field projects and in finding placements and academic sponsorship. For more information, call 825-7867 or visit 50 Dodd Hall.

Independent Field Studies

Students may individually design internships and field study opportunities to meet their specific academic, personal and career interests. A field study coordinator helps the student on a one-to-one basis in a similar fashion as the departmental field study coordinators and helps broker credit for appropriate learning gained from the field experience. For more information, call 825-7867 or visit 50 Dodd Hall.

Developmental Disabilities Immersion Program (DDIP)

Cosponsored by Field Studies Development and the Departments of Psychology and Psychiatry, DDIP offers two sessions each year — one during the Fall and Winter Quarters and the second during the Spring and Summer. Each offers students an intensive living, studying and working experience in developmental disabilities. For more information, contact Mark Lipschutz in 50 Dodd Hall (825-1627).

Professional Seminar Internships

This program is an extension to the Freshman/Sophomore Professional School Seminar series which enables lower division students the opportunity to understand more about the professions through internships and other academically related placements. For more information, contact Paul Von Blum in 2859 Slichter Hall (825-2480).

Medicine, Law and Human Values: The UCLA Program

The UCLA Program in Medicine, Law and Human Values conducts the monthly Medicine and Society Forum at the UCLA Medical School and offers transdisciplinary courses and seminars on both the undergraduate and graduate levels. Course topics and materials are designed to introduce students to the investigation and analysis of the complex relationships among the often-conflicting ethical, legal and scientific values in medical and mental health care issues, such as genetic screening, human experimentation, patients' rights and medical technology.

Undergraduate courses include a survey course (Medicine, Law and Society) which covers a wide range of issues and stresses development of writing skills, and a series of upper division seminars on single topics, including (in 1981-82) "Health Care and Constitutional Law," "Legal and Ethical Aspects of Social Science Research," "The Language of Suicide," "Jewish Law and Medical Ethics" and "Medical Ethics and Public Policy." For more information, contact the program in 2859 Slichter Hall (825-4976, 825-6682).

Summer Sessions

UCLA offers two six-week Summer Sessions each year. Summer Session study is designed to provide academic enrichment, to help students enroll in courses they were unable to take during the year because of schedule conflicts, to correct course deficiencies in preparation for graduate school and to offer small class size.

Credit

Summer Session courses may apply toward the minimum unit requirement of the College of Letters and Science and the College of Fine Arts. Consult the Colleges to make sure.

The fees for Summer Sessions differ from those of regular academic quarters because Summer Sessions receive no state support.

Admission

Admission to a Summer Session does not constitute admission to a regular session. Students planning to attend the University in regular session are referred to the "Admission" section of this catalog.

More information about Summer Sessions is available in 1254 Murphy Hall (825-8355).

University Extension

UCLA Extension offers more than 4500 classes and special programs each year, many of them innovative and experimental in content, format and teaching methods, with extensive use of media technology. Extension programs are designed to bring to adults in the community, on a part-time basis, the benefits of the talent, research and resources of the University of California. Credit and noncredit courses in nearly every academic discipline and in interdisciplinary areas provide opportunities for professional/career advancement; for expansion of cultural horizons; for development of scientific literacy; for growth in personal awareness and human interrelationships; for enhancement of capability to assess and deal with the great issues of politics and society in this era of fundamental reappraisal of established ideas and values. In the broad social view, Extension has a primary responsibility for the public service functions of the University, including community development programs and the application of University resources toward the solution of crucial statewide and urban problems.

Programs

Types of programs include regular campus-equivalent classes; lecture series; discussion groups; conferences, institutes and short courses; community development and other public service programs; film and television series; correspondence study; residential programs; sequential certificate programs; studio/workshop courses in the creative and performing arts; an extensive creative writing program series; family field/study trips and foreign travel/study programs; and counseling and testing.

Credit

For information on transferability of credit earned through Extension toward the bachelor's degree at UCLA, please contact the Extension Advisory Service (see "Additional Information" below).

Continuing Education Units

Many Extension noncredit programs offer the opportunity to earn CEU (noncredit Continuing Education Units). One CEU is awarded for each 10 contact hours of instruction. CEU are recorded on the student's transcript. They are widely accepted for relicensure and other professional/career-related purposes.

Additional Information

To obtain the current UCLA Extension catalog, call 825-8895.

An Extension Advisory Service (EAS) is available to all for assistance in planning long- or short-term study through Extension, for credit or not for credit. There is no charge for this service. Those interested may write, telephone or visit the EAS office, 114 UNEX, UCLA Extension Building, 10995 LeConte Avenue (at the southwest corner of the campus), Los Angeles, CA 90024 (206-6201).

Veterans may use the educational benefits available to them under Federal and State laws to enroll in University Extension classes, provided the classes are part of their prescribed and recognized objectives approved by the Veterans Administration.

The University Library

The University Library system consists of nineteen libraries designed to serve the study and research needs of students, faculty and staff in all the academic and research disciplines offered on the campus. The libraries collectively contain more than four million volumes, as well as extensive holdings of government publications, newspapers, pamphlets, manuscripts, microforms, music scores, slides, maps and recordings in cassette, video cassette and tape form. The library regularly receives nearly 55,000 serial publications.

Card catalogs in each library list all processed material in that library. Microfiche supplements list periodicals and partially processed books. The main card catalog in the University Research Library lists holdings in all campus libraries.

Students have access to the stacks of most of the libraries at UCLA. Orientation to and guidance in the use of these facilities, collections and services are available at each campus library. Self-service photocopying machines for copying periodical articles and portions of books are available in most library units.

The College Library

The services and collections of the College Library, located in the Lawrence Clark Powell Library Building, are designed to meet most of the basic study needs of undergraduates. Its book and periodical collections are maintained in open stacks, with course reserve materials available for loan at the Circulation Desk. 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.

Study carrels and reading rooms are found throughout the Powell Building, and typing and self-service photocopy machines are provided. The College Library also offers a self-paced, self-directed noncredit course of instruction in the use of the library, "Learning Library Skills," for a charge of $5.

University Research Library

The principal collections relating to the humanities and social sciences are located here in an open stack arrangement. In addition, the Reference Room, Circulation Department and Periodicals Room are in this building. The Microform Reading Service, with some 400,000 microcopies of newspapers, books and periodicals, has a variety of reading and copying equipment. The Graduate Reserve Service places books on open-shelf reserve for graduate courses. Typing and group study rooms and a self-service photocopy center are also provided.

The **Public Affairs Service**, located in the Research Library, provides a 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 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 materials on current issues.

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 *Elmer 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.

Other Campus Libraries

The resources of the special libraries on campus are devoted mainly to the subjects of concern to the departments or Professional Schools in which they are situated. The libraries serve primarily these departments and Schools, but their materials are available to all students and faculty members of the University.

The **Biomedical Library,** in the Center for 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 the principal subjects served by the **Education and Psychology Library,** which also has collections in the field of Teaching English as a Second Language. The **Management Library** serves the Graduate School of Management and the various subjects relating to business and management.

The following libraries support the UCLA curricula: **Architecture and Urban Planning, Art, Chemistry, Geology-Geophysics, Law, Map, Music, Oriental, Physics, Theater Arts** and the **University Elementary School.**

Supplementing the University Library is the **William Andrews Clark Memorial Library,** with its collection of about 75,000 books, pamphlets and manuscripts relating to English culture of the seventeenth, eighteenth and nineteenth centuries and the history of Montana, is not on the UCLA campus, but is located at 2520 Cimarron Street (at West Adams Boulevard). Its materials do not circulate; leaflets describing the Clark Library and information about University transportation to it may be obtained at the Reference Desk in the Research Library.

Special Library Services

The Library Photographic Service located in the Powell Library Building offers complete documentary photographic service, producing photostats, microfilm, slides, ozalid prints and other photographic work.

Computer Reference Services are offered on a partial cost-recovery basis by librarians in the Reference Department and Public Affairs Service in the Research Library, as well as by those in the Biomedical, Chemistry, Education and Psychology, Engineering and Mathematical Sciences, Geology-Geophysics, Management and Physics Libraries. Based on a number of important abstracting and indexing publications, the information covers primarily the social, life and physical sciences, technology and education. Descriptions and price lists are available at reference desks throughout the library system.

The resources and services of all the campus libraries are available to all students, faculty and staff of the University. A library handbook, describing the organization, activities and the "Summary of Library Privileges," may be obtained in any of the campus libraries.

Research Facilities, Museums, Other Resources

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. Research 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 University.

Universitywide

The **INSTITUTE OF GEOPHYSICS AND PLANETARY PHYSICS,** located in 3839 Slichter Hall (825-1664), is engaged in interdisciplinary programs related to 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 archaeology; geochronology; glaciology; petrology and metamorphism; isotope geochemistry; origins of life; and 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

The **WHITE MOUNTAIN RESEARCH STATION (WMRS),** an organized research unit of the University of California, was established (1) to provide laboratory facilites for any qualified research investigators who wish to utilize a high-mountain environment in their 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 4050 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.

Research in the agricultural, biological and physical sciences is conducted within the laboratories. The facilities also are used by 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 (825-2093). Clarence A. Hall, Jr., Director

Campuswide

The **INSTITUTE OF AMERICAN CULTURES** promotes and coordinates 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 provides research and fellowship funds to the centers and coordinates their efforts in recruiting faculty and developing new instructional programs. The Institute is guided by an Executive Committee consisting of the four center directors, three faculty members and the Vice Chancellor for Research. The director of the Institute is the Executive Vice Chancellor.

The **CENTER FOR AFRO-AMERICAN STUDIES,** located in 3111 Campbell Hall (825-7403), 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, publications and cultural programs. In addition, the Center participates with an interdepartmental degree committee responsible for administering an interdisciplinary master's degree program and an undergraduate program in Afro-American Studies. Claudia Mitchell-Kernan, Director

The **AMERICAN INDIAN STUDIES CENTER,** located in 3220 Campbell Hall (825-7315), acts as an educational catalyst in a variety of ways. It encourages new programs of study, promotes faculty development and

systematic research, and develops library materials and curricula related to American Indian studies. In addition, the Center is involved with the cultural activities of the Indian community and sponsors lectures, symposia, conferences and workshops relevant to American Indian development. Special emphasis is placed upon coordinating the educational needs of American Indian students with the University and the community.

Charlotte Heth, Director

The **ASIAN AMERICAN STUDIES CENTER,** located in 3232 Campbell Hall (825-2974), seeks to provide a deeper understanding of a particular area of study by the development of related human and material resources. It promotes the systematic development of material resources related to Asian American studies through an aggressive library acquisitions program, coordinated interdisciplinary research and a broad publications program. Human resources are nurtured by vigorous curriculum development efforts, and courses have been designed with degree-granting programs at both the undergraduate and graduate levels. The Center supports and encourages promising graduate students and postdoctoral scholars to pursue their interests in this vital field of study and sponsors a variety of conferences, lectures, symposia and cultural events. In addition, the Center supports a wide variety of projects designed to channel the resources of the University and the fruits of the Center's other areas of activity to Asian American communities. Lucie Cheng Hirata, Director

The **CHICANO STUDIES RESEARCH CENTER (CSRC),** located in 3121 Campbell Hall (825-2363), is an organized research unit established at UCLA in 1969 whose mission is to facilitate interdisciplinary academic research related to the Mexican experience. Its purpose is to seek the development of Chicano studies as a unique scholarly area of activity, recognizing that campus and national development of Chicano studies are interrelated.

The goals of the Center are to (1) identify, explore and document research which equally emphasizes original work that provides thematic conceptualization and addresses critical issues facing the Mexican community; (2) initiate and support faculty and student development in Chicano studies; (3) assist, support and encourage the development of undergraduate and graduate curricula in Chicano studies, emphasizing graduate curricula; (4) develop and disseminate research and bibliographic materials in Chicano studies; (5) facilitate public service by focusing the unique resources of the University on problems in the Mexican community and engage the further involvement of the University with the Mexican community; and (6) support the creation and development of Chicano studies at other institutions, and the organization of professional associations, conferences and meetings devoted to Chicano studies.

Juan Gómez-Quiñones, Director

The **CRUMP INSTITUTE FOR MEDICAL ENGINEERING,** located in 6417 Boelter Hall (825-4111), joins medicine and certain aspects of engineering, especially chemical engineering and materials science. Its research interests 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 and (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 (Fall 1986). At maturity, the Institute will include fifteen faculty members from engineering and medicine. F. Eugene Yates, Director

The **INSTITUTE OF INDUSTRIAL RELATIONS,** located in 9244 Bunche Hall (825-1964) and 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 and related problems, such as wage determination, 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, Psychology, Political Science and Sociology, the School of Law or other academic departments. This program affords opportunities to students specializing in personnel management and industrial relations to engage in investigative work under expert guidance. A second important concern of the Institute is the support and encouragement of teaching programs and courses in industrial relations at the University. The third major 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 in cooperation with University Extension leading to a Certificate in Industrial Relations.

Daniel J.B. Mitchell, Director

The **LABORATORY OF BIOMEDICAL AND ENVIRONMENTAL SCIENCES,** located in Warren Hall (900 Veteran Avenue, 825-9431), 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 are conducted in the Center for Health Sciences. Most of the remaining program is conducted in Warren Hall, located on the West Medical Campus.

Warren Hall is well-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 in 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

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 (administrative offices are located in 168 MBI, 825-1018). 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 Microbiology Departments and close to the School of Medicine. Paul D. Boyer, Director

The **NEUROPSYCHIATRIC INSTITUTE (NPI),** located within the UCLA Center for Health Sciences (on B Level off Westwood Boulevard, 825-0511), is an organized activity devoted to teaching, research and patient care in psychiatry, neurology and related fields. The mission of the Institute is threefold: (1) *education*—developing scholars and practitioners who contribute to the solution of problems related to mental health, mental retardation and diseases of the nervous system; (2) *research*—acquiring new knowledge about the factors that affect an individual's social, psychological, intellectual and neurological health; and (3) *patient care and treatment*—developing and utilizing the most effective techniques of diagnosing and treating these disorders. Today, the NPI staff consists of mental health professionals representing a broad spectrum of disciplines relevant to the fields of mental health and illness, mental retardation, diseases of the nervous system and allied fields of research (including anatomy, anthropology, biochemistry, computer sciences, dentistry, edu-

cation, epidemiology, ethology, genetics, health administration, linguistics, neurology, nursing, pathology, pediatrics, pharmacology, physiology, psychiatry, social work and sociology).

The Institute houses the Department of Neurology and the Department of Psychiatry and Biobehavioral Sciences and works in close association with the latter to conduct educational programs at the undergraduate, graduate and postdoctoral levels. An active and varied program of basic research, as well as biomedical, behavioral and clinical research is emphasized; NPI also provides inpatient and outpatient psychiatric and neurological services for adults, adolescents and children.

L.J. West, M.D., Director

Dentistry

The **DENTAL RESEARCH INSTITUTE,** located mainly on the 7th floor of the School of Dentistry, involves faculty, graduate and professional students doing 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, 43-186 CHS (825-5478). William H. Hildemann, Director

Engineering

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. Administrative offices are located in 5531 Boelter Hall (825-2206). S.K. Friedlander, Director

Letters and Science

The **AFRICAN STUDIES CENTER,** located in 10244 Bunche Hall (825-3686), 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 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 Research Committee, the Center makes grants to assist UCLA faculty members and students with research on 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 Africanists 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, The Journal of African Studies, African Law Studies, The African Studies Center Newsletter* and *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. Lofchie, Director

The **INSTITUTE OF ARCHAEOLOGY,** located in 288 Kinsey Hall (825-8506), was established in 1973 for the purpose of developing and coordinating all aspects of 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 artifactual remains.

The Institute includes faculty members from eleven academic units at UCLA, as well as faculty from various other UC campuses. It also serves as a home for visiting archaeologists from the U.S. and abroad. 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 and symposia and by arranging for visiting faculty; it also helps support excavation programs of individual 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 manned 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

The **CENTER FOR THE STUDY OF COMPARATIVE FOLKLORE AND MYTHOLOGY,** located in 1037 GSM (825-4242), 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 B. Hand Library of Folklore and Mythology, the Visual Media Archive, the Western Folklore Archive, the John Edwards Memorial Foundation, a recording study and sound laboratory, and collections of field recordings, phonograph records, and other 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

The **LATIN AMERICAN CENTER,** located in 10343 Bunche Hall (825-4571), 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, and Engineering and Applied Science. NDEA Title VI fellowships, research assistantships and grants-in-aid are available to students in the graduate degree programs.

The Center also sponsors an extensive program of lectures, films, colloquia and other special events for the University and general public. Additional outreach activities include precollegiate curriculum development, special offerings through University Extension, programs for community college instructors and participation in the Southern California Conference on International Studies.

The Center publishes a series of documentary and scholarly publications, which include the *Statistical Abstract of Latin America*, the *Latin American Studies Series*, the *Reference Series*, the *Journal of Latin American Lore* and the *Hispanic American Periodicals Index (HAPI)*.

Ludwig Lauerhass, Jr., Executive Director

The **CENTER FOR MEDIEVAL AND RENAISSANCE STUDIES**, located in 11365 Bunche Hall (825-1970, 825-1880), is an organized research unit of the University of California. The Center does not currently offer courses or degrees, but it contributes to the goals of the University in various ways.

The Center seeks to encourage multidisciplinary attitudes and skills as it promotes, among some twenty UCLA departments, the study of Western civilization between 300 and 1650 A.D., from the early Christian period through the time of Milton. Accordingly, the Center encompasses the arts, sciences, history and languages, and it embraces the Latin West, Byzantium, Islam, Judaism, the minor Christian communities and the various Slavic communities, as well as the Germanic and Celtic worlds. The Center seeks to furnish opportunities, facilities and assistance for individual research and interdepartmental exchanges; it appoints postdoctoral associates and visiting professors; and it sponsors lectures and organizes coordinated cultural enterprises such as conferences and colloquia. Through books and television programs, it makes the findings of scholars available to both the academic community and the general public.

Students working in Medieval and Renaissance fields enjoy excellent resources at UCLA. Among the major research tools available on campus are the Berenson photographic file and the Princeton Index of Christian Art, the Belt Library of Vinciana, the Biomedical Library's collections in the history of medicine, and the manuscript holdings in the Music Department and in the Research Library's Special Collections. As of 1979, UCLA was estimated to have more than 390,000 volumes in the fields of special interest to the Center, supplemented by growing collections in Judaica and Near Eastern studies. Nearby are the manuscripts and printed riches of the Huntington and Clark Libraries. Fredi Chiappelli, Director

The **GUSTAVE E. VON GRUNEBAUM CENTER FOR NEAR EASTERN STUDIES**, located in 10286 Bunche Hall (825-1181), was established to promote individual and collaborative research and training in this area. The Center encourages the research of individual faculty members and collaborates 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

The **CENTER FOR RUSSIAN AND EAST EUROPEAN STUDIES**, located in 334 Kinsey Hall (825-4060), was established to promote, assist and coordinate research and training 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. Bariša Krekić, Director

The **INSTITUTE FOR SOCIAL SCIENCE RESEARCH (ISSR)**, located in 11252 Bunche Hall (825-0711), 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.

The **Survey Research Center (SRC)**, located in 3260 Franz Hall (825-0715), is an integral part of the Institute which not only serves the UCLA faculty but investigators from other universities and research groups in the local and national social research community. Several times a year, SRC undertakes studies of Los Angeles County residents that provide research information to a number of different investigators. These multi-purpose surveys allow researchers to economically obtain data-sets on large representative samples of Los Angeles County citizens.

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

Finis R. Welch, Acting Director

Management

The **WESTERN MANAGEMENT SCIENCE INSTITUTE**, located in 6223 GSM (825-1581), 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 and simulation are being developed and applied. The basic economics of decision and information systems are also being studied.

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 Graduate School 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, Acting Director

Medicine

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; and (3) to develop and disseminate information about brain function in the interest of the social and scientific communities. Located in the Center for Health Sciences (73-401 BRI, 825-6055), the Institute conducts programs which are largely interdisciplinary. General activities include attention to such broad fields of interest as neurobiology, neurophysiology, neurochemistry, neuroanatomy, neuropharmacology, neuroendocrinology, neuropsychiatry, biophysics and communications, neuroimmunology, behavior and neuropathology.

Carmine D. Clemente, Director

The **JERRY LEWIS NEUROMUSCULAR RESEARCH CENTER** is located in the northwest corner of the Center for Health Sciences (on Westwood Boulevard, 825-3733) adjacent to the Reed Neurological Research Center, BRI and 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

The **JULES STEIN EYE INSTITUTE** is a comprehensive facility located within the Center for Health Sciences (2-138 JSEI, 825-5051) 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. Straatsma, Director

The **MENTAL RETARDATION RESEARCH CENTER,** located in 48-240A NPI (825-0313), provides laboratories and clinical facilities for basic and applied research and research training in mental retardation and related aspects of human development. Its interdisciplinary activities range from molecular biology to epidemiology. The Center is closely allied with a professional education and clinical services facility, which promulgates interdisciplinary training in the evaluation and treatment of mentally retarded and otherwise disturbed children and their families. Together, these two units comprise a total program directed toward a major public health program. Nathaniel A. Buchwald, Director

Museums, Galleries, Special Facilities

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, a collection of 66 sculptures from the 20th century by Arp, Calder, Lachaise, Lipchitz, Moore, Noguchi, Rodin and Smith.

Twelve exhibitions of painting, sculpture, prints 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.

In the past several years, the Gallery had exhibitions of Amish Quilts, Dowries from Kutch (a Women's Folk Art Tradition in India), Louis M. Eilshemius in the Hirshhorn Museum, UCLA 50th Anniversary (presented by the Grunwald Center for the Graphic Arts), American Impressionism, New American Monotypes and 20th-Century American Drawings from the Whitney Museum of American Art, as well as undergraduate and graduate student exhibitions from the UCLA Department of Art. The Gallery is open Tuesday through Friday 11 am-5 pm and Saturday and Sunday 1-5 pm (closed Monday). There are daily tours at 1 and 2 pm and group tours by appointment (825-3264). The administrative office is located in 1100A Dickson Art Center (825-1461). Jack B. Carter, Acting Director

The **GRUNWALD 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, located in 2122 Dickson Art Center (825-3783), include significant examples from the 15th century to the present. It is particularly noted for its collection of German Expressionist prints formed by Fred Grunwald, as well as for specialized collections in 19th- and 20th-century lithography (including the Tamarind archive), the history of ornament, Japanese prints (including the Frank Lloyd Wright collection), and comprehensive holdings of Matisse, Picasso and Rouault. Major exhibitions are organized each year accompanied by the publication of a scholarly catalog. E. Maurice Bloch, Director

The **MUSEUM OF CULTURAL HISTORY,** located in 55A Haines Hall (825-4361), houses large and diverse collections of the arts and archaeology of Africa, Oceania and the Americas and the folk arts of Latin America, Europe and the Orient. The Museum promotes the preservation and study of the arts as vital to the understanding of man's cultural heritage. As a resource for UCLA faculty, students, visiting scholars and the general public, the Museum offers assistance with instruction and research and sponsors exhibitions, lecture programs and symposia. The Museum also publishes the research of students and faculty on significant segments of the collection.

In the community, a satellite museum program organizes and mounts exhibitions throughout greater Los Angeles, particularly in culturally disadvantaged areas. A prehistory program is designed to familiarize children with the tools of early man in a classroom setting.

The Museum has an 1800 square-foot multipurpose facility, located in 2 Haines Hall (825-0288), which is used primarily for exhibits directly related to teaching and research. Exhibitions highlight various aspects of the Museum's collections. Each year the Museum sponsors a major exhibition, accompanied by a substantial catalog, in the Frederick S. Wight Art Gallery. Christopher B. Donnan, Director

The 8-acre **MILDRED E. MATHIAS BOTANICAL GARDEN,** located on the southeast corner of the campus, contains a useful teaching and research collection of about 4000 plant species from around the world. Included are a native section, desert garden, lathhouse and experimental field. The Herbarium contains a teaching and research collection of about 250,000 dried plant specimens, representatives of the world flora, with special collections of the native plants and ornamental species cultivated in Southern California. The administrative office is located in 124 Botany (825-3620). Arthur C. Gibson, Director

The **UCLA JAPANESE GARDEN** in Bel Air that reminds one of Kyoto was donated to the University in 1965 by Edward W. Carter, then Chair of the Regents of the University. It serves as an adjunct in the teaching programs of several UCLA departments. It is open to individual visitors and groups by reservation only (call the UCLA Visitors Center at 825-4574) Tuesday from 10 pm to 1 pm and Wednesday from noon to 3 pm.

The garden was created in 1961 by Mr. and Mrs. Gordon Guiberson in memory of his mother, Ethel L. Guiberson, organizer of the Beverly Hills Garden Club. The Guibersons had studied many Japanese gardens, including the most famous ones in Kyoto. They engaged Nagao Sakurai, a leading landscape architect, to design it. Major structures in the garden — the main gate, teahouse, bridges and shrine — were built in Japan and reassembled here by Japanese artisans. Major symbolic rocks were shipped from Japan, and antique stone carvings and water basins were imported. In addition, much specially selected local stone was used, including 400 tons of lichen-covered dark brown stone from Santa Paula Canyon in Ventura County.

Except for the old native coast live oaks which antidate the garden, nearly all the trees and plants belong to species that are grown in Japan. (This is not true of the separate Hawaiian Garden behind the teahouse.) The garden was seriously damaged by heavy rains in 1969; the extensive reconstruction was designed by Professor Kawana and financed by Friends of the UCLA Gardens. Gabriel Aguilera, who helped build and plant the original garden, has been in charge of it ever since.

The **OFFICE OF ACADEMIC COMPUTING (OAC),** located in 5905 Math Sciences (825-7511), 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 APL, TSO (IBM's Time Sharing Option) and WYLBUR. The 3033 supports MVS batch services as well as a fast, student-oriented batch service (QUICK-RUN).

OAC also maintains an IBM 4341 computer, principally for student use. 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 plotters (a CalComp 936 Drum Plotter and a Versatec 1200A Electrostatic Plotter), several Tektronix graphics display devices (models 4051 and 4013) and colorgraphics terminals (IBM 3279).

Computing activities are supported by an extensive library of application programs, consulting services and reference documentation. The applications program library for the 3033 includes a wide range of statistical, engineering and mathematical software. FORTRAN, PL/1 and PASCAL compilers, as well as other computer languages, are also supported on the 3033. W.B. Kehl, Director

The **DIVISION OF LABORATORY ANIMAL MEDICINE,** located in 1V-211 CHS (825-7281), 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 RESOURCES 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 (320 Botany, 825-8062) is close enough to the campus for easy daily access.

Arthur C. Gibson, Campus Representative

BIOLOGICAL 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. For more information, contact James Northern, 1303 Life Sciences (825-1282).

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.

A Note About Resources

Academics form the focus of endeavor for the UCLA community, but other resources—health care, psychological counseling, learning skills, veterans' affairs and so on—also come into play in the course of any experience here. These additional resources are listed in the "Student Services at UCLA" section of this catalog.

Finally, you may have noticed that nearly all of the academic resources discussed in this section carry room number and/or telephone number information. The reason for that is at once simple and powerful: If you want help, it's there in a variety of useful programs. . . but it's up to you to seek it out.

Grading Regulations, Student Conduct and Leaving UCLA

Grades in courses (graduate or undergraduate) are defined as follows: "A", superior; "B", good; "C", fair; "D", poor; "F", fail; "IP", In Progress; and "I", undetermined (work of passing quality but incomplete). The grade "DR" (Deferred Report) is entered on the student's record (a) when, to the faculty member'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 designations "P" (Passed) and "NP" (Not Passed) are used in reporting grades for undergraduate students taking courses on a Passed/Not Passed basis.

Grades "A", "B", "C", "D" (including plus or minus notations where authorized), "F", "P" and "NP" are final when filed by an instructor in the end-of-quarter course report, except for the correction of a clerical or procedural error. No term grade except Incomplete may be revised by reexamination.

The grading regulations below have been established by the Academic Senate, the faculty academic policymaking unit of the University. Regulation numbers and text are as they appear in the current Academic Senate Manual. "Notes" at the end of regulations reflect administrative procedure and are not part of the Senate regulations.

A-306 General

(a) The Schools of Dentistry, Medicine and Law shall develop their own grading codes for their respective professional programs and these programs are therefore excepted from the provisions of this grading code.

(b) The instructor in charge of a course shall be responsible for determining the grade of each student in the course. The standards for evaluating student performance shall be based upon the course description as approved by the appropriate course committee.

(c) The final grade in the course shall be based upon the instructor's evaluation of the student's achievement in the course. When on an examination or other work submitted by a student, the student is suspected of having engaged in plagiarism or otherwise having cheated, the suspected infraction is to be reported to the appropriate administrative office of the University for consideration of disciplinary proceedings against the student. Until such proceedings, if any, have been completed, the grade "DR" (Deferred Report) shall be assigned for that course (see Senate Divisional Regulation A-315). 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 any discipline, shall report 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.

(d) 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 division Chair. Within a period of two weeks after notification, guided by the Committee on Committees, the division Chair shall establish an ad hoc committee to determine whether the grade shall be changed. The ad hoc committee shall consist of at least three members, with at least one member a representative of the department involved. The ad hoc committee will obtain whatever records are available and use these records to make a final decision concerning the grade. If the records are not adequate, then the committee may assign a grade of Pass or allow the student to repeat the course without penalty. The ad hoc committee will report to the division Chair, who shall report the change of grade to the Registrar. To protect the student, the grade shall be changed, if warranted, within four weeks following the formation of the ad hoc committee.

A-307 Grading of Undergraduate Students

(a) The level of achievement of all undergraduate students shall be designated in the following terms: "A" (superior), "B" (good), "C" (fair), "D" (poor), "F" (fail), "I" (Incomplete), "IP" (In Progress), "P" (Passed), "NP" (Not Passed), "DR" (Deferred Report). The passing grade "A" may be modified by a minus (−) suffix. The passing grades "B", "C" and "D" may be modified by plus (+) or minus (−) suffixes.

(b) Grade points per unit shall be assigned by the Registrar as follows: "A"−4, "B"−3, "C"−2, "D"−1, "F"−zero. "Plus" grades carry three-tenths grade point more per unit and "minus" grades carry three-tenths grade point less per unit than unsuffixed grades. Subject to the provisions of Senate Regulation 634, courses in which a student receives a "P" grade shall be counted in satisfaction of degree requirements, but courses in which either a "P", "NP", "DR", "J" or "IP" has been awarded shall be disregarded in determining a student's grade-point average.

(c) The grades "A", "B", "C" and "P" denote satisfactory progress toward a degree. The "D" grade denotes progress toward a degree but as stipulated in Senate Divisional Regulation A-304 such a grade must be offset by higher grades.

A-308 Grading of Graduate Students

Please refer to the *UCLA Graduate Catalog*.

A-309 The "I" Grade

(a) The grade "I" may be assigned when a student's work is of passing quality, but is incomplete. The grade "I" shall only be assigned when the student establishes to the instructor's satisfaction that his or her work is incomplete for a 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.

(b) The student is entitled to have the grade "I" replaced by a passing grade and to receive unit credit and grade points provided he or she satisfactorily completes the work of the course by the end of the next full term that he or she is in residence in regular session following the term in which the "I" was received. The Dean of the appropriate School or College 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 were maintained.

(c) If the work is not completed according to the provisions of Senate Divisional Regulation A-309(b) above, the grade "I" shall automatically be replaced with "F", "NP" or "U" as appropriate.

Note: You must file a "Petition for Removal of Incomplete Grade" to complete the work in a way authorized by the instructor (fee: $5). Appropriate grade points and units will be assigned upon completion. If the Incomplete grade was assigned Fall Quarter 1972 or thereafter and the work is not completed by the end of the next quarter you are in academic residence, the grade "I" will automatically be lapsed to a grade of "F" or "NP".

Under extraordinary circumstances, the Dean of your College may grant an extension of time on removal of the "I" grade.

A-310 The "P" and "NP" Grades for Undergraduate Students

(a) Subject to the limitations in (c) and (d) below, an undergraduate student in good standing may enroll in one course each term on a P/NP basis.

(b) A grade of "P" shall be awarded only for work which would otherwise receive a grade of "C" or better.

(c) A student who has received two "NP" grades shall be excluded from enrolling in a course on a P/NP basis for the next term in residence.

(d) A department or School may designate any course or courses as courses not to be taken by its majors on a P/NP basis and may at its option require a student who has received a "P" in such a course before entering a major to repeat the course for a letter grade.

(e) A student who has not elected the P/NP option in a preceding term may take two courses P/NP.

(f) The Council on Educational Development and the Committee on Undergraduate Courses and Curricula may authorize exceptions to (a) and (e) above when they would be inconsistent with the purpose or design of experimental courses or programs which these committees may approve.

Note: With the permission of the Dean of your College or School, you may change your enrollment in a particular course from the Passed/Not Passed basis to the regular letter grade basis at any time up to the final date approved by the Academic Senate.

A-312 The "IP" Grade for Undergraduate Students

(a) 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" (In Progress) shall be assigned in the intervening term(s). The provisional grade shall be replaced by the final grade if the student completes the full sequence. The faculty of each School or College and the Graduate Council are authorized to regulate the award of credit in cases where the full sequence is not completed.

(b) Authorization for the use of "IP" grades in undergraduate courses shall be by the Committee on Undergraduate Courses and Curricula.

A-313 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:

(a) 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 any basis other than academic grounds. No change of grade may be made on the basis of reexamination or, with the exception of the "I" and "IP" grades, the completion of additional work. Any grade change request made more than one year after the original filing must be validated for authenticity of the instructor's signature by the departmental Chair. Any grade change request made by an instructor who has left the University must be countersigned by the departmental Chair.

A-314 Repetition of Courses

Repetition of courses other than those authorized by the Committee on Undergraduate Courses and Curricula or the Graduate Council to be taken more than once for credit is subject to the following conditions:

(a) A student may repeat only those courses in which he or she received a grade of "C−", "D+", "D", "D−", "F", "NP" or "U". Courses in which a grade of "C−", "D+", "D", "D−" or "F" has been received may not be repeated on a P/NP basis.

(b) Repetition of a course more than once requires approval by the appropriate Dean in all instances.

(c) Degree credit for a course will be given only once, but the grade assigned at each enrollment shall be permanently recorded.

(d) In computing the grade-point average of an undergraduate who repeats courses in which he or she received a "C−", "D+", "D", "D−" or "F", only the most recently earned grades and grade points shall be used for the first 16 units repeated. In the case of further repetitions, the grade-point average shall be based on all grades assigned and total units attempted.

A-315 The "DR" Grade

The grade "DR" (Deferred Report) shall be entered on the student's record:

(a) When, to the faculty member'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 according to the provisions of Senate Divisional Regulation A-306(c).

The "DR" shall not itself be calculated in any way in the student's grade-point average. The "DR" shall be 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 School or College and to the student stating the basis for that action. For students enrolled in a course approved by the Graduate Council, the Dean of the Graduate Division is the dean of record. For students in a course approved by any undergraduate course committee, the dean of record is the Dean of the College or School in which the course is offered. The Dean shall establish a date or a specific circumstance terminating the period of the Deferral of Report and inform the Registrar, the instructor and the student. Unless changed by the instructor as specified in the preceding paragraph, the "DR" shall then automatically become "F".

A-320 Special Studies Courses

(a) All special individual studies courses for undergraduate students are numbered 199. These courses are structured by the instructor and the student at the time they are initiated. The structure of the course, including both the specific proposed course of study and the requirements that must be met before a grade can be assigned, are then summarized on the standard form, "Petition for Enrollment in a Special Studies Course (199)."

(b) In order to register for a special studies course, the "Petition for Enrollment in a Special Studies Course (199)" must be approved by both the instructor in charge and the Chair of the department (or the head of the relevant interdisciplinary program).

(c) Limitations:

(1) Enrollment requires the consent of the instructor who is to supervise the study. The applicant shall show that his or her background is adequate for the proposed study.

(2) Credit for supervised individual studies in a single term is limited to a maximum of 8 units. Subject to the provisions of Senate Divisional Regulation A-310, the student may take a 199 course on a Passed/Not Passed or a letter grade basis, but the total number of units allowed in individual study courses for a letter grade is 16.

(3) At the close of the term, some tangible evidence of work accomplished, signed by the student and the supervising faculty member, shall be filed by the department for an appropriate period of time. The department shall designate the form of the evidence acceptable for this purpose.

(4) At the outset of a special studies course (199) the student must complete, and the instructor in charge must sign, a "Petition for Enrollment in a Special Studies Course (199)," which will include the specific proposed course of study and the requirements to be met before a grade can be assigned. The form must have been completed and submitted before a grade can be assigned in the course.

(5) In order to register for 199 and/or 199H, a student must have advanced junior standing and at least a 3.0 GPA in his or her major field, or he or she must have senior standing.

(6) A student who has an outstanding Incomplete in 199 or 199H may not register for another 199 or 199H until the grade of Incomplete has been removed.

(7) On the advice of the instructor(s) and departmental Chair concerned, the Dean of a student's College or School may authorize exceptions to the limitations listed.

(8) Departments may impose additional limitations on the individual study courses.

A-330, A-332 Final Examinations

A-330

No student shall be excused from assigned final examinations except as provided in Senate Divisional Regulation A-332 below.

A-332

(a) The instructor in charge of an undergraduate course shall be responsible for assigning the final grade in the course. The final grade shall reflect the student's achievement in the course and shall be based upon adequate evaluation of that achievement. The instructor's methods of evaluation must be announced at the beginning of the course. The methods may include a final written examination, a term paper, a final oral examination, a take-home examination or other evaluation device. Evaluation methods must be of reasonable duration and difficulty and must be in accord with applicable departmental policies. Final written examinations shall not exceed three hours' duration and shall be given only at the times and places established by the departmental Chair and the Registrar.

(b) At the end of the term in which a student is expected to be graduated, a student's major department may examine him or her in the field of the major, may excuse the student from final examinations in courses offered by the department during that term, and with the approval of the appropriate Committee on Courses, assign a credit value to such general examination [Variance to 772, 15 June 71].

(c) An instructor shall, if he or she wishes, release to individual students their original final examinations (or copies). This may be done by any method which insures the students' right to privacy. Otherwise, the instructor shall retain final examination materials, or a copy thereof, until the end of the next succeeding regular quarter of instruction, during which period students shall have access to their examinations.

A-340 Undergraduate Honors

Each College or School shall establish its criteria for honors at graduation and quarterly honors subject to the following minimum standards and procedures:

(a) Honors at Graduation: Students eligible for award of honors shall be those who have completed 90 or more units, for a letter grade, at the University of California and have attained, as a minimum, a GPA which places them in rankings in their College as follows: *Summa cum laude*, top 5%; *Magna cum laude*, next 5%; *Cum laude*, next 10%. At the end of each calendar year, the Registrar shall determine for each College the average minimal GPAs required for graduating in the top 5%, next 5% and next 10% during that calendar year. These GPAs, announced in January and published in the catalog for the next academic year, shall serve each College as minimal criteria for the above honors at graduation during the next academic year.

(b) Quarterly Honors: Students named on the quarterly honors list by each College shall be those who have completed, for a letter grade, a minimum of 12 units in that quarter with a GPA equal to or greater than GPA levels in effect for their College for honors at graduation.

Grade Points

For purposes of computing scholarship standing, a full course is counted as equivalent to 4 quarter units. Partial or multiple courses are counted proportionally.

Grade points per unit are assigned as follows: "A" – 4, "B" – 3, "C" – 2, "D" – 1, "F" – none and, prior to Fall Quarter 1972, "I" – none. The plus (+) notation adds 0.3 grade points per unit; the minus (–) notation subtracts 0.3 grade points per unit. Beginning Fall Quarter 1972, units attempted and grade points for work graded "I" (Incomplete) are excluded from grade-point computations for the quarter in which the "I" is assigned. Upon removal of grade "I", units and grade points are included in subsequent accumulated grade-point summaries. An "I" assigned Fall Quarter 1972 or thereafter, but not removed by the end of the next quarter you are in residence, will be lapsed to "F" or "NP" and so included in subsequent unit and grade-point summaries.

You can determine your grade-point average by dividing the number of grade points earned by the number of units attempted. A 2.0 ("C") grade-point average on all work undertaken at the University—all campuses—is required for satisfactory standing as an undergraduate.

Courses taken on a Passed/Not Passed basis are disregarded in determining grade-point average. In computing the grade-point average of an undergraduate who repeats courses in which grades of "C−", "D+", "D", "D−" or "F" were assigned, only the most recently earned grade and grade points shall be used for the first 16 units repeated. In the case of further repetitions, the grade-point average shall be based on all grades assigned and total units attempted. Courses in which a grade of "C−", "D+", "D", "D−" or "F" has been earned may not be repeated on a Passed/Not Passed basis.

Students should be aware that external agencies which evaluate student records for the purpose of admission to graduate and professional school programs may not calculate grade-point averages in the same manner as the University, and students are advised to contact such agencies about their policies concerning the calculation of grade-point averages.

Minimum Scholarship Requirements

Students in all undergraduate Colleges and Schools are expected to maintain a grade-point average of 2.0 ("C" average) on all work undertaken at the University—all campuses. Failure to maintain this level normally results in probation. The following provisions apply to all undergraduate students at Los Angeles.

Academic Probation

You will be placed on probation if, while in good standing, you fail to maintain at least a grade "C" average for all courses included in the grade-point average in a quarter.

Probationary status can be ended only at the close of a regular quarter and then only if a "C" average has been attained both on the term's work and on all work taken at the University of California—all campuses.

Academic Dismissal

You will be subject to dismissal from the University (a) if your grade-point average falls below 1.5 for any quarter or (b) if after two quarters on probation you have not achieved a grade-point average of 2.0 ("C" average) for all courses undertaken at the University or (c) if while on probation your grade-point average for work undertaken during any quarter falls below 2.0 ("C" average) or (d) if you fail to pass at least 32 units in three consecutive regular quarters in residence (see "Minimum Progress").

Grade-point averages shall be computed on the basis of all courses undertaken at the University (all campuses), including courses graded "I" (Incomplete) prior to Fall Quarter 1972, but not including noncredit courses, courses taken in University Extension, or courses taken on a Passed/Not Passed basis.

If you fail to meet the minimum scholarship requirements, you are subject to such supervision as the faculty of your College or School may determine. The faculty or its designated representative may dismiss a student subject to dismissal; may suspend dismissal, continue probation; or may readmit on probation a dismissed student.

Minimum Progress

Undergraduate students in the College of Fine Arts and the College of Letters and Science should refer to the information given on minimum progress (progress toward the degree) in the sections on each respective College.

About Student Conduct

Most of this catalog is devoted to the academic regulations which govern membership in the UCLA community. But, in addition to these, your conduct as a student is also subject to standards of behavior consistent with the role of UCLA as an institution dedicated to the pursuit of knowledge.

Just as you are subject to the provisions of the California Penal Code regardless of whether or not you are aware of each statute it contains, so, too, are you responsible for the provisions published in the *University of California Policies Applying to Campus Activities, Organizations and Students (Parts A and B) and UCLA Activity Guidelines*—and to the standards of conduct spelled out in these booklets.

You can get a copy of each of these by contacting the Dean of Students Office, 2224 Murphy Hall, or the Organizational and Inter-Organizational Relations Office, 161 Kerckhoff Hall.

The Dean of Students Office plays a central role in the interpretation, administration and application of the standards of citizenship which you are expected to follow at UCLA.

Since UCLA is large and diversified, the *UCLA Daily Bruin* is another source of general information. "Official Notices" are printed regularly, and you are held responsible for the information in them.

Disclosure of Student Records

Pursuant to the Federal Family Educational Rights and Privacy Act of 1974, the California Education Code as amended in 1976 and the University of California Policies Applying to the Disclosure of Information from Student Records, students at UCLA have the right: (1) to inspect and review records pertaining to themselves in their capacity as students, except as the right may be waived or qualified under the Federal and State Laws and the University Policies; (2) to have withheld from disclosure personally identifiable information from their student records, except as provided by the Federal and State Laws and the University Policies; (3) to inspect records maintained by the University of disclosures of personally identifiable information from their student records; (4) to seek correction of their student records through a request to amend the records and subsequently through a hearing; and (5) to file complaints with the Department of Health, Education and Welfare regarding alleged violations of the rights accorded them by the Federal Act.

The University may publish, without the student's prior consent, items in the category of "public information," which are name, address, telephone number, date and place of birth, major field of study, dates of attendance, degrees and honors received, the most recent previous educational institution attended, participation in officially recognized activities (including but not limited to intercollegiate athletics) and the name, weight and height of participants on intercollegiate athletic teams. Students who do not wish all or part of the items of "public information" disclosed may, with respect to address and telephone number, so indicate on the 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 and State Laws and the University Policies may be maintained in a wide variety of offices. Students are referred to the *UCLA Directory*, pages 1 through 28, 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 appropriate Federal and State Laws and the University Policies.

A copy of the Federal and State Laws, 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 Records Management Coordinator, 2256 Murphy Hall.

Leaving UCLA

Transfer to Other UC Campuses

Undergraduate students currently registered at any campus of the University in a regular session (or those previously registered who have not since registered at any other school) may apply for transfer to another campus by filing an "Intercampus Transfer Application" on their present campus. This application must be obtained and filed at the Registrar's Office Information Window A in Murphy Hall. There is a $25 nonrefundable fee. The deadlines are the same as the admission application deadlines given under the "Admission" section. Transcripts required for

the processing of the application for transfer are provided without additional charge. For details regarding particular campus admission provisions, visit the Intercampus Transfer Clerk at the Registrar's Office Information Window A in Murphy Hall.

Cancellation

Prior to the first day of classes, you may cancel registration by submitting a written notice, together with the current Registration Card and Student Photo ID Card to the Cancellation Clerk, Registrar's Office, 1134 Murphy Hall.

If you return to the University for the following quarter, you are eligible to preregister and preenroll as a continuing student. If you return subsequent to the following quarter, you must apply for readmission. Refer to the "Calendar" at the beginning of this catalog for registration material distribution dates.

Withdrawal

A student discontinuing attendance in **all** courses at the University within the course of a quarter must file an acceptable "Notice of Withdrawal." Failure to do so will result in nonpassing grades in all courses, thus jeopardizing your eligibility to reenter the University of California or your admission by transfer to another institution. Forms containing complete instructions are issued in the office of the Dean of the student's College, School or Graduate Division. File the "Notice of Withdrawal," Registration Card and Student Photo ID Card at your College (Letters & Science or Fine Arts students) for the withdrawal to take effect. Engineering, Nursing and Public Health students, after securing proper clearances, should file this form at the Registrar's Office Information Window A in Murphy Hall. Failure to attend classes, neglect of courses or stopping payment on checks tendered for registration do not constitute notice of withdrawal.

If you return to the University for the following quarter, you are eligible to preregister and preenroll as a continuing student. If you return subsequent to the following quarter, you must apply for readmission. Refer to the "Calendar" at the beginning of this catalog for registration material distribution dates.

One Quarter Absence

If after completing a quarter you do not register for the following quarter, you may return to the University the next subsequent quarter as a continuing student and will be eligible to preregister and preenroll.

If you plan to attend another institution (including University Extension) during your one quarter's absence, you should discuss your plans with your College or School counselor prior to enrolling elsewhere. Upon return to the University, you must provide the UCLA Admissions Office with a transcript of any courses taken.

Readmission

If you wish to return to the University after an absence of more than one quarter, you must file an "Application for Readmission." During the academic year 1982-83 applications for readmission are required as follows:

For Fall Quarter 1982—All students returning in the same status who did not complete Winter Quarter 1982.

For Winter Quarter 1983—All students returning in the same status who were not registered in Spring Quarter 1982.

For Spring Quarter 1983—All students returning in the same status who did not complete Fall Quarter 1982.

Undergraduate students may obtain application forms from the Registrar's Office Information Window A in Murphy Hall. The completed application along with a $25 application fee (nonrefundable) and transcripts of records from other institutions (including University Extension) attended during their absence must be filed with the Registrar on or before August 1 for Fall Quarter, November 15 for Winter Quarter and February 15 for Spring Quarter.

Transcript of Record

Upon formal application to the Registrar, you may have issued on your behalf transcripts of your record of work taken at UCLA in either regular session or Summer Sessions. A fee* of $3 is charged for the first copy ($1 for each additional copy ordered at the same time) of each transcript—undergraduate, graduate or Summer Session. Transcripts required for the intercampus transfer of undergraduate students within the University are provided without charge.

*Fees are subject to change without notice.

Change of Address/Name

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's Office, 1134 Murphy Hall. Veterans receiving benefits must also notify the Office of Special Services/Veterans Affairs.

Forms for change of name are available at the Registrar's Office Information Window A in Murphy Hall. Any student with a name change should immediately inform all instructors, advisors, etc, of the new name, as the Registrar's Office records will quickly reflect the name change.

Graduation from UCLA

Students at UCLA have very high aspirations, and most of them reach their educational goals. This is because UCLA's admission requirements are designed to select those students who, on the basis of their academic records, have the best chance of success in meeting their educational goals. While those with higher high school GPAs and SAT scores are more likely to succeed, every individual admitted to UCLA has the ability and the potential to graduate. In general, the students most likely to graduate and to be satisfied with their educational experience are those who take their academic program seriously and who also participate in the cultural, recreational and other activities that comprise the total University experience.

The traditional undergraduate program assumes that the degree will be awarded after four years of full-time enrollment, and many students are able to follow this pattern. However, many others find it beneficial to interrupt their studies or "stop out" for one or more quarters in order to accommodate employment or family responsibilities or for other personal reasons. Students in good standing who interrupt their studies in this way should experience no difficulty in reentering the University and completing their academic program. In summary, about three of ten students admitted to UCLA as freshmen graduate in four years, and another three will graduate from UCLA after a longer period of time.

In addition to those who remain to complete their degrees at UCLA, some students find it desirable, for either academic or personal reasons, to transfer to another institution. Another two of ten students admitted as freshmen do this and eventually receive their degrees from another campus of the University of California or some other college or university. Therefore, eight of ten UCLA freshmen will eventually receive the baccalaureate degree, and most will go on to graduate school.

Commencement

Commencement exercises honoring candidates for undergraduate and graduate degrees are held in mid-June—on the Sunday following the end of final examinations. During the early part of Commencement Day, individual departments, Colleges and Schools hold small, informal gatherings at which prizes and honors are awarded and students and their families meet faculty members. In mid-afternoon, all students, faculty, parents and friends gather in Drake Track and Field Stadium for formal exercises and the conferring of degrees. This academic pageant is a colorful affair—planned by the Committee on Public Ceremonies/Public Affairs—featuring the awarding of the UCLA medal, music, degree ban-

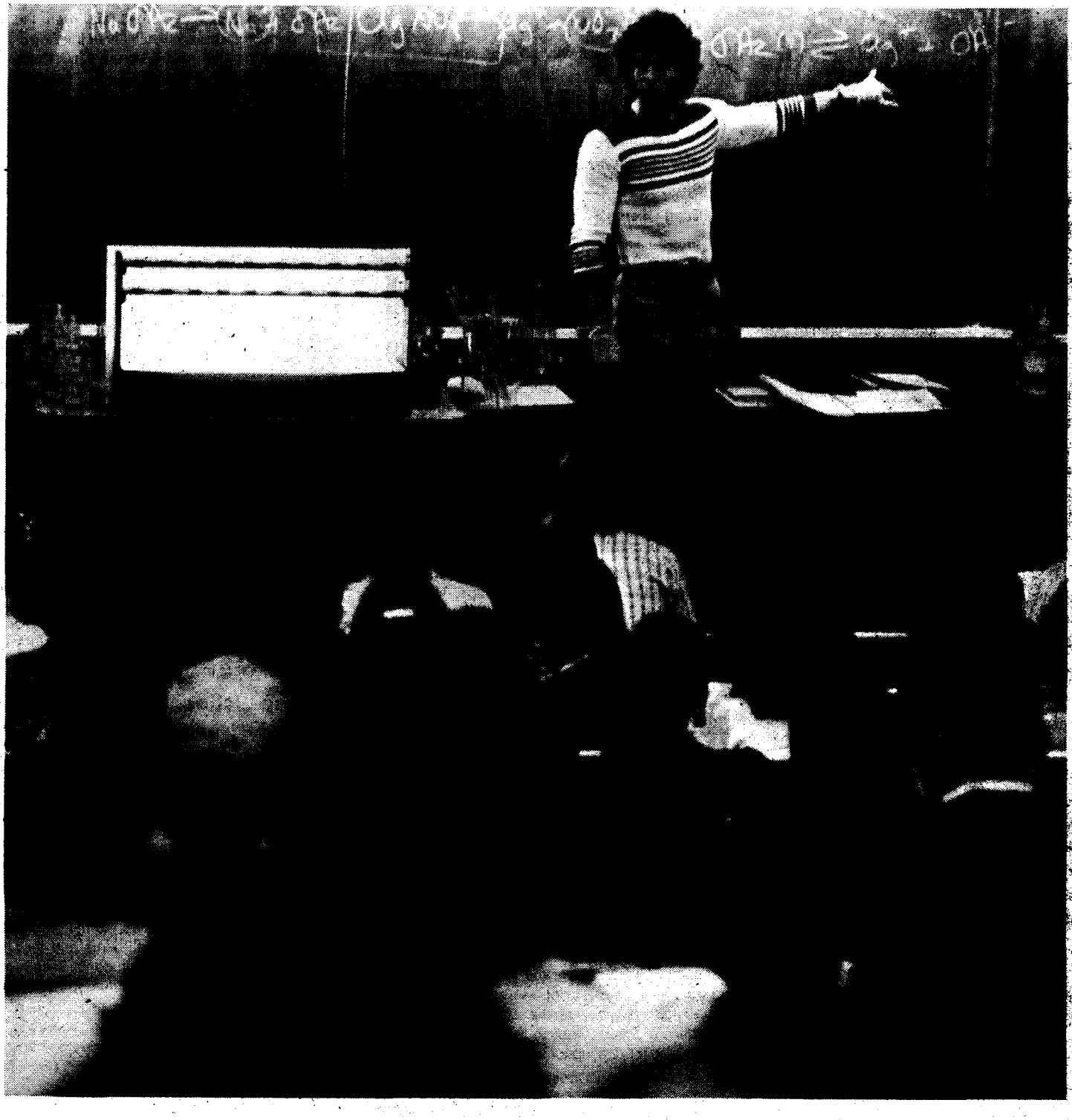
ners, student speakers and the wearing of gold fourrageres by undergraduate candidates who have achieved high academic distinction (upper 15 percent of the seniors graduating each quarter).

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 in Murphy Hall. There is no diploma fee. Upon request, diplomas are sent to the student by certified mail, with a mailing charge of $3 ($6 abroad).

You will find a full discussion of academic regulations as they relate to your specific program in the section of this catalog entitled "Undergraduate Schools and Colleges."

Graduate Education at UCLA

If you're interested in finding out about the various degree programs in the Graduate Division at UCLA—including the Professional Schools like Law, Medicine, Architecture and Urban Planning and others—you'll need to get a copy of the *UCLA Graduate Catalog*, for sale in the ASUCLA Students' Store in Ackerman Union. Copies may also be ordered by mail from the "Book Mail Out" department in the Students' Store, 308 Westwood Plaza, Los Angeles, CA 90024.



PART IV:

Majors and Courses of Instruction

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

Faculty Roster Symbols

[1]In Residence Summer Session only

[2]In Residence Fall Quarter only

[3]In Residence Winter Quarter only

[4]In Residence Spring Quarter only

[5]On leave Summer Session

[6]On leave Fall Quarter

[7]On leave Winter Quarter

[8]On leave Spring Quarter

[9]On leave Summer Session and Fall Quarter

[10]On leave Fall and Winter Quarters

[11]On leave Fall and Spring Quarters

[12]On leave Winter and Spring Quarters

[13]On leave Spring Quarter and Summer Session

[14]On leave

[15]Recalled to active service

[16]Member of Brain Research Institute

[17]Member of the Institute of Geophysics and Planetary Physics

[18]Joint Appointment

Course Listing Symbols

*[1]Not offered 1982-83

*[2]Given alternate years; not offered 1982-83

*[3]Offered as schedule and staff allow

*[4]Not offered every year

*[5]Given alternate years; offered 1982-83

*[6]Offered Fall 1982 only

*[7]Offered Winter 1983 only

*[8]Offered Spring 1983 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

*[14]Enrollment is limited (consult Undergraduate Office)

*[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

*[19]Not offered Fall 1982

*[20]Not offered Winter 1983

*[21]Not offered Spring 1983

*[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.

(F) Offered Fall Quarter

(W) Offered Winter Quarter

(Sp) Offered Spring Quarter

(Sum) Offered Summer Session

Undergraduate Courses

Undergraduate courses are classified as lower division and upper division. Lower division courses (numbered 1-99) are open to freshmen and sophomores and are also open to upper division students but without upper division credit. Upper division courses (numbered 100-199) are ordinarily open to students who have completed at least one lower division course in the given subject or two years of college work. Courses in the 100 series may be offered in partial satisfaction of the requirements for the master's degree by a student registered in graduate status if taken with the approval of the major department.

Courses numbered 98 and 198 are structured special studies courses for groups. They are not listed in the catalog because they vary in content and are offered irregularly.

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. For information and complete descriptions of all graduate-level courses, please refer to the *UCLA Graduate Catalog.*

Professional Courses

Teacher-training courses (numbered 300-399) are highly specialized courses dealing with methods of teaching and are acceptable toward the bachelor's degree only within the limitations prescribed by the various Colleges or Schools. Please refer to the *UCLA Graduate Catalog* for descriptions of these courses.

University Extension Courses

University of California Extension courses bearing numbers 1-199 (prefixed by X, B, XD, XI, XL, XR, XSB, XSC or XSD) yield credit toward the bachelor's degree. They are rated with respect to the general and specific requirements for the degree on the same basis as courses taken in residence at collegiate institutions of approved standing. Concurrent enrollment in resident courses and in University Extension courses (or courses at another institution) taken with a view to credit toward a degree is permitted only when the entire program has been approved in advance by the Dean of the student's College.

Cross-Listed Courses

Concurrently Scheduled Courses: Concurrent scheduling is defined as pairs of courses (usually within a single department or program) that are offered at the same time and place with the same instructor; credit is given at two levels — usually undergraduate and graduate. Activities and/or standards for performance and evaluation are applied separately for each level.

A capital "C" before the initial number of a course indicates concurrent scheduling.

Multiple-Listed Courses: A capital "M" before the initial number identifies courses (usually of the same level) that are listed in two or more different departments. These courses are taught at the same time and place with the same instructor, but students receive credit from the department or program in which they enrolled.

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, **History 1A-1B-1C, Introduction to Western Civilization,** indicates three full courses, 1A, 1B and 1C, 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 a specific course is dependent upon completion of a subsequent course.

Aerospace Studies

(Office: 251 Dodd Hall)

Kenneth D. Kopke, M.S., *Lt. Colonel, Professor of Aerospace Studies (Chair).*
Edward P. Westemeier, Ph.D., *Major, Assistant Professor of Aerospace Studies.*
John C. Croston, M.B.A., *Captain, Assistant Professor of Aerospace Studies.*
Phillip A. Anderson, M.B.A., *Captain, Assistant Adjunct Professor of Aerospace Studies.*
Mikael S. Beno, M.A., *Captain, Assistant Adjunct Professor of Aerospace Studies.*

Air Force Reserve Officers' Training Corps (Air Force ROTC)

Air Force ROTC provides selected students the opportunity to develop those attributes essential to their progressive advancement to positions of high responsibility as commissioned officers in the U.S. Air Force. This includes understanding Air Force history, doctrine and operating principles, demonstrating ability to apply modern principles of management and human relations in the Air Force environment and mastery of leadership theory and techniques.

Scholarship Program

Scholarships are available to qualified cadets in both the four-year and two-year programs. Scholarships cover full tuition, laboratory expenses, incidental fees, allowances for books and a stipend of $100 per month.

Four-Year Program

The four-year program is open to beginning freshmen. It consists of an initial two-year General Military Course (GMC) described below, followed by a two-year Professional Officer Course (POC) described under "Two-Year Program."

Leadership Laboratory

All Air Force ROTC students must enroll each quarter in the Leadership Laboratory as published in the *UCLA Schedule of Classes.*

Freshman Year

1A-1B-1C. U.S. Military Forces in the Contemporary World (¼ course each). Course 1A is prerequisite to 1B and 1B is prerequisite to 1C. This sequence of courses examines the role of the Air Force in the contemporary world by studying the total force structure, strategic offensive and defensive forces, general purpose forces and aerospace support forces. Capt. Beno

Sophomore Year

20A-20B-20C. The Developmental Growth of Air Power (¼ course each). Lecture-seminar, one hour. Prerequisite: courses 1A-1B-1C. These courses examine the development of air power over the past sixty years. They trace the development of various concepts of employment of air power and focus upon factors which have prompted research and technological change. Key events and elements in the history of air power are stressed, especially where these provide significant examples of the impact of air power on strategic thought. Lt. Col. Kopke

Two-Year Program

The two-year Air Force ROTC program is offered to accommodate those students who have attained at least junior standing and have two years remaining at the University, either as an undergraduate or graduate student. A prerequisite for students entering this program is successful completion of a six-week field training course on an Air Force base during the summer preceding their enrollment in the program.

Students interested in this program must make application to the Professor of Aerospace Studies during the Fall Quarter preceding the six-week summer field training course. Students attending the six-week summer field training are provided meals, quarters and travel expenses and are paid approximately $675. Students enrolled in the POC receive $100 per month retainer fee for 20 consecutive months.

Data concerning physical and age qualifications for flying and navigator training and for nonflying applicants is the same as for the four-year program.

Four-Week Field Training Course

Students who complete GMC and wish to enter POC attend a four-week field training course the summer following GMC completion. At field training, students are provided meals, quarters, clothing and travel expenses and are paid about $450 to cover incidental expenses. Subjects covered at field training include junior officer training, aircraft and aircrew orientation, career orientation, survival training, base functions, Air Force environment and physical training.

Upper Division Courses

130A-130B-130C. Concepts of Air Force Management and Leadership (¼ course each). Lecture-seminar, three hours. Course 130A is prerequisite to 130B and 130B is prerequisite to 130C. This is a three-part course. An analysis of the principles and functions of management, leadership and organizational behavior with special reference to the Air Force as a model. The course includes problem solving, information systems and models, quantitative methods and computer systems. Group discussions, case studies, films and role-playing will be used as teaching devices. Communicative skills will be strengthened through preparation of written reports and oral presentations.

140A. Military Judicial System (¾ course). Seminar, three hours. Prerequisite: course 130C. An introduction to the military justice system, international laws of armed conflict relating to air operations and the foundations of military professionalism. Oral and written reports to strengthen communicative skills are expected. Maj. Westemeier

140B. The Military in American Society (¾ course). Seminar, three hours. Prerequisite: course 140A. Examines forces and issues in the social context of the American military. Analyzes the influence of social norms, societal pressures and cultural factors on the functions and role of the military professional in the United States. Communicative skills are strengthened through extensive classroom presentations. Maj. Westemeier

140C. American Defense Policy (¾ course). Seminar, three hours. Prerequisite: course 140B. Examines U.S. security policy with respect to factors that influence its formulation, the bureaucracy that formulates and implements it, and the forms it has taken and may take in the future. Communication techniques are strengthened, and communication abilities are oriented to Air Force requirements through preparation of papers and classroom presentation

African Area Studies (Interdepartmental)

(Office: 10244 Bunche Hall)

The African Area Studies Program does not offer an undergraduate degree. For detailed information on graduate degrees offered by this program, please refer to the *UCLA Graduate Catalog.*

African Studies (Interdepartmental)

(Office: 10244 Bunche Hall)

Special Program in African Studies

This program is designed primarily for (1) students who plan to live and work in Africa or who are interested in government and public service careers involving African affairs and (2) students who plan to pursue graduate work in one of the social sciences or Near Eastern and African languages with primary concentration on the African field.

The philosophy of the Program in African Studies is that people with a firm grounding in one of the established disciplines can make the best contribution to an understanding of Africa and its problems. Thus, the Special Program in African Studies can be taken only jointly with work toward a bachelor's degree in one of the following fields: anthropology, economics, geography, history, Near Eastern and African languages, political science or sociology. The student completing this special program will receive a degree with a major in a chosen discipline and specialization in African Studies. The Chair of the Committee in Charge will certify completion of the Special Program in African Studies.

Preparation for the Program

The introductory courses listed here in three of the following departments: Anthropology 5 and 6; Economics 1 and 2 or 100; Geography 1 and 3; History 10A and 10B; Linguistics 5; Sociology 1 or 101. Training in Arabic, French, Portuguese or an African language is highly recommended.

Upper Division

Students are required to take a departmental major in the social sciences, or by special arrangement with the Committee Chair, in the

humanities or arts. In addition, they are required to take a course related to Africa in each of four departments, one of which must be African Languages 190. African Languages 190 and one of the other three required upper division courses related to Africa may, however, be replaced by a three-quarter sequence of any African language.

For more information, contact Maxine Driggers, African Studies Center, 10244 Bunche Hall (825-2944) or Professor Christopher Ehret, History, 6265 Bunche Hall (825-4093).

Afro-American Studies (Interdepartmental)

(Office: 3111 Campbell Hall)

Claudia Mitchell-Kernan, Ph.D., *Associate Professor of Anthropology.*
Halford H. Fairchild, Ph.D., *Assistant Professor of Psychology.*
Pierre-Michel Fontaine, Ph.D., *Assistant Professor of Political Science.*
Robert Hill, M.Sc., *Assistant Professor of History.*
Melvin Oliver, Ph.D., *Assistant Professor of Sociology.*
Richard Yarborough, Ph.D., *Assistant Professor of English.*

The major in Afro-American Studies is designed to provide students with a program of courses leading to a Bachelor of Arts degree in Afro-American Studies. The major offers an opportunity to systematically study the origins, experiences and conditions of people of African descent in the United States and elsewhere in the New World.

The fundamental goal of the curriculum is to provide students with a comprehensive and multidisciplinary introduction to the crucial life experiences of Afro-Americans. This goal is achieved in two primary ways. First, it provides majors with an interdisciplinary exposure to particular features of the Afro-American experience. Majors are able to gain a depth of understanding that includes the historical, anthropological, sociological, psychological, economic and political aspects of Afro-America. The curriculum also provides opportunities to study the literary, musical and artistic heritage of peoples of African descent. Second, majors are required to gain expertise in the concepts, theories and methods of a traditional academic discipline. Majors are required to select an area of concentration in one of the following fields: anthropology, economics, English, history, philosophy, political science, psychology and sociology (concentrations in departments not listed must be approved by the program advisor).

The multidisciplinary emphases of the program are its principle feature. These emphases are designed to overcome the limitations attendant to the study of people within a single disciplinary framework. At the same time, the emphasis on the required departmental concentration recognizes the value of acquiring the conceptual and analytical tools of a traditional discipline. This curricular structure ensures students of a well-rounded liberal arts education which combines the acquisition of academic skills useful for continuing education in graduate and professional schools and practical skills useful in the world of work.

In order to accomplish the program's goals, students should plan their course work in close consultation with the major's faculty advisor. Upon entering the major, four lower division and six upper division courses must be taken within the chosen department (in some cases, the required lower division courses are in related departments). Two additional upper division courses must be taken in departments outside of the student's field of concentration. Finally, Afro-American Studies majors are required to complete two seminars, a junior seminar (Afro-American Studies M100A) and a senior colloquium (Afro-American Studies M197) offered by the program. The content of these latter two courses may vary between sections and may be repeated for credit.

Preparation for the Major

History 10A and four lower division courses in any one concentration: *anthropology:* Anthropology 1, 2, 5, 6; *economics:* Economics 1, 2, 4, Mathematics 3A; *English:* English, 3, 4, Linguistics 1, 2; *history:* History 6A-6B-6C, 10B; *philosophy:* Philosophy 4, 5B, 6, 22; *political science:* Political Science 1, 6, Sociology 1, Economics 1; *psychology:* Psychology 10, 41, Biology 2, Anthropology 11 (students may substitute Mathematics 50A or Economics 40 for Psychology 41, although Psychology 41 is recommended); *sociology:* Sociology 1, Linguistics 1, Anthropology 5, Sociology 18 (students may substitute Mathematics 50A, Psychology 41, Economics 40 or Public Health 100A for Sociology 18, although Sociology 18 is recommended). Students concentrating in psychology or sociology are strongly urged to complete the required lower division quantitative course at the earliest possible moment.

The Major

(1) Anthropology M164, History 158B-158C; (2) two upper division electives outside the department of concentration selected from the approved list of courses (see item 4 below); (3) two seminars offered by the Afro-American Studies Program (Afro-American Studies M100A and M197); (4) six upper division electives within the department of concentration from the following list of approved courses (recommended courses are in bold): Anthropology 122, 124, 125A, 125B, 134, 135P, **135Q**, 138, 150, **151, 152, 153A, 153B**, 158, **M164, 166, 167**, 171, 186, **199**; Economics **101A, 101B, 102**, 103, **106, 110**, 112, 120, **121**, 130, 150, 160, **180**, 183, 190, 191, **199**; English **104**, 118, 120A, 120B, 120C, **123**, 136A, 136B, 136C, 140A, **190, M197, 199**; History 107A, 107B, 109A, 109B, 135A, 135B, **145A, 145B, 146A, 146B, 154A, 154B, 158A, 158B, 158A, 158B, 158C, 158D, 158E, 175A, 175B**, 175C, 176A, 176B, 178A, 178B, **199**; Philosophy **104**, 126A, 126B, **126C**, 129, **150**, 153A, **190, 199**; Political Science **104A, 104B, 110, 114A, 114B, 116, M140, 142, 147, 165, 166A, 166B, 166C**, 167, M169A, 170, 182A, 182B, **188B**, 191, **199**; Psychology **100, 110, 115, 120, 125, 127**, 133B, M138, **139, 175, 176**, 177, **195, 199**; Sociology **109, 112, 113, 114**, 115, **120**, 122, **124, 125, 130**, 136, 140, 142, M143, 145, 146, **147**, 150, **151**, 152, 153, 154, **155**, 157, 160, 161, 162, **199**. The student may petition the Committee which administers the degree program to include in the major area a course not on the approved list.

Honors Option

An Honors Option is also available. Students participating in this option are required to complete an independent research paper or project. Normally, this paper or project would receive three quarters of credit and would be undertaken with the guidance of a faculty member.

Double Major Option

Some students elect to complete the requirements for two majors (Afro-American Studies and another). Students interested in this option should seek counseling at the earliest possible moment.

For further information, contact Professor Halford Fairchild, Afro-American Studies, 3111 Campbell Hall (825-7403, 825-2961).

Upper Division Courses

M100A. Special Studies in Comparative Government. (Same as Political Science M169A-M169Z.) Intensive examination of one or more special problems appropriate to comparative government. Sections will be offered on a regular basis with topics announced in the preceding quarter.

100B. Psychology from an Afro-American Perspective. A survey of psychological literature relevant to Afro-Americans. Contributions of Afro-American psychologists are emphasized. Topics include the history of psychology, testing and intelligence, the family, personality and motivation, racism and race relations, education, community and the future of Afro-American psychology. Mr. Fairchild

145. Ellingtonia. The course will explore the music of Duke Ellington, his life and the far-reaching influence of his efforts. Ellington's music, known as "Ellingtonia," is one of the largest and perhaps most important bodies of music ever produced in the United States. The course will also cover the many contributions of other artists who worked with Ellington, such as composer Billy Strayhorn and musicians Johnny Hodges, Cooties Williams and Mercer Ellington. Mr. Burrell

M164. The Afro-American Experience in the United States. (Same as Anthropology M164.) This course aims to promote understanding of contemporary sociocultural forms among Afro-Americans in the United States by presenting a comparative and diachronic perspective on the Afro-American experience in the New World. We will be concerned with the utilization of anthropological concepts and methods in understanding the origins and maintenance of particular patterns of adaptation among Black Americans. Ms. Mitchell-Kernan

M172. The Afro-American Woman in the U.S. (Same as Psychology M172 and Women's Studies M172.) Prerequisite: upper division standing. This course will focus on the impact of the social, psychological, political and economic forces which impact upon the interpersonal relationships of Afro-American women, as members of a large society and as members of their biological and ethnic group.
Ms. Mays

M197. Topics in Afro-American Literature. (Formerly numbered M197A.) (Same as English M197.) A variable specialized studies course in Afro-American literature. Topics include the Harlem Renaissance; Afro-American Literature in the Nadir: 1890-1914; Contemporary Afro-American Fiction.
Mr. Yarborough

197B. Special Studies in Comparative Literature: Caribbean Literature. A general introduction to the literature of the English-speaking Caribbean by reviewing its historical and geographical background. To analyze the historical process towards self-determination in the literature, the following topics will be given major concern: (1) alienation and the search for community, (2) "external" relationships (the ancestor, the kinsman, the other) and (3) form and language.

Graduate Courses

For complete descriptions of graduate-level courses offered by this program, please consult the *UCLA Graduate Catalog.*

Anatomy

(Office: 73-235 Center for Health Sciences)

The Department of Anatomy does not offer an undergraduate degree. The following upper division courses are offered with enrollment restrictions as indicated:

Upper Division Courses

101. Microscopic Anatomy (2 courses). Four three-hour sessions per week in 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 (½ course, 2 courses). One hour of lecture and four of lab per week in Winter Quarter; four hours of lecture and twelve of lab in Spring. Prerequisite: enrollment in School of Dentistry or consent of instructor. Course 102A is prerequisite to 102B. 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. Systemic and topographical human anatomy with dissection of the human cadaver. Emphasis on head and neck.
Mr. Harper and the Staff

103A-103B. Basic Neurology (¼ course, ¾ course). Two four-hour sessions and one three-hour session per week in the last three weeks of Winter Quarter; two two-hour sessions and two three-hour sessions per week in Spring Quarter. Prerequisite: Medical School status or consent of instructor. Lectures, conferences, demonstrations and laboratory procedures necessary for an understanding of the functions of the human nervous system. In Progress grading. Must be taken concurrently with Physiology 103A-103B.
Mr. Schlag and the Staff

104. Mammalian Histology (1½ courses). Three three-hour sessions per week in Fall Quarter. Prerequisite: enrollment in School of Dentistry or consent of instructor. Lectures, demonstrations and laboratories dealing with the structural organization of tissues and organs at the microscopic level.
Mr. Campbell and the Staff

105A-105B. Gross Anatomy (2 courses, 1 course). Four four-hour sessions per week in Fall Quarter; one three-hour, one four-hour and one five-hour session per week in Winter Quarter (first seven weeks). Prerequisite: enrollment in School of Medicine or consent of instructor. Offered on an In Progress basis. Lectures and dissection of the human body.
Mr. Sawyer and the Staff

106. Mammalian Neurology. One one-hour session and one four-hour session per week in Winter Quarter. Prerequisite: enrollment in School of Dentistry or consent of instructor. Lectures, demonstrations and laboratories dealing with the fundamental structure and functional organization of the nervous system.
Mr. Kruger and the Staff

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Medical History Division

Upper Division Courses

107A-107B. Historical Development of Medical Sciences. Three hours per week in Winter and Spring Quarters. The major contributions of medicine and medical personalities from earliest times. **107A** concerns the contributions of medicine and medical personalities from earliest times through 1650; **107B** deals with the subject in the period from 1650 through the 19th century. Illustrated lectures, class discussion and required readings from selected texts.
Mr. Agnew, Ms. O'Neill

M108A-M108B. History of Biological Sciences. (Same as History M195F-M195G.) Three hours per week in Fall and Winter Quarters. Prerequisite: upper division standing. **M108A:** Biological sciences from ancient times to the early nineteenth century. **M108B:** Biological sciences from the early nineteenth century to the mid-twentieth century.
Mr. Frank

110. Medicine and Society in 20th-Century America. Three hours per week in Spring Quarter. Prerequisite: consent of instructor. Preference given to health sciences students. Reading and conference course on social aspects of the growth of medical care, education and research in the United States since the late nineteenth century.
Mr. Frank

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Anesthesiology

(Office: 56-125 Center for Health Sciences)

The Department of Anesthesiology does not offer an undergraduate degree. For detailed information on graduate degrees offered by this department, please refer to the *UCLA Graduate Catalog.*

Anthropology

(Office: 341 Haines Hall)

Christopher Donnan, Ph.D., *Professor of Anthropology.*
Walter R. Goldschmidt, Ph.D., *Professor of Anthropology.*
Peter 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).*
Clement W. Meighan, Ph.D., *Professor of Anthropology.*
Michael Moerman, Ph.D., *Professor of Anthropology.*
Henry B. Nicholson, Ph.D., *Professor of Anthropology.*
Wendell H. Oswalt, Ph.D., *Professor of Anthropology.*
James R. Sackett, Ph.D., *Professor of Anthropology.*
Johannes Wilbert, Ph.D., *Professor of Anthropology.*
Bobby J. Williams, Ph.D., *Professor of Anthropology.*
Ralph L. Beals, Ph.D., *Emeritus Professor of Anthropology.*
Joseph B. Birdsell, Ph.D., *Emeritus Professor of Anthropology.*
Hilda Kuper, 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 Read, Ph.D., *Associate Professor of Anthropology.*
Jennie Joe, Ph.D., *Assistant Professor of Anthropology.*
Gail E. Kennedy, Ph.D., *Assistant Professor of Anthropology.*
Paul Kroskrity, Ph.D., *Assistant Professor of Anthropology.*
Nancy E. Levine, Ph.D., *Assistant Professor of Anthropology.*
Eugene L. Mendonsa, Ph.D., *Assistant Professor of Anthropology.*
Robert J. Russell, 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. Velez-I., Ph.D., *Assistant Professor of Anthropology.*

•

C. Rainer Berger, Ph.D., *Professor of Anthropology, Geography and Geophysics.*
William O. Bright, Ph.D., *Professor of Linguistics and Anthropology.*
Pamela J. Brink, 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.*
Nicholas Blurton Jones, Ph.D., *Professor of Anthropology and Education.*
John G. Kennedy, Ph.D., *Professor of Psychiatry and Anthropology.*
L.L. Langness, Ph.D., *Professor of Anthropology and Psychiatry.*
Donald Lindburg, Ph.D., *Adjunct Associate Professor of Anthropology.*
Larry Mai, Ph.D., *Adjunct Assistant Professor of Anthropology and Surgery Orthopedics.*
Merrick Posnansky, Ph.D., *Professor of History and Anthropology.*

Douglas Price-Williams, Ph.D., *Professor of Anthropology and Psychiatry.*
Gerardo Reichel-Dolmatoff, Ph.D., *Adjunct Professor of Anthropology.*
Susan Scrimshaw, Ph.D., *Associate Professor of Anthropology and Public Health.*
Hiroshi Wagatsuma, Ph.D., *Adjunct Professor of Anthropology.*
Thomas S. Weisner, Ph.D., *Associate Professor of Anthropology and Psychiatry.*

Anthropology as a Major

Anthropology is today classed as a social science, but its roots are in both the biological sciences and humanistic studies. It still constitutes a bridge linking these three areas of knowledge, and the department has strong ties with other disciplines ranging from anatomy and genetics to linguistics and classics. An understanding of the department offerings must take cognizance of this special characteristic of the subject.

A major in Anthropology is particularly valuable for students planning careers in which an understanding of human behavior and cultural diversity is necessary or desirable. This is obviously the case for persons engaged in international relationships (whether in the public or private sector) and for people who intend to engage in the helping professions, such as medicine, public health, nursing, law, education and social welfare. Because of its breadth of outlook, anthropology also offers an ideal basis for a student seeking a general education in our ever shrinking and increasingly interdependent world.

The department recognizes five fields in anthropology: Archaeology, Biological Anthropology, Cultural Anthropology, Linguistic Anthropology and Social Anthropology. Faculty members tend to specialize in one field, though several teach courses in two. A brief description of these five fields is provided below:

Archaeology is the study of cultures of the past, where knowledge of their characteristics is obtained primarily from material evidence left in the ground, supplemented in some cases by historical and inscriptional records. Courses in this field illuminate the nature and content of diverse past cultures, their ecological adaptations and historical development. Other courses examine the methodology of scientific archaeology, including proper means of excavation, laboratory analysis, dating techniques (including obsidian dating which has been largely developed at UCLA) and methods of analysis. The archaeology program offers two core courses: one focusing on the history of human culture and the other on methodology.

Biological Anthropology is the general study of the diversity of the physical characteristics of the human animal and the biological characteristics underlying human behavior. The faculty in this field specializes in one of four subfields: (a) primatology or the study of the physical and behavioral characteristics of monkeys and apes; (b) paleoanthropology, the study of fossil hominids and the evolution of man; (c) human genetics which examine genetic diversity in modern populations throughout the world; and (d) evolutionary ecology of human and nonhuman primates.

Cultural Anthropology is the investigation of the perceptions, attitudes and behavioral characteristics of peoples as they are found throughout the world, and as these attitudes and behaviors are established by tradition and transmitted from generation to generation. Courses in cultural anthropology fall into three categories: psychological anthropology, aesthetic anthropology and the study of ideational systems including religious beliefs and mythologies, philosophical concepts, world views, and art and technologies.

Linguistic Anthropology examines the diversity of natural languages and their relationship to the cultural knowledge of their speakers and to processes of communication in their associated speech communities.

Social Anthropology directs its attention to the structure of the social order and the institutionalized patterns of human collaboration. It examines the diverse forces of family and kinship, governance and political systems, law and the resolution of conflict, economic collaboration, social status and role, and those aspects of religion which serve to reinforce institutional behavior. The distinction between cultural anthropology and social anthropology is a conceptual one and there is necessarily much overlap, but essentially the former directs attention to the perception and sentiments of individuals as they are acquired in the process of growing up within a community, while the latter directs its attention to social interaction systems. The former ties more closely to psychology and the humanities; the latter to sociology and the other social sciences.

Three other categories of course offerings are recognized by the department; the courses are not limited to one field:

Regional Cultures includes courses which describe the contemporary peoples, cultures and civilizations of major areas of the world as they were found at the time of discovery and as they exist today.

The Anthropology of Social Action includes those courses that direct attention to the anthropological understanding of diverse matters pertaining to the modern world. These courses should sensitize students to programs of action on issues and programs of change in some felt problem area, and enable them to predict the social outcome of innovations. The following topics are included: development in Third World countries, health issues, ethnic relations and the role of women in society.

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

Advising

Students majoring in Anthropology are expected to contact the departmental student counseling offices in order to be assigned a faculty advisor at the time they declare their major, but at any rate not later than the first quarter of their senior year. The breadth of anthropological interests makes it possible and necessary for students to formulate a program of studies appropriate to their special interests, and this can best be achieved through regular consultation with the faculty advisor. Faculty advisors are responsible for guiding students in their final years as Anthropology majors by examining the students' record and directing them to those courses necessary for completion of the major, while assisting each student in developing a program suited to his or her special interest within the regulations of the department and the University.

Preparation for the Majors

Required: Anthropology 1 (formerly 1A), 2 (formerly 1B), 5 (formerly 5A), 6 (formerly 5C). All courses taken in preparation for the major must be taken on a letter grade basis.

The Majors

The Department of Anthropology offers a choice between two undergraduate majors:

(1) General major

(2) Preprofessional major

In order that students majoring in Anthropology may have a comprehensive understanding of the disciplines as a whole, each must take at least one course in each of the five fields. One core course is offered in each field (archaeology offers a choice of two), but the student may take any course to fulfill this requirement if the prerequisites have been met. Students taking either major must also meet the requirements of the University and the College of Letters and Science for graduation.

The General Major in Anthropology is designed for students interested in an anthropological understanding of human behavior who have plans to use such knowledge in pursuit of personal goals or professional goals other than those of anthropologists. Students taking the General major must complete fourteen (4-unit) upper division courses on a letter grade basis as follows:

(1) One course in each of the five fields: Archaeology, Biological Anthropology, Cultural Anthropology, Linguistic Anthropology and Social Anthropology

(2) One course in the category of Regional Cultures

(3) Four additional upper division courses in anthropology

(4) Four upper division courses in related fields drawn from a list maintained in the department

The Preprofessional Major is designed primarily for students planning to make a career

in anthropology and is expected of students entering the graduate program in anthropology at UCLA. Students taking the Preprofessional major must complete a total of sixteen (4-unit) upper division courses on a letter grade basis. The requirements for this major are specifically distributed as follows:

(1) One course in each of the five fields: Archaeology, Biological Anthropology, Cultural Anthropology, Linguistic Anthropology and Social Anthropology

(2) One course in the category of Regional Cultures

(3) Two courses in the category of History and Theory

(4) One course in statistics (may be taken at either the lower or upper division levels) drawn from a list maintained in the department

(5) Three or four additional upper division courses in anthropology

(6) Three or four upper division courses in related fields drawn from a list maintained in the department

(7) Competence in a foreign language (see below)

Foreign Language

For the Preprofessional major the department requires demonstration of proficiency in one foreign language to insure that its graduates have the communication skills and cultural insights offered by such proficiency. Any spoken language or any extinct language with a substantial body of literature is acceptable. Proficiency is equated with the skill level attained through course five in a language. Specifically, this requirement may be met in one of two ways: (1) by completion of the fifth quarter of one foreign language or (2) by a demonstration of foreign language proficiency at level 5. Courses taken to satisfy the foreign language requirements may be taken on Passed/Not Passed basis and may be applied toward satisfaction of the College of Letters and Science breadth requirements in the humanities. For additional information, consult the departmental counselor.

Other Relevant Information

The Undergraduate Student Association is important to the departmental program and organization. Through this association students have the opportunity to take a direct part in departmental administration and to select speakers and programs. Undergraduate students are encouraged to acquaint themselves with this organization and with the departmental library, museum study collections, reading room, typing room and the Archaeological Survey.

Lower Division Courses

Note: Students cannot receive credit for both Anthropology 2 and 11.

1. The Principles of Human Evolution: Genetic Basis. (Formerly numbered 1A.) Lecture, three hours; discussion, one hour. Students cannot receive credit for both courses 1 and 2 (formerly numbered 1B) and 11. Human population biology in the conceptual framework of evolutionary processes. Course 1 emphasizes the genetic basis of evolution, population biology and diversity among living populations. This course is required as preparation for the major.

2. The Principles of Human Evolution: Comparative Analysis. (Formerly numbered 1B.) Lecture, three hours; discussion, one hour. Students cannot receive credit for both courses 1 (formerly numbered 1A) and 2 and 11. Human population biology in the conceptual framework of evolutionary processes. Course 2 emphasizes comparative primate behavior, structural anatomy and the fossil record. This course is required as preparation for the major.

5. Principles of Cultural Anthropology. (Formerly numbered 5A.) Lecture, three hours; discussion, one hour. Students cannot receive credit for both courses 5 and 22. The character of culture and nature of social behavior as developed through anthropological study of contemporary peoples. This course is required as preparation for the major.

6. Culture History. (Formerly numbered 5C.) Lecture, three hours; discussion, one hour. The development of culture from its first beginnings to the advent of writing as developed through archaeological investigation. This course is required as preparation for the major.

11. The Evolution of Man. Lecture, three hours; discussion, one hour. Students cannot receive credit for course 11 and both courses 1 (formerly numbered 1A) and 2 (formerly numbered 1B). This course does not satisfy major requirements. A one-quarter course on the evolution of man. Emphasis is on evolutionary processes and the evolutionary past of the human species.

22. General Cultural Anthropology. Lecture, three hours; discussion, one hour. Students cannot receive credit for both courses 22 and 5 (formerly numbered 5A). An introduction to the cultural understanding of human behavior designed for students who do not plan further work in anthropology. Stress is placed on those concepts and theories that are applicable to the everyday life and professional activities in the modern world. Examples of institutions and individual behavior of modern America are counterpointed against studies of primitive life.

33. Culture and Communication. Lecture, three hours. This course examines the role of culture in structuring how people communicate with one another and emphasizes the importance of language as a symbolic guide to one's culture. Topics to be treated include cultural differences in verbal and nonverbal behavior, imagined and actual differences in male and female speech, language and education, verbal style and interactional strategy, language taboos, and the sociocultural factors which promote and retard language change. The course thus emphasizes patterns of language use rather than details of language structure. Mr. Kroskrity, Ms. Mitchell-Kernan

*Upper Division Courses

Courses 1 and 2 (formerly 1A and 1B), 5 (formerly 5A), 6 (formerly 5C) or upper division standing are prerequisite to all upper division courses, except as otherwise stated. All upper division courses with letter designations (A, B, P, Q, etc) may be taken independently except as otherwise stated.

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

ARCHAEOLOGY

110. World Archaeology. (Formerly numbered 123.) Prerequisite: upper division standing or consent of instructor. A broad survey of human culture history from its Stone Age beginnings down to the establishment of the primary civilizations of the Old and New Worlds. Intended for students with a general interest in archaeology and in an anthropological approach to the study of the past. (Alternate CORE COURSE for Archaeology.) Mr. Sackett

111. The Study of Archaeology. A survey of contemporary prehistoric archaeology. Emphasis is on what archaeologists do, and how and why they do it. Contributions of archaeology to the modern world are also examined. Intended for students with a desire to explore the nature of anthropological archaeology. (Alternate CORE COURSE for Archaeology.) Mr. Hill

112. Old Stone Age Archaeology. (Formerly numbered 109.) Prerequisite: course 6 (formerly numbered 5C) or consent of instructor. The development of Paleolithic cultural traditions in Europe, Africa, Asia and the New World. Emphasizing the ordering and interpretation of archaeologial data, Pleistocene geology and chronology, and the relationship between human cultural and biological evolution. Mr. Sackett

113P. Archaeology of North America. (Formerly numbered 106D.) Prerequisite: course 5 (formerly numbered 5A), 6 (formerly numbered 5C) or 22 or consent of instructor. Prehistory of the North American Indians; the evolution of Indian societies from earliest times to (and including) contemporary Indians; approaches and methods of American archaeology. Mr. Meighan

113Q. The Prehistory of California Indian Cultures. (Formerly numbered 106B.) Examination of the California archaeological record from earliest human evidence to historic times, with emphasis on the development of cultural diversity. Mr. Meighan

113R. Southwestern Archaeology. An examination of the prehistory of the American Southwest from Early Man to historic times. Emphasis is on describing and explaining cultural variation and change, employing an ecological and evolutionary perspective. The "Great Events" (agriculture, town living and the Great Abandonment) are given special attention. Evolutionary processes are generalized and related to contemporary world problems. Mr. Hill

114P. Ancient Civilizations of Western Middle America (Nahuatl Sphere). (Formerly numbered 123C.) Pre-Hispanic and Conquest period native cultures of Western Middle America as revealed by archaeology and early colonial writings in Spanish and Indian languages. Toltec-Aztec and Mixteca civilizations and their predecessors, with emphasis on sociopolitical systems, economic patterns, religion, and esthetic and intellectual achievements. Mr. Nicholson

114Q. Ancient Civilizations of Eastern Middle America (Maya Sphere). (Formerly numbered 123D.) Pre-Hispanic and Conquest period native cultures of eastern Middle America as revealed by archaeology and early colonial writings in Spanish and Indian languages. Lowland and Highland Maya civilizations and their predecessors with emphasis on sociopolitical systems, economic patterns, religion, and esthetic and intellectual achievements. Mr. Nicholson

114R. Ancient Civilizations of Andean South America. (Formerly numbered 123E.) Prerequisite: course 5 (formerly numbered 5A), 6 (formerly numbered 5C) or 22. Pre-Hispanic and Conquest period native cultures of Andean South America as revealed by archaeology and early Spanish writing. The Inca and their predecessors in Peru, with emphasis on sociopolitical systems, economic patterns, religion, and esthetic and intellectual achievements. Mr. Donnan

115P. Archaeological Field Training. (Formerly numbered 170A.) Prerequisite: consent of instructor. Procedures of archaeological excavation, mapping, stratigraphy, collecting and recording of archaeological data. This is a field class conducted off campus. Mr. Dillon

115Q. Archaeological Research Techniques. (Formerly numbered 175B.) Prerequisite: course 6 (formerly numbered 5C) or consent of instructor. An introduction to the techniques of discovery and analysis that archaeologists have found useful in research. Special attention is given to sampling, typology and locational analysis. Techniques for the measurement of such important variables as population size, diet, seasonality, specialization and exchange are also considered. Mr. Hill

115R. Strategy of Archaeology. (Formerly numbered 175A.) Prerequisite: course 6 (formerly numbered 5C) or consent of instructor. An introduction to problem formulation, theory and method in archaeology, with emphasis on the development of research designs. The focus is on how archaeological research is conceived and planned, with consideration of differing viewpoints and their usefulness. Mr. Hill

M115S. Historical Archaeology. (Same as History M103.) A survey of the aims and methods of Historical Archaeology, as practiced on both sides of the Atlantic, with case studies drawn from North America, the Caribbean, Africa and Europe. Mr. Posnansky

116P. Laboratory Analysis in Archaeology. (Formerly numbered 175E.) Prerequisite: consent of instructor. Description and classification of archaeological collections: cataloging, typology, documentation. Preparation of archaeological reports for publication. Mr. Meighan

M116Q. Dating Techniques in Environmental Sciences and Archaeology. (Formerly numbered M175C.) (Same as Geography M178.) Prerequisite: consent of instructor. Introduction to scientific dating methods such as radiocarbon dating, radiation damage methods, biological dating techniques and magnetic dating, and applications in environmental sciences, archaeology and physical anthropology. Mr. Berger

116A. Museum Studies. (Formerly numbered 178A.) Prerequisite: consent of instructor. Method and theory of museum operation. Acquisition accession, storage, photography, conservation and exhibition are discussed and demonstrated. Museum research, publication and teaching as well as museum administration and funding are analyzed. Lectures and demonstrations are structured to illustrate how the various aspects of museum operation are interrelated. Mr. Donnan and the Museum Staff

116B. Museum Studies. (Formerly numbered 178B.) Prerequisites: course 116A (formerly numbered 178A) and consent of instructor. Two areas of museum operation are selected by the students from those discussed and demonstrated in course 116A (formerly numbered 178A). The student is then required to develop expertise in these areas through a combination of library research and a series of assignments carried out in the museum. Mr. Donnan and the Museum Staff

119. Archaeology of Southern California: Field Studies. Saturday field class, 8-5. This course is designed primarily for nonmajors and is a survey of Southern California archaeology from the Historical or Mission Period back to the hotly disputed time of "Early Man." Classroom lectures will be combined with weekly field study trips to archaeological sites in the greater Los Angeles area, with the aim of exposing students to primary archaeological evidence in a variety of contexts. P/NP only. Mr. Dillon

BIOLOGICAL ANTHROPOLOGY

120. Survey of Biological Anthropology. Prerequisites: courses 1 (formerly 1A) and 2 (formerly 1B) or equivalent. Restricted to majors and graduate students in Anthropology. A survey of biological anthropology including all major subareas. A lecture/seminar format requires attendance at a recitation section in addition to lectures. (CORE COURSE for Biological.) Mr. Williams

***121A. Fossil Man and His Culture.** (Formerly numbered 111A.) Prerequisites: courses 1 (formerly numbered 1A), 2 (formerly numbered 1B) recommended; course 121A also recommended before 121B and 121C. They are not required. Introduction to method and theory in paleoanthropology. Primate evolution, Cretaceous through the Miocene. Ms. Kennedy

***121B. The Australopithecines.** (Formerly numbered 111B.) Prerequisites: courses 1 (formerly numbered 1A), 2 (formerly numbered 1B), 121A (formerly numbered 111A) recommended. Consent of instructor required. The morphology, ecology and behavior of the genus *Australopithecus*. The history of their discoveries and their place in human evolution will also be discussed. Ms. Kennedy

***121C. Evolution of the Genus Homo.** (Formerly numbered 111C.) Prerequisites: courses 1 (formerly numbered 1A), 2 (formerly numbered 1B), 121A (formerly numbered 111A), 121B (formerly numbered 111B) recommended. Consent of instructor required. The origin and evolution of the genus *Homo*, including archaic sapiens and the neanderthals. The morphology, ecology and behavior of these groups will be included. The course will end with the appearance of modern man. Ms. Kennedy

122. Biology, Society and Culture. (Formerly numbered 134.) Prerequisite: course 2 (formerly numbered 1B). An investigation of the interaction between human biology and human behavior. Particularly emphasized are the influences of human biological evolution on human cultural evolution and human cultural evolution on human biological evolution.

123. Human Genetics. Prerequisite: course 1 (formerly numbered 1A) recommended. This course includes discussion of the nature and causes of human biological variation. Evolutionary models of genetic and phenotypic changes will be developed and compared. Geographical and cultural contributions to the development of observed patterns of human biological variation are emphasized.

124. Evolution and Biology of Human Behavior. (Formerly numbered 131.) A comparative survey of the behavior patterns of preliterate and Paleolithic peoples and those of nonhuman primates. The biological variables fundamental to human and prehuman behavior will be assessed with regard to theories on the evolution of human culture.

***125A-125B. The Genetics of Human Diversity.** (Formerly numbered 130A-130B.) Course 125A or its equivalent is prerequisite to 125B. A survey of human biological diversity. Emphasis is on genetics at the population level for both discrete and quantitative variation. Analytic methods and evolutionary hypotheses are considered.

126P. Anatomy for the Humanities: Mind, Body and Behavior. A discussion of the structure and workings of the human machine for students with little or no knowledge of biology. Human form and function will be taught from an evolutionary and developmental perspective, illustrated with relevant examples of behavior and disfunction (disease). Mr. Russell

***127P. Primate Evolution.** (Formerly numbered 135A.) Prerequisite: upper division standing. A survey of the primate paleontological and evolutionary record, encompassing prosimians, New and Old World monkeys and hominoids. Attendant aspects of paleoecology and behavior will be discussed. Mr. Russell

***127Q. Introduction to Primate Anatomy (1½ courses).** (Formerly numbered 135B.) Course 127P (formerly numbered 135A) is desirable but not required. Lecture, two hours; laboratory, four hours. Lab: anatomical terms and principles of dissection of a nonhuman primate cadaver and with the study of osteological material. Lecture: introduce basic developmental anatomy; the evolution of gross structure; allometry, morphological and psychological scaling; and the morphological correlates of posture, locomotion and diet. Mr. Russell

***127R. Introduction to the Comparative Morphology and Physiology of Primates (1½ courses).** (Formerly numbered 135C.) Courses 127P, 127Q (formerly numbered 135A, 135B) are desirable but not required. Lecture, two hours; laboratory, four hours. This series will cover the functional, evolutionary and taxonomic studies of primate anatomy and physiology. Lecture: compare functional systems (e.g., locomotion) through the primate series. Lab: students will dissect regions of several unrelated specimens and perform their own comparative analysis. Mr. Russell

128A-128B. Primate Behavior Nonhuman to Human (2 courses). (Formerly numbered 133A-133B.) Prerequisite: upper division standing. Course 128A (formerly numbered 133A) is prerequisite to 128B (formerly numbered 133B). Review of primate behavior as known from laboratory and field studies. Stresses theoretical issues and the evolution of causal processes, structure and function of animal behavior with special reference to nonhuman primates. Human behavior will be discussed as the product of such evolutionary processes. This course is offered on an In Progress basis. Credit is given only after completion of the full 2-quarter sequence. Ms. Cheney-Seyfarth, Mr. Seyfarth

***129P. Laboratory Methods in Biological Anthropology: Skeletal.** (Formerly numbered 171A.) Prerequisites: courses 1 (formerly numbered 1A) and 2 (formerly numbered 1B), restricted to majors and graduate students, consent of instructor. Laboratory methodology and analysis of human variation on skeletal material.

***129Q. Laboratory Methods in Biological Anthropology: Living Populations.** (Formerly numbered 171B.) Prerequisites: courses 1 (formerly numbered 1A) and 2 (formerly numbered 1B), restricted to majors and graduate students, consent of instructor. Laboratory methodology and analysis of human variation in living populations.

***129R. Laboratory Methods in Biological Anthropology: Biochemistry.** (Formerly numbered 171C.) Prerequisites: courses 1 (formerly numbered 1A) and 2 (formerly numbered 1B), restricted to majors and graduate students, consent of instructor. Laboratory methodology and analysis of human variation involving biochemical methods.

CULTURAL ANTHROPOLOGY

130. The Study of Culture. This course will focus on the 20th-century elaboration and development of the concept of culture from the Boasian period to the present, thereby surveying the major schools of anthropological thought such as historical particularism, psychological anthropology, functionalism, cultural materialism, structuralism and symbolic anthropology. It will also examine the utility of the culture concept in more applied areas of anthropology. (CORE COURSE for Cultural.)

131. American Culture. Prerequisite: upper division standing. An examination of American life in historical and contemporary terms with special reference to the individual life cycle. The goal is to offer a systematic analysis of American culture and society in a cross-cultural perspective. Mr. Oswalt

132. Technology and Environment. (Formerly numbered 122C.) Significance of material culture in archaeology and ethnology; problems of invention and the acceptance of innovations; the ecological and sociological concomitants of technological systems; selected problems in material culture.

133P. Social and Psychological Aspects of Myth and Ritual. (Formerly numbered 141.) This course is aimed at understanding the social and psychological significance of myth, ritual and symbolism with particular attention given to anthropological theories and interpretations of religious belief systems. Ms. Levine, Mr. Mendonsa

133Q. Symbolic Systems. (Formerly numbered 138.) Prerequisite: upper division standing or consent of instructor. An analysis of the anthropological research and theory on the cultural systems of thought, behavior and communication expressed in a symbolic mode (as distinguished from the discursive, instrumental and causal modes). Methods for the study of symbolic meaning, including the experiential approach. Mr. Maquet

133R. Aesthetic Anthropology. (Formerly numbered 144.) Prerequisite: upper division standing. Elaboration of a cross-cultural notion of visual aesthetic phenomena that meets the requirements of anthropological research. Aesthetic phenomena as cultural; their integration in a cultural system; their relationships with other elements in the interplay of social forces. Mr. Maquet

134. Personality and Cultural Systems: Enculturation. (Formerly numbered 148.) Prerequisite: upper division standing or consent of instructor. The course examines the relationship between individual and culture by focusing on enculturative learning as modality of personality forms and internal dynamics of culture change. Major emphasis on cultural influences of cognition, perception, thought processes, socialization and development of value. Mr. Wilbert

135P. Introduction to Psychocultural Studies. Prerequisite: upper division standing or consent of instructor. A survey of the history and development of psychocultural studies. Topics are examined as they relate to the cross-cultural study of such things as personality, pathology and deviance, fantasy, altered states of consciousness, cognition, perception, motivation and other similar phenomena.

135Q. The Individual in Culture. (Formerly numbered 143.) Prerequisite: upper division anthropology, sociology or psychology students. The course considers the balance for freedom and determinism for individuals and societies in the interrelation of personality, social structure and culture. It surveys the nature and limits of human plasticity; the variability and uniformity of personality within and between cultures; the relation of normal and abnormal conformity and deviance.

135R. Comparative Study of Socialization. (Formerly numbered 142.) Introduction to ethnographic data on socialization and child training. Theories explaining cross-cultural variability in socialization practices. Current methods and research topics in the field.

136P. Ethnology: Field Training. (Formerly numbered 170B.) Training in ethnographic field methods. Execution of individual and group ethnographic field research projects.

M136Q. A Laboratory for Naturalistic Observations: Developing Skills and Techniques. (Formerly numbered M176.) (Same as Psychiatry M112 and Psychology M155.) 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. Group and individual projects will be included. Some of the uses of observations and their implications for research in the social sciences will also be discussed. Mr. Gallimore, Mr. Levine, Mr. Turner

137. Ethnography on Film. (Formerly numbered 179.) Intensive examination of filmed and written ethnographies of a wide range of the world's peoples with the purposes of (a) comparing visual with written data and evidences and (b) developing criteria for adequate written and film ethnography. Mr. Moerman

138. Methods and Techniques of Ethnohistory. (Formerly numbered 172.) Introduction to the problems and procedures of extracting cultural data from documentary sources and their interpretation and analysis. The relevant documentary sources of various New World regions will be selected as case histories to illustrate more concretely the problems and challenges in this major area of anthropological concern. Mr. Nicholson

LINGUISTIC ANTHROPOLOGY

M140. Language in Culture. (Formerly numbered M146.) (Same as Linguistics M146.) Prerequisite: upper division standing or consent of instructor. The study of language as an aspect of culture; the relation of habitual thought and behavior to language; and language and the classification of experience. The course offers a holistic approach to the study of language and emphasizes the relationship of Linguistic Anthropology to the fields of Biological, Cultural and Social Anthropology, as well as Archaeology. (CORE COURSE for Linguistics.) Mr. Kroskrity

141. The Ethnography of Communication: Introduction and Practicum. (Formerly numbered 180.) Prerequisite: upper division standing or consent of instructor. The course has two interrelated objectives: (1) to introduce students to the ethnography of communication—the description and analysis of situated communicative behavior — and the sociocultural knowledge which it reflects and (2) to train students to recognize, describe and analyze the relevant linguistic, proxemic and kinesic aspects of face to face interaction. Mr. Kroskrity

142A-142B. Human Social Ethology. (Formerly numbered 149A-149B.) Prerequisite: consent of instructor. A two-quarter course. First quarter strongly recommended before taking second. Students will make primary records (sound tape, videotape or film) of naturally occurring social interactions. These will be analyzed in class for the interactive tasks, resources and accomplishments displayed. The course requires laboratory and field work outside of class and minimal fees to offset costs of equipment maintenance and insurance. Mr. Moerman

143A. Field Methods in Linguistic Anthropology: Practical Phonetics. (Formerly numbered 177A.) Practice in elicitation from informants for the purposes of analysis of phonological systems and development of practical transcription, as a preliminary to learning to speak the native language and to the recording of ethnographic materials in native language. No previous experience in linguistics is assumed. Mr. Kroskrity

143B. Field Methods in Linguistic Anthropology: Syntax, Semantics, Textual Cohesion. (Formerly numbered 177B.) Prerequisite: course 143A (formerly numbered 177A), equivalent experience or consent of instructor. This course attempts to supply students with the skills and strategies necessary for conducting investigations into the syntactic, semantic and textual (or discourse) structures of field languages. Practice with native speakers of various non-Indo-European languages is an important aspect of student participation. Mr. Kroskrity

144. American Indian Ethnolinguistics and Sociolinguistics. Prerequisite: previous course work in either anthropology, linguistics or American Indian studies. The course provides an introduction and comparative analysis of the sociocultural aspects of language use in Native North American Indian speech communities. Specific foci include both micro- and macro-sociolinguistic topics. Micro-sociolinguistic topics are comprised of such issues as multilingualism, cultural differences regarding appropriate communicative behavior and variation within speech communities (e.g., male and female speech, baby talk, ceremonial speech, etc.). Macro-sociolinguistic considerations include language contact and its relationship to language change and language in American Indian education. Mr. Kroskrity

C145. Afro-American Sociolinguistics: Black English. Prerequisite: consent of instructor. This course aims to provide basic information on Black American English, an important minority dialect in the United States. The social implications of minority dialects will be examined from the perspectives of their genesis, maintenance and social functions. General problems and issues in the fields of sociolinguistics will be examined through a case study approach. Concurrently scheduled with course CM243Q. Ms. Mitchell-Kernan

SOCIAL ANTHROPOLOGY

150. Comparative Society. (Formerly numbered 122A.) Prerequisite: course 5 (formerly numbered 5A) or 6 (formerly numbered 5C) or Sociology 1 or consent of instructor. The general principles of the organization of society; the relation of these to the technological complexity and ecological conditions of the culture; the principles of evolutionary development of social systems. (CORE COURSE for Social.) Mr. Goldschmidt

151. Marriage, Family and Kinship. Prerequisite: course 5 (formerly numbered 5A) or 22. A survey of marital patterns, descent and family structure in a range of societies. The emphases are on the relationship between kinship and other aspects of the sociocultural system and on the importance of kinship for general anthropological research. Ms. Levine

152. Traditional Political Systems. Prerequisite: course 150 (formerly numbered 122A) or Sociology 101 or consent of instructor. Political organization in preindustrial societies of varying degrees of complexity. Law and the maintenance of order; corporate groups; ideology. The relations of political to other institutions of society. Ms. Levine, Mr. Mendonsa

153A-153B. Production and Exchange in Traditional Societies. A review of economic and ecological approaches to studying organization of production and exchange. Economic life is viewed from three perspectives: adaptation, decision making and social structure. Comparative theories are discussed in the content of ethnographic evidence from a wide variety of cultural systems. **153A:** Nonstratified Societies; **153B:** Stratified Societies. Mr. Earle, Mr. Johnson

154. Principles of Social Structure. (Formerly numbered 150B.) Prerequisites: course 5 (formerly numbered 5A) or 22 or Sociology 1 or 101 and upper division standing in anthropology or sociology. This course will focus on the methods and theory which derive from Emile Durkheim in France and Radcliffe-Brown in England. It also discusses the variety of approaches and concerns in social anthropology. Ethnographic material will be used to illustrate the methods and concepts used by social anthropologists. Mr. Mendonsa

155. Illness in Non-Western Societies. Prerequisites: course 5 (formerly numbered 5A) or 22 or Sociology 1 or 101 and upper division standing or consent of instructor. An analysis of the cultural modes of thought and social structures associated with illness in non-western societies. The emphasis will be upon the social roles involved in the diagnosis and curing. Mr. Mendonsa

156. Comparative Religion. (Formerly numbered 140.) A survey of various methodologies in the comparative study of religious ideologies and action systems. These include the understanding of particular religions through descriptive and structural approaches, and the identification of social and psychological factors which may account for variation in religious systems cross-culturally. Mr. Newman

157. Intentional Communities. Prerequisite: upper division standing or consent of instructor. Communes and monasteries, ashram and kibbutz are voluntarily joined societal units, offering complete life styles perceived as alternatives to the mainstream cultures and stressing the affective involvement of the members. Questions such as the following will be discussed in a comparative perspective: institutional goals stated in the community's "charter"; system of acquisition or production; internal organization; ideational configurations; individual experience; sociological and psychological functions; criteria of success and failure; subculture and counterculture. Mr. Maquet

158. Hunting and Gathering Societies. (Formerly numbered 112.) Prerequisite: course 5 (formerly numbered 5A). A survey will be made of hunting and gathering societies. Their distinctive features will be examined from both an ecological and cultural viewpoint. The possibility of developing a general framework for synthesizing these two viewpoints will be discussed. This synthesis will be used as a basis for illustrating the relevance of hunting and gathering societies as an understanding of complex societies. Mr. Read

THE ANTHROPOLOGY OF SOCIAL ACTION

161. Development Anthropology. Prerequisites: course 5 (formerly numbered 5A) and upper division standing or consent of instructor. Comparative study of the peasantization of tribal peoples, the proletarization of peasants and the urbanization of ruralities. Particular emphasis on the relation between national and international, and localized sociocultural systems; the theory of social movements. Alternative theoretical constructs will be critically discussed. Mr. Mendonsa

162. Contemporary American Indian Problems. Contemporary problems of the American Indian both on and off the reservation. Topics will include self-determination, land claims, activism, urban Indians and role of the Bureau of Indian Affairs.

M163. Women in Culture and Society. (Formerly numbered 163.) (Same as Women's Studies M163.) Prerequisite: course 5 (formerly numbered 5A) or 22. A systematic approach to the study of sex roles from an anthropological perspective. A critical review of relevant theoretical issues supported by ethnographic material from traditional cultures and contemporary American culture. Ms. Levine

M164. The Afro-American Experience in the United States. (Same as Afro-American Studies M164.) This course aims to promote understanding of contemporary sociocultural forms among Afro-Americans in the United States by presenting a comparative and diachronic perspective on the Afro-American experience in the New World. We will be concerned with the utilization of anthropological concepts and methods in understanding the origins and maintenance of particular patterns of adaptation among Black Americans. Ms. Mitchell-Kernan

165. Demographic Problems in Nonindustrial Societies. Prerequisite: course 5 (formerly numbered 5A) or 22. The course examines the dynamic interaction between environment, cultural belief, social structure and population in hunting and gathering, pastoral, horticultural and agricultural societies. The principle theories of population change and current issues in population policy are considered in light of the anthropological evidence. Ms. Levine

166. Comparative Minority Relations. (Formerly numbered 139.) Prerequisites: courses 5 (formerly numbered 5A) and 6 (formerly numbered 5C). Comparative study of minority relations, social discrimination and prejudice. The emphasis will be both on cross-cultural perspectives and on psycho-cultural analysis. The cases will be taken from the U.S., Latin America, India and other areas. The factors responsible for discrimination and the cultural-psychological consequences of class, caste or minority status of the individuals will be discussed. Mr. Velez-I.

167. Urban Anthropology. (Formerly numbered 169.) Prerequisite: open to upper division majors in social sciences, and others by consent of instructor. A survey of urbanization throughout the world, with emphasis on urban adaptation of rural migrants. Special focus on the problems of rural-urban migration of ethnic minority groups and subsequent adaptation of them within the United States explored in terms of the methods and perspectives of anthropology. Mr. Velez-I.

M168. Health in Culture and Society. (Formerly numbered M158.) (Same as Nursing M158.) Prerequisite: upper division standing. An examination of the theories and methods of medical anthropology in relation to cross-cultural health systems, role networks, attitude and belief systems of the participants. Emphasis will be placed upon interaction networks in health care systems. Ms. Brink

REGIONAL CULTURES

Africa

171. Civilization of Sub-Saharan Africa. (Formerly numbered 113.) Prerequisite: upper division standing or consent of instructor. A comprehensive overview of the sociocultural world of Sub-Saharan Africa. This world is interpreted as a broad cultural unit with its specific African configurations, and as a plurality of civilizations, each based on a particular association of an environment (dry savanna, grassland, equatorial forest, highlands) with a dominant technique of acquisition/production (hunting/gathering, cereals growing, cattle herding, commercial crops, industry). Mr. Maquet, Mr. Mendonsa

North America

172P. North American Indian Cultures. (Formerly numbered 106C.) An examination of American Indian cultures from early historic time to modern development. Mr. Oswalt

172Q. Cultures of the California Indians. (Formerly numbered 106A.) An examination of the cultural diversity of the Indians of California: their technology, social organization and religions. Mr. Meighan

172R. Cultures of the Pueblo Southwest. (Formerly numbered 106H.) Prerequisite: one of the following: Anthropology 5 (formerly numbered 5A), 6 (formerly numbered 5C), 22, upper division standing or consent of instructor. A survey of ethnographic and ethnohistorical research of the Pueblo Indians — Hopi, Zuni, Tanoan and Keresan — and their immediate neighbors. This course provides basic information on the history, languages, social organization and traditional cultural systems of these groups. Mr. Kroskrity

172S. Theory and Method in the Pueblo Southwest. (Formerly numbered 106I.) Prerequisite: course 172R (formerly numbered 106H) or consent of instructor. This course focuses on selected problems in southwestern ethnology, viewing the pueblo southwest as an important locus for anthropological theory and method. Such theories as Early Culture and Personality theory, functionalism and symbolic anthropology are explored in their application to the Pueblos and the Navajo. Methodological considerations include the use of life histories, the problem of objectivity and the use of native languages as field tools. Mr. Kroskrity

172T. Ethnohistory of Hispanic Cultures in the U.S. Southwest. (Formerly numbered 106G.) Prerequisite: course 5 (formerly numbered 5A) or 22 or consent of instructor. An ethnography of the social and cultural adaptations of the Hispanic Peoples in the U.S. Southwest: their respective social organization, economic and political institutions, sacred and secular belief systems and expressive cultures. Mr. Velez-I.

172U. Eskimos. (Formerly numbered 106F.) Prerequisite: upper division standing. This is a survey on historical, ethnographic and contemporary Eskimo life stressing their importance in anthropological theory and practice. Particular emphasis is placed in Eskimo origins, technology and modern administration. Mr. Oswalt

Middle America

173P. Cultures of Middle America. (Formerly numbered 105B.) An introduction to the social and cultural anthropology of Middle America, with an emphasis on indigenous communities. Aspects of economics, society, politics and religion are reviewed in light of their historical development and current distribution.

173Q. Latin American Communities. (Formerly numbered 105C.) An overview of the social and cultural anthropology of small communities in Latin America. Similarities and contrasts in social organization and interpersonal relations are described in the context of economic, political and cultural environments. Mr. Johnson

South America

174P. Ethnography of South American Indians. (Formerly numbered 105A.) Introduction to the ethnography of South American Indians with special emphasis on Lowland South America. The course surveys the history and development of man and society in this world area and examines exemplary cultures symptomatic of the various levels of cultural achievement. Mr. Wilbert

174Q. Ethnology of South American Indians. Prerequisite: course 174P (formerly numbered 105A) or consent of instructor. Introduction to the ethnology of South American Indians with special emphasis on Lowland South America. The course details the methods and theories applied to the study of man and culture on the subcontinent, including biological anthropology, linguistics and sociocultural anthropology. Mr. Wilbert

Asia

175P. Civilizations and Cultures of Southeast Asia. (Formerly numbered 103B.) An introduction to the understanding and appreciation of the peoples, cultures and societies of The Philippines, Indonesia, Malaysia, Thailand, Burma, Laos, Cambodia and Vietnam seen against their historical and ecological backgrounds. Slides and other media will be used along with texts, lectures and discussion. Mr. Moerman

175Q. Civilizations of South Asia. (Formerly numbered 103A.) Examination of the civilizations of Sri Lanka, India, Pakistan, Bangladesh and the Himalayan states. Ideational systems, social institutions and techniques of production will be discussed in the framework of a few contemporary civilizations, each focused on a major religious tradition (Hinduism, Buddhism and Islam). Ms. Levine, Mr. Maquet

175R. Civilizations of Inner Asia. (Formerly numbered 103E.) The course will provide an overview of culture and society among the diverse peoples of Inner Asia, including Mongolia, Tibet and Soviet Central Asia. Topics to be covered include: environment and economic adaptation, politics in traditional isolation and within the framework of recent national integration, kinship, forms of marriage and the status of women, religion and the social order in Hindu-Buddhist culture contact zone and current problems of modernization. Ms. Levine

175S. Japan. (Formerly numbered 103C.) Prerequisite: course 22. An overview of contemporary Japanese society. General introduction; kinship; marriage and family life; social mobility and education; norms and values; religions; patterns of interpersonal relations; social deviance.

Middle East

176. Cultures of the Middle East. (Formerly numbered 110.) Prerequisite: course 5 (formerly numbered 5A) or consent of instructor. This course will delineate the area of "Arab Peoples" through an examination of their historical background, their language and their belief system. It will attempt to uncover the structural principles shared by the Arab people of North Africa and Southwest Asia which underlie Arab culture.

Pacific

177. Cultures of the Pacific. (Formerly numbered 108.) This course covers the four major culture areas of Australia, Melanesia, Polynesia and Micronesia. General geographical features, prehistory and language distribution of the whole region are discussed. Distinctive sociocultural features of each culture area are presented in the context of their adaptive significance. Mr. Newman

HISTORY AND THEORY

182. The History of Anthropology. (Formerly numbered 182A-182B.) A brief survey of the development of Western social science, particularly anthropology, from Greek and Roman thought to the emergence of evolutionary theory and the concept of culture in the late 19th century. The course will examine the "root paradigm" of Western social science and examine its influence on such notables as Durkheim, Freud, Hall, Lombroso, Marx, Piaget, Terman and others. It will in turn consider how this influences Ethnocentrism and Eurocentrism, sexism, racism, the perception of deviance, and our view of culture in general.
Mr. Langness

183. History of Archaeology. Prerequisite: at least one upper division course in archaeology or consent of instructor. The development of world archaeology from the Renaissance to the present. Particular care is taken to show how each of the major branches of archaeology has evolved a special character determined by the peculiarities of its own data, methods and intellectual affiliation. Mr. Sackett

184. History of Human Evolutionary Theory. The men, the events and the spirit of the time which mark man's attempts to understand his origins and diversity. Mr. Williams

185. History of Social Anthropology. (Formerly numbered 150A.) Prerequisites: course 5 (formerly numbered 5A) or 22 or Sociology 1 or 101 and upper division standing in anthropology or sociology. A systematic survey of the development of social anthropology in France and Britain from the Enlightenment to the present. Reviews major early concepts of French sociology and British structuralist-functionalism and current concerns in social theory.
Mr. Mendonsa

186A-186B. Quantitative Methods and Models in Anthropology. (Formerly numbered 173A-173B.) Prerequisite: upper division standing. This two-quarter course is designed to provide an introduction to quantitative methods of data analysis and the modeling of sociocultural systems. **186A** (formerly numbered 173A) will emphasize methods of data analysis and cover topics such as data description, sampling, estimation procedures and hypothesis testing. **186B** (formerly numbered 173B) will cover topics from statistical modeling (e.g., linear regression models) and deterministic modeling (e.g., network models, kinship structures, systems, models). Mr. Read

187. Theory and Method in Sociocultural Anthropology. Prerequisite: at least eight units of upper division social and cultural anthropology. A review of the major theoretical orientations in sociocultural anthropology with special emphasis on the research methods that have been found most useful in each. The relevance of philosophy of science to sociocultural anthropology is examined, and theoretical and methodological links to other social sciences are identified. Mr. Johnson

SPECIAL STUDIES

191. Writing for Anthropology. (Formerly numbered 181.) Prerequisite: course 5 (formerly numbered 5A). Students learn writing skills in various academic forms including term papers, essay examinations, journal articles and reports. Class projects require student writing and evaluation of professional writing. Stress is placed on the organization and presentation of a scholarly argument. Mr. Earle

199. Special Studies in Anthropology (¼ to 2 courses). Prerequisite: consent of instructor. Two courses of 199 may be applied to the upper division anthropology courses required for the major.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Applied Linguistics (Interdepartmental)

(Office: 3306 Rolfe Hall)

The Applied Linguistics Program does not offer an undergraduate degree. For detailed information on graduate degrees offered by this program, please refer to the *UCLA Graduate Catalog.*

Archaeology (Interdepartmental)

(Office: 288 Kinsey Hall)

An interdepartmental committee administers graduate degree programs leading to the M.A. and Ph.D. in Archaeology, in addition to the individual departmental programs in which archaeological specialization is possible. There is no undergraduate program in archaeology leading to a B.A. degree. However, qualified undergraduates may enroll in courses offered by the program provided they receive consent of the instructor. A course taken by an undergraduate may not be applied subsequently to the fulfillment of any graduate degree.

For detailed information on graduate degrees offered by this program, please refer to the *UCLA Graduate Catalog* or contact the office at 825-4169.

Architecture and Urban Planning

(Office: 1317 Architecture)

The Graduate School of Architecture and Urban Planning does not offer an undergraduate degree. The following upper division courses are offered with enrollment restrictions as indicated:

Upper Division 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 new towns. Lectures (with illustrated examples), field visits and presentation of the students' own projects create the fram3work for expanding our understanding of the urban planning and design process.
Mr. Kamnitzer

189. Pre-Modern and Post-Modern Architecture. Consideration of nineteenth-century revivalism and the response of architects to a growing historical awareness. Issues of eclecticism within the Beaux Arts and Art Nouveau movements will be studied. These same themes will be reconsidered in terms of the Post-Modern era. Mr. Jencks

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-made to the natural environment. The students are encouraged to comprehend the major urban issues both as citizens and as potential technical experts. Mr. Perloff

191. Modern Architecture. A brief examination of the tenets of Western Architecture after the Renaissance, the accelerating eclecticism of the nineteenth century, the basis of the revolutionary movements of the twentieth century in Germany, Holland, Austria, Italy, France, Russia and the United States, and the subsequent extension and rejection of those movements after World War II. Though the "International Style" is the central figure of this drama; its ancestors occupy the stage as well.

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.

M195. Engineering and Environmental Geology. (Same as Earth and Space Sciences M139.) Prerequisite: Earth and Space Sciences 1 or 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. Merifield (F)

M196. Geomorphology. (Same as Geography M102.) Lecture, three hours; reading period, one hour. Prerequisite: Geography 1 or equivalent or junior standing or consent of instructor. A study of the processes responsible for shaping the world's landforms with emphasis on the relationship between the energy and materials involved and the magnitude and organization of the surface forms produced.
Mr. Orme

197. Planning for Minority Communities. 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 Alternatives Inner City Future Exercise, (2) each student is expected to identify the value assumptions and theories of social justice implicit or explicit in alternative intervention programs, and (3) each student is expected to participate in class discussions which emphasize minority issues which affect implementation. Mr. Estrada

199. Special Studies. Independent study. Prerequisite: consent of instructor. Independent research or investigation on a selected topic to be arranged with a faculty member. May be repeated for credit.

Graduate Courses

For complete descriptions of graduate-level courses offered by this School, please consult the *UCLA Graduate Catalog.*

Art, Design and Art History

(Office: 1300 Dickson Art Center)

Samuel Amato, B.F.A., *Professor of Art.*
Albert Boime, Ph.D., *Professor of Art.*
William J. Brice, *Professor of Art.*
Raymond B. Brown, M.A., *Professor of Art.*
Jack B. Carter, M.A., *Professor of Art.*
Susan B. Downey, Ph.D., *Professor of Art.*
Elliot J. Elgart, M.F.A., *Professor of Art.*
Robert F. Heinecken, 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 Pedretti, M.A., *Professor of Art.*
Jan Stussy, M.F.A., *Professor of Art.*
Otto-Karl Werckmeister, Ph.D., *Professor of Art.*
Laura F. Andreson, M.A., *Emeritus Professor of Art.*
Alexander Badawy, B.Arch., D.I.A., Ph.D., *Emeritus Professor of Art.*
Karl M. Birkmeyer, Ph.D., *Emeritus Professor of Art.*
E. Maurice Bloch, Ph.D., *Emeritus Professor of Art.*
Archine V. Fetty, M.A., *Emeritus Professor of Art.*
Lester D. Longman, Ph.D., L.H.D., D.F.A., *Emeritus Professor of Art.*
Katharina Otto-Dorn, Ph.D., *Emeritus Professor of Art.*
Josephine P. Reps, *Emeritus Professor of Art.*
Frederick S. Wight, M.A., *Emeritus Professor of Art.*
Mitsuru Kataoka, M.A., *Associate Professor of Art.*
Cecelia F. Klein, Ph.D., *Associate Professor of Art.*
David M. Kunzle, Ph.D., *Associate Professor of Art.*
Donald F. McCallum, Ph.D., *Associate Professor of Art.*
Arnold Rubin, Ph.D., *Associate Professor of Art.*
Adrian Saxe, B.F.A., *Associate Professor of Art.*
Nathan Shapira, Dottore in Architettura, *Associate Professor of Art.*
James W. Bassler, 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.*
Deborah Klimburg-Salter, Ph.D., *Assistant Professor of Art.*
Richard C. Marquis, M.A., *Assistant Professor of Art.*
Alice E. McCloskey, M.A., *Assistant Professor of Art.*
Martin J. Powers, Ph.D., *Assistant Professor of Art.*
Madeleine Sunkees, B.Ed., *Emeritus Assistant Professor of Art.*

•

Donald Roberts, *Lecturer in Art.*
Jean Weisz, M.A., *Lecturer in Art.*

Note: Information in this section is subject to change.

It is recommended that each student majoring in Art have each quarter's program approved by a departmental advisor.

The departmental major offered in the College of Fine Arts leads to the degree of Bachelor of Arts with the opportunity to specialize in one of three areas: (1) Art History, (2) Art and (3) Design.

Preparation for the Major

Art History: Courses 50, 51, 54, 55, 56, 57.

Art: Courses 5A, 5B, 5C, 15, 21, 22 and one course selected from 50, 51, 54, 55, 56, 57.

Design: Courses 30A, 30B, 31A, 31B, 32A, 32B, four courses selected from 33A, 33B, 33C, 33D, 33E, 33F and one course selected from 50, 51, 54, 55, 56, 57.

The Major

Art History (12 courses of upper division art history required):

(A) A total of nine courses from the following nine areas (at least three courses in one area for the concentration, at least one course each in four of the remaining areas and two additional courses from any of the nine areas):

(1) 101A, 101B, 101C, 102
(2) 103A, 103B, 103C, 103D, 103E
(3) 104B, 104C, 104D
(4) 105A, 105B, 105C, 105D, 105E
(5) 106A, 106B, 106C, 108A, 108B, 109A, 109B, 109C, 109D, 120A, 121A
(6) 110A, 110B, 110C, 110D, 110E, 120B, 120C, 121B
(7) 112A, 112B, 112C
(8) 114A, 114B, 114C, 114D, 115A, 115B, 115C
(9) 117A, 117B, 117C, 118A, 118B, 118C, 118D, 119A, 119B

(B) Three courses of art history electives which may include Classics 151B, 151C, 151D, Art 125, 197, 199 (design or studio courses do not apply as electives).

In addition to the 12 courses (48 units) of upper division art history, three upper division courses from other departments related to the area of concentration are to be selected in consultation with a faculty advisor.

(C) Two quarters of one foreign language or the equivalent. The language should be in relation to the concentration area and is in addition to the foreign language which is part of the general College requirements.

Art: A minimum of 14 upper division courses selected in consultation with an art advisor, including one course each in courses 130, 133, 137, 140, 145, 147, 148 and 149, one course selected from 101-122 and five courses of art electives.

Design: A minimum of 12 upper division courses selected in consultation with an advisor, including eight courses from 161A-172B and four courses of art electives.

Note: Check the Schedule of Classes for courses restricted to majors only.

Lower Division Courses

Art courses are supervised by the following faculty, augmented by visiting staff: Amato, Brice, Elgart, Mullican, Nunes and Stussy.

5A. Introduction to Art. Studio, eight hours; five hours arranged. Selected creative work in fine arts related to historical and contemporary issues; selected from media such as drawing, painting, sculpture, printmaking, photography, and new forms and concepts (performance, video, nonobject art).

5B. Introduction to Art. Studio, eight hours; five hours arranged. Prerequisite: course 5A. Continuation of course 5A.

5C. Introduction to Art. Studio, eight hours; five hours arranged. Prerequisites: courses 5A, 5B. Continuation of courses 5A, 5B.

15. Intermediate Art. Studio, eight hours; five hours arranged. Prerequisites: courses 5A, 5B, 5C. Continuation of courses 5A, 5B, 5C with increased emphasis on individual creative development.

21. Analysis and Criticism. Discussion, four hours. Prerequisites: courses 5A, 5B, 5C, 15. Analysis and criticism of individual creative work and ideas.

22. Art and Artists/History and Theory. Lecture/discussion, three hours. Discussion and analysis of artists and art, historical and contemporary.

30A. Nature of Design. Lecture, three hours; discussion, one hour. Understanding the design process with emphasis on development of a visual language; a study of historic, scientific, technological, economic and cultural factors influencing design in our physical environment. Open to nonmajors; not open for credit to students with credit for former course 30A.
Mr. Goulds

30B. Design Resources. Lecture/discussion, three hours. Prerequisite: course 30A. Investigation of resources for creativity as an introduction to research.

31A. Fundamentals of Design: Color. Lecture, two hours; laboratory, four hours. Exploration of color in theory and practice. Development and articulation of sensory concepts. May be taken concurrently with course 32A. Mr. Vasa in charge

31B. Fundamentals of Design: Form. Lecture, two hours; laboratory, four hours. Interrelation of three dimensional form concepts as a foundation for creativity; origination and solution of problems. May be taken concurrently with course 32B.
Mr. Vasa in charge

32A. Perceptual Drawing. Demonstration, discussion and laboratory, eight hours. Translation of perception through delineation, drawing and other descriptive media. May be taken concurrently with course 31A. Not open for credit to students with credit for former course 32A. Mr. Vasa in charge

32B. Visual Presentation. Demonstration, discussion and laboratory, eight hours. Prerequisite: course 32A. Translation of perception through delineation, drawing and other descriptive media. May be taken concurrently with course 31B. Mr. Vasa in charge

33A. Materials and Processes: Ceramics (½ course). Demonstration, discussion and laboratory, four hours. Introduction to processes and media in design. Forming and processing techniques in traditional and contemporary ceramics. May be repeated once. Mr. Saxe in charge

33B. Materials and Processes: Visual Representation (½ course). Demonstration, discussion and laboratory, four hours. Introduction to processes and media in design. Use of drafting instruments. Measuring and construction methods. Orthographic and isometric projection. Information analysis and visualization necessary to support the design task. May be repeated once.

33C. Materials and Processes: Graphic Processes (½ course). Demonstration, discussion and laboratory, four hours. Introduction to processes and media in design. Photography as a means of depicting and recording design concepts. Introduction to photomechanical techniques and photographic generation of images; introduction to graphic presentation production. May be repeated once.
Mr. Neuhart in charge

33D. Materials and Processes: Production Processes (½ course). Demonstration, discussion and laboratory, four hours. Introduction to media and processes in design. Introduction to the use of industrial technology. Processes covering the methods of production and handforming. Emphasis on finishing with industrial materials and systems including plastics, metal, woods, cardboards and other materials. May be repeated once. Mr. Shapira in charge

33E. Materials and Processes: Glass (½ course). Demonstration, discussion and laboratory, four hours. Introduction to media and processes in design. Forming and processing techniques in traditional and contemporary glass. May be repeated once.
Mr. Marquis in charge

33F. Materials and Processes: Textiles (½ course). Demonstration, discussion and laboratory, four hours. Introduction to media and processes in design. Fundamental methods of textile structure and design. May be repeated once. Mr. Kester in charge

34A-34B. History of Design. *Lecture, three hours;* discussion, one hour. Course 34A is prerequisite to 34B. Analysis of significant concepts of form in relation to social, technological and historical developments. Not open for credit to students with credit for course 154A or 154B respectively.

50. Ancient Art. Lecture, three hours; quiz, one hour. Open to freshmen and to students who do not have credit for former course 1A or 100A. Prehistoric, Egyptian, Mesopotamian, Aegean, Greek, Hellenistic and Roman art and architecture. Ms. Downey

51. Medieval Art. Lecture, three hours; quiz, one hour. Open to freshmen and students who do not have credit for former course 1B or 100B. Early Christian, Byzantine, Islamic, Carolingian, Ottomian, Romanesque and Gothic art and architecture.
Ms. Kalavrezou-Maxeiner, Mr. Werckmeister

54. Modern Art. Lecture, three hours; quiz, one hour. Open to freshmen and students who do not have credit for former course 1C or 100C. Art and architecture from 1800 to the present in Europe and the United States. Mr. Boime, Mr. Kunzle

55. Africa, Oceania and Native America. Lecture, three hours; quiz, one hour. Comparative approach, emphasizing economic, cultural and historical aspects of selected artistic traditions which developed outside the spheres of influence of the major European and Asiatic civilizations. Ms. Klein, Mr. Rubin

56. Asian Art. Lecture, three hours; discussion, one hour. A survey of the major artistic monuments of the Indo-Iranian, Southeast and Central Asian and the East Asian cultures, concentrating upon formal and iconographical problems, as well as the social and political conditions under which artworks were patronized and produced.
Ms. Klimburg-Salter, Mr. Powers

57. Renaissance and Baroque Art. Lecture, three hours; discussion, one hour. History of art and architecture in Western Europe from 1400 to 1750. Not open for credit to students with credit for former courses 52 *and* 53. Ms. Weisz

Upper Division Courses

HISTORY AND THEORY OF ART

101A. Egyptian Art and Archaeology. Lecture, three hours. A study of architecture, sculpture, painting and minor arts during the predynastic period and Old Kingdom.

101B. Egyptian Art and Archaeology. Lecture, three hours. A study of architecture, sculpture, painting and minor arts during the First Intermediate Period, Middle Kingdom and Second Intermediate Period.

101C. Egyptian Art and Archaeology. Lecture, three hours. A study of architecture, sculpture, painting and minor arts during the Empire (or New Kingdom).

102. Art of the Ancient Near East. (Formerly numbered 101D.) A study of architecture, sculpture, painting and minor arts in Mesopotamia, Asia Minor, North Syria, Phoenicia, Palestine, Persia and Cyprus from the origins to the 5th century B.C. Not open to students with credit for former course 101D.

103A. Greek Art. Lecture, three hours. Prerequisite: course 50. A survey of the art and architecture of Greece from the archaic period through the 5th century B.C. Ms. Downey

103B. Hellenistic Art. Lecture, three hours. Prerequisites: courses 50, 103A. The art and architecture of the Greek world from the fourth century through the first century B.C., including the transmittal of Greek art forms to the Roman world. Ms. Downey

103C. Roman Art. Lecture, three hours. Prerequisite: course 50. The art and architecture of Rome and its Empire from ca. 300 B.C. to A.D. 300. Ms. Downey

103D. Etruscan Art. Lecture, three hours. Prerequisite: course 50. The arts of the Italic peninsula from ca. 1000 B.C. to the end of the Roman Republic.
Ms. Downey

103E. Late Roman Art. Lecture, three hours. Prerequisites: courses 50, 103C. The art of the Roman Empire from the second through the fourth centuries A.D.
Ms. Downey, Ms. Kalavrezou-Maxeiner

104B-104C-104D. Architecture and the Minor Arts of Islam in the Middle Ages. Lecture, three hours. Prerequisites: course 104B for 104C; course 104C for 104D.

105A. Early Christian Art. Lecture, three hours. Prerequisite: course 51 or consent of instructor. The origins and development of the architecture, sculpture and painting of early Christianity to the Iconoclastic controversy. Not open to students with credit for former course 105A. Ms. Kalavrezou-Maxeiner

105B. Early Medieval Art. Lecture, three hours. Prerequisite: course 51 or consent of instructor. Art and architecture of Western Europe from the Migration period until 1000 A.D. Mr. Werckmeister

105C. Romanesque Art. Prerequisite: course 51. Art and architecture of Western Europe in the 11th and 12th centuries. Mr. Werckmeister

105D. Gothic Art. Lecture, three hours. Prerequisite: course 51. Art and architecture of Europe in the 13th century. Mr. Werckmeister

105E. Byzantine Art. Lecture, three hours. Prerequisite: course 51 or consent of instructor. The theory and development of Byzantine Art from the Iconoclastic controversy to 1453, and the diffusion of Byzantine Art in Armenia, Georgia, the Caucasus and Russia. Not open to students with credit for course 105A prior to Spring 1972.
Ms. Kalavrezou-Maxeiner

106A. Italian Art of the Trecento. Lecture, three hours. Prerequisite: course 57 or consent of instructor. Art and architecture of the 14th century.

106B. Italian Art of the Quattrocento. Lecture, three hours. Prerequisite: course 57. Art and architecture of the 15th century. Mr. Pedretti, Ms. Weisz

106C. Italian Art of the Cinquecento. Lecture; three hours. Prerequisite: course 57. Art and architecture of the 16th century. Mr. Pedretti, Ms. Weisz

108A. Northern Renaissance Art. Lecture, three hours. Prerequisite: course 57. Painting and Sculpture in the Northern Renaissance.

108B. Northern Renaissance Art. Lecture, three hours. Prerequisite: course 108A. Painting and Sculpture in the Northern Renaissance.

109A. Baroque Art. Lecture, three hours. Prerequisite: course 57. Art and architecture of Italy and Spain, 16th to late 17th century.
Mr. Pedretti, Ms. Weisz

109B. Baroque Art. Lecture, three hours. Prerequisite: course 109A. Art and architecture of Northern Europe, 16th to late 17th century. Mr. Kunzle

109C. European Art of the 18th Century. Lecture, three hours. Prerequisite: course 57. Painting, architecture and sculpture of the 18th century will be examined in the light of political and intellectual developments. Special emphasis will be given to the effect of the rise of democratic institutions, especially the French Revolution. Mr. Kunzle

109D. Art and Architecture of Georgian England. Lecture, three hours.

110A. European Art of the 19th Century. Lecture, three hours. Prerequisite: course 54. Neoclassicism and Romanticism, with emphasis upon France — the development and influence of David, Ingres and Delacroix. Mr. Kunzle

110B. European Art of the 19th Century: Realism and Impressionism. Lecture, three hours. Prerequisite: course 54. An inquiry into the problem of realism with emphasis on French Art, but including developments in England and Germany. Mr. Kunzle

110C. European Art of the 19th and 20th Century: Post Impressionism to Surrealism. Lecture, three hours. Prerequisite: course 54. A study of the major developments in Modern Art, 1880's-1930, including Seurat, Cezanne, Gauguin, Van Gogh, Art Nouveau, Fauvism, German Expressionism.
Mr. Boime, Mr. Kunzle

110D. Contemporary Art. Lecture, three hours. Prerequisite: course 54. European and American art since World War II. Mr. Kunzle

110E. Political Perspectives on Contemporary Art (Post World War II). Prerequisite: course 54. Includes vanguard painting in the U.S. (Picasso, Abstract Expressionism and Pop Art, etc.), and the popular media of posters, comic strips and murals, all of which will be analyzed according to the dominant values under capitalism: alienation, consumerism, racism, imperialism and sexism. Antidotal emphasis on protest art and women's art in the U.S., and the art of the socialist cultures of Cuba since 1959 and Chile, 1970-73. Mr. Kunzle

112A. American Art. Lecture, three hours. Architecture in the United States from the Colonial period to the 19th century.

112B. American Art. Lecture, three hours. Painting and sculpture in the United States from the Colonial period to the 19th century.

112C. American Art. Lecture, three hours. Art and architecture in the United States in the 20th century.

114A. The Early Art of India. Lecture, three hours. Not open to freshmen. Survey of Indian Art from the Indus Valley cultures to the 10th century. Emphasis will be given to the Buddhist and Hindu backgrounds of the arts. Ms. Klimburg-Salter

114B. Chinese Art. Lecture, three hours. Not open to freshmen. Survey of the arts of China from the Neolithic times to the 18th century. The various arts will be related to the developing historical background of the country. Mr. Powers

114C. Japanese Art. Lecture, three hours. Not open to freshmen. Japanese art from its beginning in prehistory through the 19th century. Emphasis will be placed on the development of Buddhist art and its relationship with the culture. Mr. McCallum

114D. The Later Art of India. Lecture, three hours. Prerequisite: course 114A or consent of instructor. Survey of Indian Art from the 10th century to the 19th century. The decline of Buddhist art; the last efflorescence of Hindu architecture, Muslim painting and architecture, and Rajput painting. Ms. Klimburg-Salter

115A. Advanced Indian Art. Lecture, three hours. Prerequisite: course 114A. Study in Indian sculpture and architecture. Ms. Klimburg-Salter

115B. Advanced Chinese Art. Lecture, three hours. Prerequisite: course 114B. Study in Chinese painting and sculpture. Mr. Powers

115C. Advanced Japanese Art. Lecture, three hours. Prerequisite: course 114C. Study in Japanese painting and sculpture. Mr. McCallum

117A. Advanced Studies in Pre-Columbian Art: Mexico. Lecture, three hours. Prerequisite: course 118B or consent of instructor. A study of the art of selected cultures of northern Mesoamerica from ca. 1200 B.C. to the Conquest, with an emphasis on historical and iconographic problems. Ms. Klein

117B. Advanced Studies in Pre-Columbian Art: Central America. Lecture, three hours. Prerequisite: course 118B or consent of instructor. A study of the art of selected cultures of southern Mesoamerica and the remainder of Central America, from ca. 2000 B.C. to the Conquest, with particular emphasis on the history and iconography of the art of the Maya.
Ms. Klein

117C. Advanced Studies in Pre-Columbian Art: The Andes. Lecture, three hours. Prerequisite: course 118B or consent of instructor. A study of the art of selected cultures of Colombia, Ecuador, Peru and Bolivia, from ca. 4000 B.C. to the Conquest, with particular emphasis on the history and iconography of the art of Peru. Ms. Klein

118A. The Arts of Oceania. Lecture, three hours. Prerequisite: course 55 or consent of instructor. Survey of the arts of the major island groupings of the Pacific, emphasizing style-regions and broad historical relationships. Ms. Klein, Mr. Rubin

118B. The Arts of Pre-Columbian America. Lecture, three hours. Prerequisite: course 55 or consent of instructor. Survey of the sequence of cultures which developed in the area between (and including) Mexico and Peru, from ca. 1000 B.C. until the Conquest. Ms. Klein

118C. The Arts of Sub-Saharan Africa. Lecture, three hours. Prerequisite: course 55 or consent of instructor. The early arts of Nigeria and a selection of other traditions, emphasizing sculpture. Mr. Rubin

118D. The Arts of Native North America. Lecture, three hours. Prerequisite: course 55 or consent of instructor. Survey of painting, sculpture and other arts from the Eskimo to the peoples of the Caribbean and the Southwestern United States. Ms. Klein, Mr. Rubin

119A. Advanced Studies in African Art: Western Africa. Lecture, three hours. Prerequisite: course 118C or consent of instructor. Consideration of the network of stylistic, historical and cultural relationships existing among the peoples of the upper Niger River Valley and adjacent portions of the Western Guinea Coast. Mr. Rubin

119B. Advanced Studies in African Art: Central Africa. Lecture, three hours. Prerequisite: course 118C or consent of instructor. Northern and eastern Nigeria, Cameroun and the Ogowe River Basin. Mr. Rubin

120A. History of Prints. Lecture, three hours. Development of style and techniques of expression in the graphic arts, from the 15th century to the early 16th century.

120B. History of Prints. Lecture, three hours. Development of style and techniques of expression in the graphic arts from the 16th to the early 19th centuries.

120C. History of Prints. Lecture, three hours. Development of style and techniques of expression in the graphic arts of the latter 19th and 20th centuries.

121A. Critical and Historical Studies in Drawing. Lecture, three hours. Development of style and means of expression in drawing from late Middle Ages to the Early Renaissance.

121B. Critical and Historical Studies in Drawing. Lecture, three hours. Development of style and means of expression in drawing from Late Renaissance to the present.

122. History of Style and Ornament. Lecture, three hours. Development of stylistic ideas and motifs in the Western world and their expression in design media from the Renaissance to 1900. A study in connoisseurship.

125. Tutorial Conferences. Discussion, two hours. Prerequisites: courses 50, 51, 54, 57. Restricted to undergraduate Art History majors. Discussion of selected art topics with emphasis on related readings in music, literature, history and philosophy. Oral reports. Course grading will be on Passed/Not Passed basis only.

ART

Art courses are supervised by the following faculty, augmented by visiting staff: painting, drawing and sculpture, Amato, Brice, Elgart, Mullican, Nunes and Stussy; printmaking, Brown; photography, Heinecken.

130. Drawing. Studio, eight hours; five hours arranged. Prerequisites: courses 5A, 5B, 5C, 15, 21 or consent of instructor. May be repeated for a maximum of four courses. Varied media and subject; drawing as an intrinsically expressive mode. Mr. Mullican, Mr. Stussy

133. Painting. Studio, eight hours; five hours arranged. Prerequisites: courses 5A, 5B, 5C, 15, 21 or consent of instructor. May be repeated for a maximum of four courses. Varied media, purposes, subjects, structures, presentation, meaning.

137. New Forms and Concepts. Studio, eight hours; five hours arranged. Prerequisites: courses 5A, 5B, 5C, 15, 21 or consent of instructor. May be repeated for a maximum of four courses. Varied purposes, forms, processes, post-concept, other approaches to art and non-art, objects, events, installations, and non-studio pieces, film and video. Mr. Burden and the Staff

140. Printmaking. Studio, eight hours; five hours arranged. Prerequisites: courses 5A, 5B, 5C, 15, 21 or consent of instructor. May be repeated for a maximum of four courses. Selected studies in fine printmaking, historical and contemporary: wood-cut, etching and engraving, lithography, silk-screen, mixed media. Mr. R. Brown and the Staff

145. Sculpture. Studio, eight hours; five hours arranged. Prerequisites: courses 5A, 5B, 5C, 15, 21 or consent of instructor. May be repeated for a maximum of four courses. Selected studies in sculpture, historical and contemporary: modeling, carving, casting, welding and other media; forms in space including installations and non-studio pieces. Mr. G. Dill and the Staff

147. Photography. Studio, eight hours; five hours arranged. Prerequisites: courses 5A, 5B, 5C, 15, 21 or consent of instructor. May be repeated for a maximum of four courses. Selected studies in photography, historical and contemporary: documentation, non-silver methods, extended forms, color, mixed media. Photography as a medium of artistic expression. Mr. Heinecken and the Staff

148. Advanced Analysis and Criticism. Discussion, four hours; studio, nine hours arranged. Prerequisites: courses 5A, 5B, 5C, 15, 21 or consent of instructor. May be repeated for a maximum of four courses. Analysis and criticism of individual creative work and ideas.

149. Advanced Art and Artists/History and Theory. Lecture/discussion, three hours. Prerequisite: consent of instructor. May be repeated for a maximum of three courses. Discussion and analysis of artists and art, historical and contemporary.

DESIGN

(I) COMPARATIVE STUDIES IN DESIGN

161A. Ceramics. Lecture, three hours; laboratory, to be arranged. The evolution of ceramic form through geographic, social and technological influences. Mr. Saxe

161B. World Costume. Lecture, three hours; laboratory, to be arranged. Costume and body ornamentation; symbolic significance and evolving forms within their social, cultural and geographic context. Not open to students with credit for former course 161B. Ms. McCloskey

161C. Graphics. Lecture, three hours; laboratory, to be arranged. Symbols, signs and images, within social, cultural and historical contexts. Mr. W. Brown, Mr. Jennings, Mr. Neuhart

161D. Glass. Lecture, three hours; laboratory, to be arranged. The evolution of glass form and technology through geographic and sociological influences.

161E. Industrialization. Lecture, three hours; laboratory, to be arranged. Industry, design and society; their evolution and changing relationships.

161F. Landscape. Lecture, three hours; laboratory, to be arranged. The evolution and analysis of concepts affecting the aesthetic and ecological quality of the landscape. Mr. Roberts

161G. Shelter. Lecture; three hours; laboratory, to be arranged. The development of interior spaces in relation to structure, visual quality, function, human needs and behavior.

161H. Textiles. Lecture, three hours. The development of textile forms through geographic, cultural, stylistic and technological influences. Mr. Kester

161J. Video Imagery. Lecture, three hours; laboratory, to be arranged. Analysis of videographic form. Mr. Kataoka, Mr. Neuhart

161K. Historic Fashions. Lecture, three hours; discussion, two hours. Fashions and stylistic changes in western dress from the late Medieval period to the present time, studied in relationship to the social and cultural background of each era. Ms. McCloskey

(II) CONCEPT AND FORM IN DESIGN

162A. Ceramics. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B or equivalent. Creative development of ceramic materials and processes with emphasis on handbuilding methods; investigation and analysis of formal and expressive content. May be repeated once. Mr. Saxe

162B. Ceramics. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, 162A or equivalent. Continuation of course 162A. Emphasis on wheelforming methods and materials science as sources of aesthetic content. May be repeated once. Mr. Saxe

163A. Costume. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B or equivalent. Introduction to the creative process in designing contemporary costume. May be repeated once. Not open to students with credit for former course 163A. Ms. McCloskey

163B. Costume. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, 163A or equivalent. Further development of the design process, with emphasis on the symbolic aspect of contemporary costume. May be repeated once. Not open to students with credit for former course 163B. Ms. McCloskey

164A. Fiber Structure. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B or equivalent. Design and construction of woven forms. May be repeated once. Mr. Bassler, Mr. Kester

164B. Fiber Structure. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B or equivalent. The derivation of non-loom methods of fabric construction using pliable elements. May be repeated once. Mr. Bassler, Mr. Kester

165A. Graphics. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B or equivalent. The development of letterforms, typography and reproduction technology. May be repeated once. Mr. W. Brown, Mr. Neuhart

165B. Graphics. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, 165A or equivalent. Empiric and systematic graphic concepts, including methods, symbols and media technology. May be repeated once. Mr. W. Brown, Mr. Neuhart

166A-166B. Glass. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B or equivalent. Course 166A is prerequisite to 166B. The development of forms in glass; methods including blowing, molding and coldworking. Each course may be repeated once. Mr. Marquis

167A-167B. Form in Industrialized Materials. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B or equivalent. Course 167A is prerequisite to 167B. Theories and applications of technological materials. Each course may be repeated once.

168A. Landscape. Lecture, two hours; laboratory four hours. Prerequisites: courses 30A, 30B, 31A 31B, 32A, 32B or equivalent. The modification, conservation and utilization of natural land elements May be repeated once. Mr. Roberts

168B. Landscape. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, 168A or equivalent. The specific relationship of modified natural elements to human requirements. May be repeated once. Mr. Roberts

169A-169B. Product. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B or equivalent. Course 169A is prerequisite to 169B. Product development in industry; function, aesthetics and material properties as they relate to human needs. Each course may be repeated once. Mr. Shapira

170A-170B. Interior Spaces. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B or equivalent. Course 170A is prerequisite to 170B. The definition of structure and space in relation to human needs. Each course may be repeated once. Not open to students with credit for former courses 170A and 170B. Mr. Shapira

171A. Textiles. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B or equivalent. Systems of fabric surface organization, including the study of color, pattern and methods of printing. May be repeated once. Ms. Breitenbach

171B. Textiles. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B or equivalent. Dye systems and theories, including methods of application to fabrics. May be repeated once. Mr. Bassler, Ms. Breitenbach

172A. Video Imagery. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B or equivalent. Introduction to electronic image-making; videotape and "live" representation. May be repeated once. Mr. W. Brown, Mr. Kataoka, Mr. Neuhart

172B. Video Imagery. Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, 172A or equivalent. Electronic audiographic recording explored for its sensory potential; videotape as record of process and content levels. May be repeated once. Mr. W. Brown, Mr. Kataoka, Mr. Neuhart

(III) PROSEMINARS IN DESIGN

189. Topics in Design. Lecture/discussion, three hours; laboratory, to be arranged. Prerequisites: consent of advisor and instructor. Members of the faculty will examine specific problems relevant to design theory and performance. Topics for investigation will be announced in advance. May be repeated for a maximum of four courses.

193. Proseminar in Design: Senior Studies. Proseminar, three hours. Prerequisite: consent of advisor. Members of the faculty will examine specific problems relevant to design theory and performance. Topics for investigation will be announced in advance. Open to senior and advanced students through design faculty advisors. May be repeated for a maximum of three courses.

Special Studies for All Majors

197. Honors Course. Hours to be arranged. Prerequisites: 3.0 overall, 3.5 in major, consent of instructor, junior or senior standing. Individual studies for majors. Maximum two courses.

199. Special Studies in Art (½ to 2 courses). Hours to be arranged. Prerequisites: 3.0 in major, consent of instructor, senior standing. Individual studies for majors. Maximum two courses.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

The Department of Art reserves the right to hold for exhibition purposes examples of any work done in classes and to retain for the permanent collection of its galleries such examples as may be selected.

UCLA FREDERICK S. WIGHT ART GALLERY

The UCLA Frederick S. Wight Art Gallery, adjacent to Dickson Art Center, presents a program of changing exhibitions of regional, national and international significance, including a range of historical, ethnic and contemporary forms of art. Included in this program are exhibitions by faculty and students of the Art and Design areas, and exhibitions assembled from the extensive collections of the Museum of Cultural History, focusing on non-Western and folk art. The Grunwald Center for the Graphic Arts maintains a print study collection and presents a series of exhibitions related to the Art Department's program of advanced studies in the graphic arts and art history.

Asian American Studies (Interdepartmental)

(Office: 3232 Campbell Hall)

Special Program in Asian American Studies

The Program in Asian American Studies is intended to promote the study of Asian and Pacific peoples in the United States from several disciplines. It provides a general introduction to Asian American studies for those who anticipate advanced work at the graduate level or careers in research and community work related to the Asian American.

Students may participate in the program by undertaking a course of study which focuses on the special roles and experiences of Asian and Pacific peoples in the United States through a departmental major or the interdepartmental major in East Asian Studies.

Preparation for the Program

Asian American Studies 100A-100B, Introduction to Asian American Studies.

Upper Division

Since Asian American Studies is not a degree-granting program, students participating in it must complete an organized major.

For further information, contact Tim Dong, Asian American Studies Center, 3232 Campbell Hall (825-2974).

Upper Division Courses

100A-100B. Introduction to Asian American Studies. This survey sequence is an introduction to Asian American studies. The first quarter of the course will deal with the history of Asians in America. The second quarter will examine Asian American communities today.

103. Asian Americans and the Law. The course will survey major Federal and California case and legislative law directed specifically toward Asian Americans, from 1850 to World War II and relocation. Major subject areas are Japanese relocation orders, anti-Asiatic labor legislation, legal prohibitions against Asians' right to testify, case law on Asian women and equal educational opportunity for Asians. Mr. Iwasaki

197. Topics in Asian American Studies.

Graduate Courses

For complete descriptions of graduate-level courses offered by this program, please consult the *UCLA Graduate Catalog.*

Related Upper Division Courses in Other Departments

The following courses pertaining to Asian American studies are offered by the departments listed:

Anthropology M163. Women in Culture and Society.
M164. The Afro-American Experience in the United States.
166. Comparative Minority Relations.
167. Urban Anthropology.
172T. Ethnohistory of Hispanic Cultures in the U.S. Southwest.
175P. Civilizations and Cultures of Southeast Asia.
175Q. Civilizations of South Asia.
175S. Japan.
177. Cultures of the Pacific.

History 153. The United States and the Philippines.
154A-154B. United States Urban History.
155A-155B. American and European Working Class Movements.
159A-159B. History of the Chicano Peoples.
160. The Immigrant in America.
161. Asians in American History.
163. History of California.
183. Modern China, 1840-1920.
187C. Modern Japanese History.

Political Science 135. International Relations of China.
136. International Relations of Japan.
147. Minority Group Politics.
159. Chinese Government and Politics.
160. Japanese Government and Politics.

Psychology 175. Community Psychology.
176. Experimental Community Psychology.

Sociology 124. Ethnic and Status Groups.
125. Urban Sociology.
134. Comparative Social Institutions of East Asia.
155. Intergroup Conflict and Prejudice.

Astronomy

(Office: 8979 Math Sciences)

George O. Abell, Ph.D., *Professor of Astronomy.*
Lawrence H. Aller, Ph.D., *Professor of Astronomy.*
Ferdinand Coroniti, 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 Plavec, Ph.D., *Professor of Astronomy.*
Roger K. Ulrich, Ph.D., *Professor of Astronomy (Chair).*

Edward L. Wright, Ph.D., *Professor of Astronomy.*
Daniel M. Popper, Ph.D., *Emeritus Professor of Astronomy.*
Steven A. Grandi, Ph.D., *Assistant Professor of Astronomy.*

•

Robert P. Kraft, Ph.D., *Director of Lick Observatory.*

Classes for Nonmajors

Astronomy 3 and 4 are essentially nonmathematical courses open to the general University student normally not intending to major in the physical sciences. Astronomy 4 covers special topics to a somewhat greater depth and requires some preliminary elementary background in astronomy (e.g., Astronomy 3).

Students who have had at least two courses in high school algebra and one course in trigonometry are strongly advised to take, instead of Astronomy 3, the parallel honors course, Astronomy 3H. While the level of required mathematical skills in course 3H is still elementary, the class is smaller and more challenging. Similarly, students who have already taken some college courses in physics and mathematics should take Astronomy 4H instead of 4. In particular, declared or potential majors in Astronomy or in physical and related sciences should take courses 3H and 4H, not 3 or 4.

Astronomy 101 is a general survey course recommended for science majors (sophomores and above) who wish to get a good general picture of astronomy and astrophysics in one course. Astronomy 4H is on about the same level, but has the form of a seminar focused on several selected topics and is recommended mainly to lower division students who already have had an astronomy class.

Students of junior and senior standing in physics or related sciences are invited to choose any of these classes: 103, 104, 106, 115, 117, 127, 130, 180.

Advising

Every student enrolled in the curriculum in astronomy is required each quarter to have a program approved by a departmental advisor.

Preparation for the Major

Required: Physics 8A, 8B, 8C, 8D, 8E, Mathematics 31A, 31B, 32A-32B, 33A, 33B. *Recommended:* Astronomy 3H or 101, 4H, 10, Chemistry 11A, Engineering 10F.

The Major

Required: Astronomy 103, 106, 115, 117, 127, 130; Physics 105A, 105B, 110A, 110B, 115A, 115B, 131A; mathematics: at least one upper division course chosen from 130 through 152, or alternatively, completion of Physics 131B. *Recommended:* Astronomy 4H, 101, 104, 180, Earth and Space Sciences 101, Physics 108, 112A, 124, 131B.

Honors Program in Astronomy

Senior majors in Astronomy with a 3.4 grade-point average in all astronomy, mathematics and physics courses are eligible for the Honors Program in Astronomy. In addition to completing all courses required for the major, the honors student must complete two quarters of course 199. To receive honors and highest honors at graduation, the grade-point average must remain 3.4 or higher and the work in course 199 must reflect original research and be accepted by the departmental honors committee.

Lower Division Courses

3. Astronomy: The Nature of the Universe. Lecture, three hours; discussion, one hour. Not open to students with credit for or currently enrolled in course 3H or 101. A course for the general University student normally not intending to major in physical sciences on the development of ideas in astronomy, and what has been learned of the nature of the universe, including recent discoveries and developments. No special mathematical preparation is required beyond that necessary for admission to the University with freshman standing.

3H. Introductory Astronomy and Astrophysics. Lecture, three hours; discussion, one hour. Not open to students with credit for or currently enrolled in course 3. Introduction to astronomy and astrophysics for freshmen who are seriously interested in science. Course requires the ability to understand mathematical and physical concepts, but high school algebra and trigonometry classes provide sufficient qualification. Particularly recommended to declared or potential majors in Astronomy or in physical and mathematical sciences.

4. Topics in Modern Astronomy. Lecture, three hours; discussion, one hour. Prerequisite: course 3 or 3H or equivalent. Not open to students with credit for or currently enrolled in course 4H. For the general University student with previous introduction to astronomy. Selected topics (such as evolution of the solar system and stars, and cosmology) are treated in some depth, but without formal mathematics, emphasizing their significance and relationships to other sciences.

4H. Topics in Contemporary Astrophysics. Prerequisites: Astronomy 3 or 3H, Physics 8A, Mathematics 31A, 31B or equivalents; Physics 8B and Mathematics 32A concurrent; or consent of instructor. Not open to students with credit for or currently enrolled in course 4. An honors course for students whose physics and mathematics background is insufficient for upper division courses, but have the ability to understand mathematics and physical concepts. Selected topics, such as cosmology, stellar evolution or formation of the solar system, are treated in depth with moderate use of mathematics.

10. Practice in Observing (½ course). Meets one evening a week for two and one-half hours. Prerequisites: knowledge of plane trigonometry and some previous or concurrent course in astronomy or consent of instructor. Practical work for beginners, including telescopic observations and laboratory exercises cognate to an introductory course in astronomy.

Upper Division Courses

101. General Astronomy and Astrophysics. Prerequisites: Physics 8A and Mathematics 31A, 31B or equivalents. Open to qualified sophomores as well as upper division students. Course 10 may be selected for observatory and laboratory work in connection with this course. A survey of the whole field of astronomy, designed primarily for students majoring in a physical science or mathematics.

103. Gravitational Astronomy. Prerequisites: Physics 8A-8D; Mathematics 31A, 31B, 32A-32B, 33A; Astronomy 101 or 3H recommended. Astronomical coordinates, transformations, precession, astronomical time keeping, celestial navigation. Two body orbit theory in the solar system, calculation of an ephemeris from orbital elements and an orbit from observations. Theory of least squares and data handling. Orbits of visual and spectroscopic binary stars; determination of stellar masses. Tidal, rotational, and relativistic perturbations of the gravitational potential.
Mr. Abell, Mr. Epps

104. Astronomical Optics. Meets three hours per week. Prerequisite: Physics 105A. Geometrical optics, including ray tracing and optical aberrations commonly encountered in optical design. Interference, diffraction, dispersion, photoelectric emission and other aspects of physical optics with particular emphasis placed on practical application in astronomical investigation.
Mr. Epps

106. Stars, Stellar Systems, and Cosmology. Meets three hours per week. Prerequisites: Physics 8A-8D; Mathematics 31A, 31B, 32B, 33A. Recommended: Astronomy 3H or 101, 103. Properties of stars, stellar spectroscopy and photometry. The galaxy and external galaxies. Galactic and extragalactic distance scales. Introduction to cosmology.
Mr. Abell, Mr. Ford, Mr. Plavec

115. Physical Foundations of Astrophysics. Prerequisite: upper division standing in astronomy or physics or consent of instructor. Spectroscopy and spectral lines in stellar spectra. Theory of radiation and continuous stellar spectra. Astrophysics of the gaseous state of matter, ionization and excitation, and local thermodynamic equilibrium. Interaction between matter and radiation.
Mr. Coroniti, Mr. Epps, Mr. Jura

117. Stellar Atmospheres and Interstellar Matter. Meets three hours per week. Prerequisites: senior standing in astronomy or physics or consent of instructor; Astronomy 115 or its equivalent. Introduction to radiative transfer, stellar atmospheres and their models. Curve of growth analysis and abundance determinations. Atmosphere of the Sun. Physical conditions in the interstellar medium and aspects of star formation.
Mr. Aller, Mr. Jura

127. Stellar Interiors and Evolution. Meets three hours per week. Prerequisite: senior standing in astronomy or physics or consent of instructor. Recommended: Astronomy 115. Physical conditions in stellar interiors. Energy production in stars. Stellar evolution from star formation through the normally observed stages to white dwarfs, neutron stars, and black holes. Novae, supernovae, other variable stars. Synthesis of chemical elements in stars.
Mr. Plavec, Mr. Ulrich

130. High Energy Astrophysics. Meets three hours per week. Prerequisite: senior standing in astronomy or physics or consent of instructor. Theory and observation pertaining to astronomical sources of high energy radiation. Theory of synchrotron radiation, Compton scattering; interaction of matter with compact objects. Solar flares, X and gamma ray sources, the Crab nebula, nuclei of peculiar galaxies, quasars.
Mr. Wright

180. Introduction to Modern Faint Object Measurement in Astronomy. Laboratory, six hours. Prerequisites: junior or senior standing in astronomy or physics and consent of instructor. Introduction to modern astronomical instrumentation. Experiments will cover photography, phototubes, image tubes, spectrophotometry, solid-state detectors and microprocessor-controlled instrumentation.
Mr. Grandi

190. Senior Symposium on Topics in Modern Astronomy. Meets three hours per week. Prerequisite: senior standing in astronomy or physics or consent of instructor. Lectures by instructors in astronomy and related fields to supplement the regular course sequence. Topics may include: radio, infrared, UV and X-ray astronomy, observational cosmology, variable stars, planetary physics, pulsars and quasars.
Mr. Ulrich

199. Special Studies (½ or 1 course). Prerequisites: senior standing in astronomy or physics, with an outstanding record, and consent of instructor. Special studies with an individual faculty member. With prior approval, this course may be used to carry out a meritorious observing program at the UCLA Students' Observatory, or in special cases with the 24-inch reflector.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Atmospheric Sciences

(Office: 7127 Math Sciences)

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).*
George L. Siscoe, Ph.D., *Professor of Atmospheric Physics.*
Richard M. Thorne, Ph.D., *Professor of Atmospheric Physics.*
Sekharipuram V. Venkateswaran, Ph.D., *Professor of Atmospheric Physics.*
Morton G. Wurtele, Ph.D., *Professor of Atmospheric Dynamics.*
Michio Yanai, D.Sc., *Professor of Atmospheric Dynamics.*
Yale Mintz, Ph.D., *Emeritus Professor of Meteorology.*
Morris Neiburger, Ph.D., *Emeritus Professor of Meteorology.*
Carlos R. Mechoso, Ph.D., *Assistant Professor of Atmospheric Dynamics.*
Derek C. Montague, Ph.D., *Assistant Professor of Atmospheric Chemistry.*
Max J. Suarez, Ph.D., *Assistant Professor of Atmospheric Dynamics.*

Preparation for the Major

Required: Atmospheric Sciences 3H, Physics 8A, 8B, 8C, 8D, 8E; Mathematics 31A, 31B, 32A-32B, 33A, 33B, Chemistry 11A, Engineering 10C or 10F.

The Major

Required: Atmospheric Sciences 104A, 104B, 104C, M149; Physics 110A, 110B, 131A, 131B; two courses from Atmospheric Sciences 143, 144, 150, 151; one course from 160, 161; two courses from 152, 153, 154, 156. In addition, students preparing for graduate studies in Dynamic and Synoptic Meteorology should take courses 150, 151 and Mathematics 140A; students preparing for graduate studies in Dynamics and Microphysics of Clouds and Precipitation should take as electives the following courses: Physics 112A, 140, Mathematics 140A, 135A-135B; students preparing for graduate studies in Radiation or Upper Atmospheric and Space Physics should take as electives the following courses: Physics 105A, 105B, M122.

Lower Division Courses

2. Air Pollution. Lecture, three hours; discussion, one hour. A breadth requirement course for all students interested in the causes and effects of high concentrations of pollution in the atmosphere. Topics covered will include the nature and sources of gaseous and particulate pollutants, their transport, dispersion, modification and removal, with emphasis on atmospheric processes on scales ranging from individual sources to global effects; interaction with the biosphere and the oceans; stratospheric pollution. Mr. Montague

3. Introduction to the Atmospheric Environment. Lecture, three hours; discussion, one hour. A course specifically designed to satisfy in part the breadth requirement of students majoring outside the physical sciences. The nature and causes of weather phenomena, including winds, clouds, rain, lightning, tornadoes and hurricanes, solar and terrestrial radiation; phenomena of the higher atmosphere; the ionosphere and the auroras; causes of air pollution; proposed methods and status of weather modification. Mr. Edinger, Mr. Siscoe

3H. Introduction to Atmospheric Sciences. Lecture, three hours; discussion, two hours. Prerequisite: Physics 8D or exceptional performance in high school mathematics and physics or consent of instructor. An introductory course in atmospheric phenomena and atmospheric processes, required for Atmospheric Sciences majors and recommended for honors students who are declared or potential majors in the physical sciences or engineering. Mr. Thorne

12. Forecasting Seminar (½ course). Objective forecasting of wind, temperature, and precipitation for Los Angeles as measured at UCLA, and for a major city east of the Rockies. Emphasis on developing forecasting experience and familiarity with the use of satellite and conventional observations, map analyses and numerical weather prediction guidance produced by National Meteorological Center. Forecasts are qualified and evaluated objectively. No previous experience required. Mr. Edinger

Upper Division Courses

104A. Atmospheric Thermodynamics and Introduction to Cloud Physics. Lecture, three hours; discussion, two hours. Prerequisites: Mathematics 33B, Physics 8D, Chemistry 11A. Basic thermodynamics including the first, second and third laws. Atmospheric statics. Dry adiabatic processes. Phase changes of water and moist adiabatic processes. Gravitational stability. Elementary cloud physics. Mr. Montague

104B. Introduction to Dynamic and Synoptic Meteorology (1½ courses). Lecture, three hours; laboratory, six hours. Prerequisite: course 104A. Kinematics. Equation of motion. Quasi-static balance and the pressure coordinate. Geostrophic and thermal wind balance. Circulation and vorticity. Vorticity equations for barotropic and baroclinic atmospheres. Fronts and cyclones. Laboratory includes elementary synoptic analysis and a detailed synoptic case study. Mr. Arakawa

104C. Energetics of Solar-Atmosphere-Earth System. Lecture, three hours; discussion, two hours. Prerequisite: course 104B. Solar and terrestrial radiation. Atmospheric chemistry. Energy budget of atmosphere-earth system. Energy transports and energy cycle. Angular momentum budget. Hydrological cycle. Climatology. Mr. Wurtele

143. Physical Oceanography. Lecture, three hours; discussion or field trip, one hour. Prerequisite: course 104B. Physical structure of the oceans; observational techniques. Theory of waves, currents, swell and tides. Mr. Mechoso

144. Micrometeorology and Air Pollution Meteorology. Lecture, three hours. Prerequisite: course 104C or consent of instructor. Wind and temperature structure in the surface layer; mesoscale weather and wind systems; turbulence and diffusion; evaporation; transport, diffusion and transformation of atmospheric contaminants. Mr. Edinger

M149. Introduction to Fluid Dynamics. (Same as Earth and Space Sciences M149.) Lecture, three hours; discussion, two hours. Prerequisites: Physics 131A, 131B or consent of instructor. Equations of fluid motion. Circulation theorems. Irrotational flow. Vortex motion. Surface and internal gravity waves. Rotating frame. Viscous flow. Mr. Schubert (F)

150. Atmospheric Motion I. Lecture, three hours; discussion, two hours. Prerequisite: course M149 or consent of instructor. Wave motions in a stratified and rotating atmosphere. The quasi-static equilibrium. Rossby waves. The quasi-geostrophic motion. Dynamics of extra-tropical cyclones. The general circulation of the atmosphere. Mr. Yanai

151. Atmospheric Motion II. Lecture, three hours; discussion, two hours. Prerequisite: course 150 or consent of instructor. Fronts and frontal waves. Atmospheric turbulence and boundary layers. Moist convection. Stratus clouds. Elementary cumulus dynamics. Tropical disturbances. Mesoscale weather systems. Mr. Arakawa

152. Introduction to Physics of Clouds and Precipitation. Lecture, three hours; discussion, one hour. Prerequisite: course 104A or consent of instructor. Macroscopic and microscopic description of clouds and precipitation; phase change processes in the atmosphere; theory of drop forming and ice forming nuclei; development of precipitation in clouds; cloud chemistry, cloud electricity. Mr. Pruppacher

153. Atmospheric Radiation. Lecture, three hours. Prerequisite: Physics 110B or consent of instructor. Thermal radiation from the sun and planets. Transfer of thermal radiation through planetary atmospheres. Radiation budget. Scattering of electromagnetic radiation by atoms, molecules, dust and aerosols. Remote sensing. Meteorological optics. Mr. Siscoe

M154. Solar Terrestrial Physics. (Same as Earth and Space Sciences M154.) Lecture, three hours; discussion, one hour. Prerequisite or concurrent: Physics 110B. Particle and electromagnetic emissions from the sun under quiet and under disturbed conditions. The solar wind. The magnetospheres and the ionospheres of the earth and other planets. Geomagnetic phenomena. Aurora and airglow. Mr. Venkateswaran (F)

156. Introduction to Atmospheric Chemistry. Lecture, three hours; discussion, one hour. Prerequisite: course 104A or consent of instructor. Chemical composition and history of the atmosphere; natural cycles of important minor constituents; relevance and application of elementary chemical kinetics, thermochemistry, spectroscopy and photochemistry to chemical processes in the lower and upper atmosphere; chemical aspects of air pollution and aerosol formation. Mr. Montague

160. Synoptic Meteorology Laboratory. Laboratory, six hours. Prerequisite: concurrent with course 150. Study of cyclone structure and fronts through analyses of surface and upper-level weather charts. Graphical computation of vorticity. Graphical determination of large-scale vertical motion. Discussion of cyclone development. Mr. Mechoso

161. Laboratory in Atmospheric Dynamics. Laboratory, six hours. Prerequisites: course 150; Engineering 10C or 10F; or consent of instructor. Numerical solution of problems selected from atmospheric dynamics. Introduction to numerical weather prediction. Mr. Suarez

165. Laboratory in Meteorological Observation. Laboratory, six hours. Prerequisites: junior standing and consent of departmental undergraduate advisor. Theory and application of instrumentation in field and laboratory. The material covered will be partly determined by the students' interests. Mr. Edinger

198. Operational Meteorology (½ course). Prerequisite: junior or senior standing. Daily contact with weather data and forecasting, satellite, acoustic sounder and radar data. Introduction to weather forecasting for aviation, air pollution, marine weather, fire weather and public use. Includes daily weather map discussions and visits to observing, radiosonde and radar installations. Mr. Edinger

199. Special Studies in Meteorology (½ or 1 course). Prerequisite: consent of instructor. Special individual study.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Related Courses in Other Departments

Astronomy 101, 103, 104.

Chemistry and Biochemistry 103, 110A, 110B, C123A-C123B.

Earth and Space Sciences 101, M149, M154.

Engineering 10C, 103, 117A, 117B, M118, 124A, 131A, 134C, 137A, 137E, 150A, 150B, 181A, 192A, 192B, 192C.

Mathematics 131A-131B, 132, 135A-135B-135C, 141A-141B, 142, 145A-145B, 150A-150B-150C, 152A-152B.

Physics 108, 110A, 110B, 112A, 115A, 115B, M122, 131A, 131B.

Biochemistry

See Chemistry and Biochemistry.

Biological Chemistry

(Office: 33-257 Center for Health Sciences)

The Department of Biological Chemistry does not offer an undergraduate degree. The following upper division courses are offered with enrollment restrictions as indicated:

Upper Division Courses

101A-101B-101C. Biological Chemistry. Lecture, three hours. Prerequisite: organic chemistry. Required in the medical curriculum; consent of instructor is required for nonmedical students.

101E. Biological Chemistry Laboratory. Laboratory, seven hours. 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. Required in the dental curriculum; consent of instructor is required for nondental students. The laboratory, which consists of experiments designed to illustrate biochemical principles, involves studies on enzymes, metabolic processes, respiration and calcified structures. The seminars, which will be given by the students to small discussion groups, involve presentation of material from current research dealing with biochemical studies related to dentistry.

Mr. Snoke and the Staff

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Biology

(Office: 2203 Life Sciences)

Albert A. Barber, Ph.D., *Professor of Cell Biology.*
George A. Bartholomew, Ph.D., *Professor of Zoology.*
Joseph Cascarano, Ph.D., *Professor of Cell Biology.*
David J. Chapman, Ph.D., *Professor of Biology.*
William R. Clark, Ph.D., *Professor of Cell Biology.*
Martin L. Cody, Ph.D., *Professor of Biology.*
Nicholas E. Collias, Ph.D., *Professor of Zoology.*
Wilbur T. Ebersold, Ph.D., *Professor of Biology.*
Roger O. Eckert, Ph.D., *Professor of Biology.*
Franz Engelmann, Ph.D., *Professor of Biology.*
John H. Fessler, Ph.D., *Professor of Molecular Biology.*
Malcolm S. Gordon, Ph.D., *Professor of Biology.*
Thomas R. Howell, Ph.D., *Professor of Zoology.*
Thomas W. James, Ph.D., *Professor of Cell Biology.*
J. Lee Kavanau, Ph.D., *Professor of Biology.*
James A. Lake, Ph.D., *Professor of Molecular Biology.*
George G. Laties, Ph.D., *Professor of Plant Physiology.*
F. Harlan Lewis, Ph.D., *Professor of Biology.*
O. Raynal Lunt, Ph.D., *Professor of Biology.*
Austin J. MacInnis, Ph.D., *Professor of Cell Biology.*
James G. Morin, Ph.D., *Professor of Zoology.*
Leonard Muscatine, Ph.D., *Professor of Biology.*
Park S. Nobel, Ph.D., *Professor of Biology.*
John D. O'Connor, Ph.D., *Professor of Developmental Biology.*
Bernard O. Phinney, Ph.D., *Professor of Biology.*
Dan S. Ray, Ph.D., *Professor of Molecular Biology.*
Winston A. Salser, Ph.D., *Professor of Molecular Biology.*
Richard W. Siegel, Ph.D., *Professor of Biology.*
Larry Simpson, Ph.D., *Professor of Cell Biology.*
Clara M. Szego, Ph.D., *Professor of Biology.*
Henry J. Thompson, Ph.D., *Professor of Botany.*
J. Philip Thornber, Ph.D., *Professor of Molecular Biology.*
Peter P. Vaughn, Ph.D., *Professor of Zoology.*
David Appleman, Ph.D., *Emeritus Professor of Plant Physiology.*
Gordon H. Ball, Ph.D., *Emeritus Professor of Zoology.*
Jacob B. Biale, Ph.D., *Emeritus Professor of Biology.*
Frederick Crescitelli, Ph.D., *Emeritus Professor of Cell Biology.*
Eric B. Edney, Ph.D., *Emeritus Professor of Biology.*
Karl C. Hamner, Ph.D., *Emeritus Professor of Botany.*
Arthur W. Haupt, Ph.D., *Emeritus Professor of Botany.*
Mildred E. Mathias, Ph.D., *Emeritus Professor of Botany.*
Everett C. Olson, Ph.D., *Emeritus Professor of Zoology.*
Charles A. Schroeder, Ph.D., *Emeritus Professor of Botany.*
Flora Murray Scott, Ph.D., *Emeritus Professor of Botany.*
Fritiof S. Sjostrand, M.D., Ph.D., *Emeritus Professor of Molecular Biology.*
Boyd W. Walker, Ph.D., *Emeritus Professor of Zoology.*
Vladimir Walters, Ph.D., *Emeritus Professor of Zoology.*
Samuel G. Wildman, Ph.D., *Emeritus Professor of Botany.*
Clifford F. Brunk, Ph.D., *Associate Professor of Cell and Molecular Biology.*
Arthur C. Gibson, Ph.D., *Associate Professor of Botany.*
Robert Goldberg, Ph.D., *Associate Professor of Biology.*
Elma Gonzalez, Ph.D., *Associate Professor of Cell Biology.*
Michael Grunstein, Ph.D., *Associate Professor of Biology.*
Henry A. Hespenheide, Ph.D., *Associate Professor of Biology.*
Harumi Kasamatsu, Ph.D., *Associate Professor of Biology.*
John R. Merriam, Ph.D., *Associate Professor of Genetics.*
Kenneth A. Nagy, Ph.D., *Associate Professor of Biology in Residence.*
Paul H. O'Lague, Ph.D., *Associate Professor of Biology.*
Richard R. Vance, Ph.D., *Associate Professor of Biology.*
J. Chloë Bulinski, Ph.D., *Assistant Professor of Cell Biology.*
Donald G. Buth, Ph.D., *Assistant Professor of Biology.*
Michael Greenfield, Ph.D., *Assistant Professor of Biology.*
Judith A. Lengyel, Ph.D., *Assistant Professor of Biology.*
Peter M. Narins, Ph.D., *Assistant Professor of Biology.*
Jane A. Peterson, Ph.D., *Assistant Professor of Biology.*
Allan J. Tobin, Ph.D., *Assistant Professor of Biology.*
Elaine M. Tobin, Ph.D., *Assistant Professor of Biology.*
Dan B. Walker, Ph.D., *Assistant Professor of Botany.*

•

Robert Barrett, Ph.D., *Lecturer in Biology.*
Elsie C. Collias, Ph.D., *Research Associate in Zoology.*
Jared M. Diamond, Ph.D., *Professor of Physiology.*
J. William Schopf, Ph.D., *Professor of Geology.*
M. Ann Spence, Ph.D., *Associate Professor of Psychiatry and Biomathematics in Residence.*
David Verity, B.S., *Senior Museum Scientist, Botanical Gardens and Herbarium.*

Advising

All incoming students (freshmen and transfers) must see a departmental advisor before they register for classes. In addition, all students majoring in Biology must confer with a departmental advisor by the start of the junior year and again during the senior year.

Pre-Biology Major

Students who have not completed all the courses required as "Preparation for the Major" are Pre-Biology majors. Upon completion of these courses with a grade of "C–" or better in each, students should petition to enter the Biology major in the Undergraduate Affairs Office.

Preparation for the Major

(1) Biology 5, 6, 6L, 7, 8, 8L

(2) Chemistry 11A, 11B, 11BL, 11C, 11CL, 21, 23, 25

(3) Mathematics 3A, 3B, 3C or 31A, 31B, 32A; the 31A, 31B, 32A courses are strongly recommended for students intending to study ecology, evolution or population genetics.

(4) Physics 6A, 6B, 6C

Requirements for the Major

(1) Three courses from the core list, one from each of the following groups:

(a) Morphology Systematics: Biology 100, 101, 105, 110, 153, Microbiology 101

(b) Developmental and Molecular Biology: Biology 137, 138, 141, 144, 146

(c) Physiology: Biology 158, 162, 166, 167

(2) Two additional upper division biology courses

(3) Four courses which may be chosen from upper division biology or any upper division course in microbiology, chemistry, mathematics (except 100 through 107), physics or the approved list which may be obtained in the Student Affairs Office. A maximum of 4 units of Biology 199 may be applied toward the major. 199's from other departments cannot be applied.

Additional Requirements

(1) Six-unit courses (1½ courses) count as only one course on requirements for the major.

(2) A maximum of eight units of Biology 190 *or* four units of Biology 199 may be used for fulfillment of the major.

(3) Courses taken to fulfill requirements for "Preparation for the Major" and the major must be taken for a letter grade.

(4) Biology majors must earn a "C – " or better in each core course, a 2.0 average in all upper division biology courses and a 2.0 average in the nine courses comprising the major.

Transfer Students

In order to be admitted as Pre-Biology majors, transfer students who have 80 units or more must have completed one year of general chemistry with laboratory, Biology 5 and 7 or their equivalent and one of the following sequences:

(1) One year of calculus,

(2) One year of calculus-based physics or

(3) Two courses in organic chemistry with laboratory

Honors in Biology

Requirements for graduation with Honors in Biology are an overall GPA of 3.4 and a 3.4 in the Biology major. Highest Honors in Biology are awarded to those Biology majors who have a GPA of 3.6 overall and a 3.6 GPA in the major at graduation and who have satisfactorily completed Biology 190.

Lower Division Courses

2. Principles of Biology. Lecture, three hours; laboratory, one and one-half hours. Lecture: structure and chemical composition of cells, animal structure and diversity, cellular respiration, photosynthesis, major organ systems with emphasis on human cell division, reproduction, development, ecology, population growth, genetics, evolution. Laboratory: structure and function of cells, morphology of plants and animals, circulatory and nervous systems, embryology, plant diversity and adaptation, human genetics. Offered for students other than majors in the biological sciences. Not open to students with credit for courses 5 and 7.

5. Biology of Organisms. Lecture, three hours; discussion/demonstration, two hours. Comparative morphology and embryology of the major plant and animal phyla; function of organ systems including gas exchange, transport, regulation of the internal environment, hormones, coordination, and the nervous system.

6. Ecology and Evolution. Lecture, three hours; discussion, two hours. Prerequisites: course 5 and Mathematics 3A or 31A. A survey of the principles of population growth and ecology, competition, predation, community ecology, environmental physiology, population genetics, natural selection, and speciation.

6L. Organismic and Environmental Biology Laboratory (¼ course). Laboratory, three hours. Prerequisite: course 6 (may be taken concurrently with Biology 6). Introductory Biology Laboratory including basic cell and microorganism organization, morphology and diversity of organisms, population biology, evolution, and community ecology.

7. Introductory Cellular and Molecular Biology. Lecture, three hours; discussion/demonstration, two hours. Prerequisite: course 5; Chemistry 23 is strongly recommended. An integrated introduction to cellular and subcellular biology, including cells and organelles, molecular biology, cell cycles, and developmental biology.

8. Introductory Genetics. Lecture, three hours; discussion/demonstration, one hour. Prerequisite: course 7. Principles of Mendelian inheritance, including gene interactions, introductory biochemical genetics, chromosome changes, and mutations genetics.

8L. Cellular and Molecular Biology Laboratory (¼ course). Laboratory, three hours. Prerequisite: course 8 (may be taken concurrently with Biology 8). Introductory laboratory experience including bacterial growth, mitosis and meiosis, genetics, molecular biology and developmental biology.

10. Plants and Civilization. Lecture, three hours; lecture-demonstration, one hour. The origin of crop plants; man's role in the development, distribution, and modification of food, fiber, medicinal and other plants in relation to their natural history. Designed for nonmajors. Mr. Schroeder (F,Sp)

11. Field Botany. Lecture, two hours; laboratory, six hours; required field trips. An introduction to the systematics, morphology, and ecology of the local flora (native and cultivated). Use of keys for identification; morphological characteristics of common families of vascular plants; plant communities and environmental factors affecting their distribution; emphasis on California. Designed for nonmajors.
Mr. Thompson (Sp)

12. Taxonomy and Ecology of Ornamental Plants. Lecture, one hour; laboratory and field trips, six hours. The origin, classification and identification of the more important ornamental plants in Southern California with special emphasis on their environmental requirements and adaptation. Designed for nonmajors.

13. Evolution of Life. Lecture, three hours; discussion, one hour. Limited to 100 students. Not open to life sciences majors. An introduction to biology within the framework of evolutionary theory. The relationships of evolutionary thought to other areas of knowledge and society. Natural selection and the origin of variation are examined in the context of genetics, molecular biology, physiology, phylogeny, population dynamics, behavior and ecology. Stress is laid upon the critical role of historical processes. (F)

20. Introduction to Human Heredity. Lecture, two hours; discussion, one hour; laboratory, two hours. This course is not open to students with a previous college course in genetics, nor is it intended to satisfy the requirements of medical or dental schools. Man's inheritance and its biological basis will be introduced through lectures, readings and laboratory exercises with *Drosophila*. Topics will include prenatal development, Mendelizing factors, the role of chromosomes in heredity and the role of genes in disease and population structure. (Sp)

21. Field Biology. Lecture, three hours; required field trips. Prerequisite: course 2. An introduction to the natural history and ecology, interrelationships, and classification of the common animals and plants with emphasis on western North America.

25. The Oceans. Lecture, three hours; discussion, one hour. Not open to students in the sciences or to students with credit for Earth and Space Sciences 15. Limited to 40 students. Physical and chemical processes that take place in the oceans with emphasis on their effects on organisms. (W)

30. Biology of Cancer. An introduction to molecular, cellular and clinical aspects of cancer and a consideration of the sociological and psychological impact of cancer on the individual and society. Each lecture-discussion period will be given by an invited lecturer who is prominent in cancer research or treatment. (Credits may not be applied toward fulfillment of the Biology major.) P/NP grading.

35. Mathematical Ideas in Biology. Lecture, three hours; discussion, one hour. Prerequisites: one year of calculus and consent of instructor. The use of mathematical ideas and analysis in the formulation and evaluation of theories of biological phenomena, such as growth, growth control, biological rate processes and applications of random walk theory. Coverage of topics will be tailored to specific student interests.
Mr. Kavanau

*Upper Division Courses

Upper division standing and completion of Biology 5, 6, 7 and 8 or equivalent or consent of instructor are required for admission to all upper division courses.

100. Biology of Lower Plants (1½ courses). Lecture, four hours; laboratory, six hours. Prerequisite: course 5 or equivalent or consent of instructor. An introduction to the biology of algae, fungi and bryophytes, with an emphasis on form, function and development, and the role of lower plants in the environment. Students are strongly encouraged to take both courses 100 and 101 since these represent a course sequence to survey the entire plant world as appropriate background for upper division courses in plant biology. Mr. Chapman

101. Biology of Vascular Plants (1½ courses). Lecture, three hours; laboratory, six hours. Prerequisite: course 5 or equivalent or consent of instructor. An introduction to the diversity in form and reproduction of vascular plants with emphasis on development, evolution, and function. Students are strongly encouraged to take both courses 100 and 101 since these represent a course sequence to survey the entire plant kingdom as appropriate background for upper division courses in plant biology. Mr. D. Walker

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

102. Biology of Marine Invertebrates (1 or 1½ courses). Lecture, five hours; laboratory, fifteen hours (five-week intensive course). Prerequisites: "Preparation for the Major" and consent of instructor. Morphology, systematics, life histories and natural history, ecology, behavior, and physiology of marine invertebrates; emphasis on local invertebrates of Southern California and their habitats. Course to be given at the *Catalina Marine Science Center.*
Mr. Morin, Mr. Muscatine, Mr. Vance

103. Taxonomy of Flowering Plants. Lecture, two hours; laboratory and field trips, six hours. The evolution, systematics, and distribution of the families of flowering plants. Morphology, principles of taxonomy, phylogenetic systems, nomenclature, modern methods of investigation. Mr. Gibson

104. Biology of Marine Vertebrates (1 or 1½ courses). Prerequisites: completion of "Preparation for the Major" and consent of instructor. Selected aspects of the natural history, ecology, physiology and behavior of vertebrates living in marine environments. To be offered as a concentrated five or seven week course for four or six units credit as part of the Catalina Marine Biology Quarter.
Mr. Buth, Mr. Gordon

105. Biology of Invertebrates (1½ courses). Lecture, three hours; laboratory, six hours (includes field trips). Prerequisite: completion of all courses listed under "Preparation for the Major." Introduction to the systematics, evolution, natural history, morphology and physiology of the invertebrates.
Mr. Morin, Mr. Muscatine (F)

106A-106B. Experimental Marine Invertebrate Zoology (1½ courses each). Lecture, two hours; laboratory, twelve hours. Prerequisites: courses 105 and 166 (latter may be taken concurrently with 106A) or equivalent and consent of instructor. Course 106A is prerequisite to 106B. An advanced course of natural history, physiology, biochemistry of invertebrates with emphasis on independent laboratory and field investigations. Mr. Morin, Mr. Muscatine

107. Entomology. Lecture, three hours; laboratory, six hours; field trips. An introduction to the morphology, ecology and classification of insects.
Mr. Greenfield

108. Terrestrial Arthropods. Lecture, three hours; laboratory, six hours; several field trips. Prerequisite: course 107 or consent of instructor. Systematics, distribution, and bionomics of hexapods and arachnids.

109. The Development of Evolutionary Theory. Lecture, three hours; discussion, one hour. A study of the historical development of the physical and biological concepts which have led to current evolutionary theory. These concepts are considered in context of the social circumstances in which they originated. Enrollment limited to 80 students.

110. Vertebrate Morphology. Lecture, three hours; laboratory, four hours. Prerequisites: courses 5, 6, 6L. A study of vertebrate morphology and evolution from the viewpoint of comparative anatomy of adult forms, developmental anatomy, and paleontology. Laboratory study of selected vertebrates.
Ms. Peterson, Mr. Vaughn (F,W)

111. Biology of Vertebrates. Lecture, three hours; demonstration, field trips, discussion, three hours. Prerequisites: courses 5, 6, 6L. The adaptations, behavior, and ecology of vertebrates.
Mr. Bartholomew, Mr. Howell (F,Sp)

112. Ichthyology. Lecture, two hours; laboratory, six hours; field trips. Prerequisites: courses 5 and 6, 110 or 111 or consent of instructor. The biology of freshwater and marine fishes with emphasis on their evolution, systematics, morphology, zoogeography, and ecology. Field trips will examine the fishes of the Southern California shoreline, tidepools, and coastal streams. Enrollment limited to 24 students. Mr. Buth

113. Herpetology (1 or 2 courses). Prerequisites: one of the following: course 111, 120 or 122 and consent of instructor. *Herpetology will be offered alternately as a 4-unit course to be given during a conventional academic quarter, or as an 8-unit course as part of the Field Biology Quarter.* The 4-unit course has lecture, three hours; laboratory, six hours; and approximately 4 weekend field trips. The systematics, distribution, physiology, behavior and ecology of amphibians and reptiles will be covered. The 8-unit course covers the same basic lecture and laboratory material in two intensive weeks. This is followed by an extended field trip where students will do individual field projects in behavior, physiological ecology, or field ecology.

114. Ornithology. Lecture, two hours; laboratory, discussion, field trips, six hours. Prerequisites: course 111 and consent of instructor. Limited enrollment. The systematics, distribution, physiology, behavior and ecology of birds. Mr. Howell

115. Mammalogy. Lecture, two hours; laboratory and field trips, six hours. Prerequisites: course 111 or equivalent and consent of instructor. The evolution, ecology, behavior and physiology of mammals.

116. The Evolution of Mammalian Dentitions. Lecture, two hours; laboratory, six hours. Prerequisite: consent of instructor. Limited enrollment. The origin and adaptive radiation of mammalian teeth is considered with special emphasis upon morphological aspects of change relative to function. Tooth histology and embryology are studied. Laboratory work involves study of dental morphology and histology.

M117. Vertebrate Paleontology. (Same as Earth and Space Sciences M117.) Lecture, three hours; laboratory, three hours. Prerequisite: course 110. Recommended: a course in general geology. Limited enrollment. The fossil record of the evolution of the vertebrates, with emphasis on the morphology of primitive forms in the series from fish to mammal.
Mr. Vaughn (Sp)

M118. Paleobotany. (Same as Earth and Space Sciences M118.) Lecture, three hours; laboratory, three hours. Prerequisite: one course in biological science or consent of instructor. Recommended: Earth and Space Sciences 2 or equivalent. Survey of morphology, paleobiology and evolution of vascular and nonvascular plants during geologic time, and particular emphasis on major evolutionary events.
Mr. Schopf (Sp)

119. Mathematical Ecology. Lecture, three hours. Prerequisites: course 6, Mathematics 32A or consent of instructor; course 122 is recommended. Models of population growth and interspecies interactions, formulated as multidimensional, nonlinear differential or difference equations, are used to explore the structure and dynamics of ecological populations and communities. Mr. Vance

120. Evolutionary Biology. Lecture, three hours; laboratory, two hours. Prerequisite: completion of all courses listed under "Preparation for the Major"; Mathematics 31A, 31B, 32A are highly recommended. Recommended for Biology majors specializing in environmental and population biology. Introduction to the mechanics and processes of evolution with emphasis on natural selection, population genetics, speciation, evolutionary rates, and patterns of adaptation. Mr. Cody, Mr. Hespenheide (W)

121. Seminar in Ecology (½ course). Discussion, two hours. Prerequisites: course 120 or 122 and consent of instructor. Undergraduate seminar in ecology; reading and discussion of current research, including preparation of review paper or annotated bibliography. May be repeated twice for credit.
Mr. Hespenheide

122. Ecology. Lecture, three hours; laboratory, three hours. Prerequisite: completion of all courses listed under "Preparation for the Major"; Mathematics 31A, 31B, 32A are highly recommended. Recommended for Biology majors specializing in environmental and population biology. Introduction to population and community ecology, with emphasis on the growth and distribution of populations, interactions between species, and the structure, dynamics and functions of communities and ecosystems.
Mr. Cody, Mr. Vance (F)

123. Ecology of Marine Communities (1 or 2 courses). Prerequisites: course 122, approval for scuba diving from UCLA diving officer and consent of instructor; courses 105 and 112 are recommended. *This course will be offered either as a full quarter course for 4 units credit or in the Field Biology Quarter as a concentrated five-week course for 8 units credit.* Field study of the natural history and ecology of marine organisms and communities. Field work will involve scuba diving. Part of the course will be devoted to an independent research project.
Mr. Morin, Mr. Vance

124. Field Ecology (1 or 2 courses). Lecture, two hours; laboratory or field trip, ten hours. Prerequisites: course 120 or 122 and consent of instructor. Field and laboratory research in ecology, the collection, analysis and write-up of numerical data, with emphasis on design and execution of field studies. *The course may either be given as a quarter-long course with weekend field trips or as a single field trip conducted between quarters followed by lectures and tutorials for three weeks. When the course is given as part of the Field Biology Quarter, it will be 8 units and will last for five weeks.* Mr. Cody

125. Plant Population Ecology (1 or 2 courses). Lecture, two hours; laboratory, six hours; field trips. Prerequisites: course 120 and consent of instructor. *This course will be offered either as a full quarter course for 4 units credit or in the Field Biology Quarter as a concentrated five-week course for 8 units credit.* A study of ecological variation, structure, distribution and reproductive biology of plant populations emphasizing field studies of selected populations and ecosystems. Mr. Cody

126. Behavioral Ecology (2 courses). Lecture, two hours; discussion, two hours; laboratory, six hours. Prerequisites: courses 5, 6. Field and laboratory research in behavioral ecology, emphasizing communication behavior of animals. The design and execution of individual and small group field projects will be stressed. *This course is only offered as part of the Field Biology Quarter for 8 units of credit. An intensive field trip is an integral part of this course.* Mr. Narins

M127. Soils, Plants, and Society. (Same as Geography M127.) Lecture, three hours; field trip. Prerequisites: Chemistry 11A, 11B, 11C or equivalent or consent of instructor. A general treatment of soil development and morphology and the physical and chemical properties of soils as they relate to plant growth and distribution; soil resources, management, conservation and cultural aspects. Soil profiles examined on the field trip are used to explain developmental phenomena. Mr. Lunt

128. Plant Physiological Ecology (1 or 2 courses). Lecture, three hours; laboratory and field, three hours. A study of plant-environmental interactions under natural conditions. Emphasis is on transpiration and photosynthesis, leaf temperatures, and water movement in the soil-plant-atmosphere continuum. Individual student projects. *When the course is given as part of the Field Biology Quarter, it will be 8 units and the individual research project will be correspondingly expanded.* Mr. Nobel

129. The Behavior of Animals. Lecture, three hours; discussion, three hours. Prerequisite: course 111 or consent of instructor. Ecological significance, underlying mechanisms, and evolution of behavior, with special reference to animal sociology under natural conditions. Mr. Collias

130. Behavior Research Problems. Lecture, three hours; laboratory, two hours. Prerequisites: courses 5, 6 and consent of instructor. Systems controls and nonobtrusive sensing procedures for behavior studies in the laboratory and field. Rationale, design, and limitations of laboratory studies of behavior.
Mr. Kavanau

131. Insect Ecology (1 or 2 courses). Lecture, two hours; laboratory or field trip, eight hours. Prerequisites: course 120 or 122 and consent of instructor. Analysis of the ecological roles of insects in terrestrial communities, with emphasis on interactions with both plants and vertebrates. Students will perform group and individual field projects. *The course may either be given as a quarter-long course with weekend field trips or as part of the Field Biology Quarter. When given as part of the Field Biology Quarter, it will be 8 units and the amount of field work increased accordingly.* Mr. Greenfield, Mr. Hespenheide

135. Population Genetics. Lecture, three hours; discussion, one hour. Prerequisite: course 8; Mathematics 31A, 31B are highly recommended. Basic principles of genetics of population, dealing with the genetic structure of natural populations and the mechanisms of evolution. The course will cover equilibrium conditions and the forces altering gene frequencies, polygenic inheritance, and the methods of quantitative genetics. Mr. Taylor

136A-136B-136C. Seminar in Genetics (½ course each). Discussion, two hours. Prerequisites: course 8 and consent of instructor. Undergraduate seminar in genetics; reading and group discussion of current research in genetics. Mr. Siegel (F,W,Sp)

137. Morphogenesis. Lecture, three hours; discussion, one hour. Prerequisite: completion of Pre-Biology major. Study of embryonic development. Emphasis will be on the morphogenetic events in insect, avian, amphibian and mammalian species.

138. Developmental Biology. Lecture, three hours; discussion, one hour. Prerequisite: completion of all courses listed under "Preparation for the Major." Synopsis of fundamental concepts in embryology and a survey of current topics in developmental biology. Ms. Lengyel, Mr. O'Connor, Mr. Tobin

139. Introductory Laboratory in Developmental Biology. Lecture, two hours; laboratory, six hours. Prerequisites: course 138 and consent of instructor. Introductory course in developmental biology including cell and organ culture and biochemical analysis of developing systems.

140. Plant Development and Differentiation. Lecture, two hours; laboratory, four hours. Prerequisites: courses 5, 7 or consent of instructor. A study of the ontogeny of the vascular plant body and comparisons of that development among the major plant taxa; discussion of the concepts of plant development. Mr. Schroeder

141. Molecular Basis of Plant Differentiation and Development. Lecture, three hours; discussion, one hour. Prerequisites: courses 5, 7, 8. An in-depth study of the basic processes of development and the molecular aspects of the developmental process as it relates to the plant kingdom. A variety of developing systems will be discussed (protistons, fungi, lower and higher plants) with the goal of developing a unified concept of differentiation. Mr. Goldberg, Ms. Tobin (Sp)

142A-142B-142C. Seminar on Topics in Developmental Biology (½ course each). Discussion, two hours. Prerequisites: course 138 and consent of instructor. Undergraduate seminar on topics in developmental biology. Reading and group discussions of current research. Will be offered each quarter. Ms. Lengyel, Mr. O'Connor, Mr. Tobin

144. Molecular Biology. Lecture, three hours; discussion, one hour. Prerequisite: completion of all courses listed under "Preparation for the Major." Course 8 is strongly recommended. A course in molecular biology emphasizing the synthesis, structure, function and interactions of biological macromolecules. (F,W,Sp)

145A-145B-145C. Molecular Biology Laboratory. Laboratory, twelve hours. Prerequisite: consent of instructor. It is highly desirable that the student have already taken course 144. A course in experimental molecular biology in which the student carries out original research under supervision. Space available is limited, and arrangements must be made in advance with the instructor. Mr. Salser (F,W,Sp)

146. Physiochemical Biology. Prerequisites: courses 5, 7 or consent of instructor; Physics 6C or equivalent. A physiochemical analysis of the physiology of cells and organelles with emphasis on membranes, thermodynamics of solute and water movement, light absorption, and subcellular energy transduction. Mr. Nobel (F)

147. Biological Oceanography. Lecture, five hours; laboratory, fifteen hours (five-week intensive course). Prerequisites: completion of "Preparation for the Major" and consent of instructor. Lecture: physical, chemical, and biological factors affecting the composition and distribution of plankton. Natural history of major phytoplankton and zooplankton taxa; production in marine food chains; adaptation to pelagic habitat. Laboratory: systematics, morphology of major plankton taxa; experimental studies of local marine plankton with emphasis on measurement of feeding, primary and secondary productivity, and nutrient flux. Course to be given at the *Catalina Marine Science Center.* Mr. Muscatine

148. Biology of Marine Plants. (Formerly numbered 101.) Lecture, five hours; laboratory, fifteen hours. Prerequisites: "Preparation for the Major" and consent of instructor. An introduction to the general biology of marine algae: includes basics of structure reproduction, life histories, systematics and an introduction to the physiology and ecology of marine algae. Techniques in culture and laboratory investigation and utilization of algae. Course to be given at the *Catalina Marine Science Center.* Mr. Chapman

149. Plant Biochemistry and Photosynthesis. Lecture/discussion, four hours. Prerequisite: completion of all courses listed under "Preparation for the Major." A survey course emphasizing plant-specific biochemistry, including photosynthesis; nitrogen fixation and metabolism; sulfur metabolism; respiration; plant pigments, lipids, proteins and nucleic acids; the cell wall; terpenes; alkaloids and flavenoids. Mr. Thornber

150. Experimental Phycology and Mycology. Lecture, three hours; discussion, one hour; laboratory, six hours. Prerequisite: course 100 or equivalent or consent of instructor. Study of algae and fungi emphasizing basic concepts in such topics as photobiological phenomena, physiology of growth, nutrition and reproduction; physiological ecology. Laboratory includes isolation and culture techniques and experiments designed to introduce students to a wide range of experimental uses of algae and fungi. Mr. Chapman

152. Functional Plant Anatomy. Lecture, three hours; laboratory, six hours. Prerequisite: completion of all courses listed under "Preparation for the Major" or consent of instructor. The structure and functional significance of the various cell and tissue types in higher plants, plus the patterns of growth and differentiation in roots, stems, leaves, flowers, and fruits. Mr. D. Walker

153. Histology. Lecture, three hours; laboratory, four hours. Prerequisite: completion of all courses listed under "Preparation for the Major." An introduction to descriptive and functional histology, using light and electron microscope information. Discussion of histological research methods. (Sp)

154. Functional Ultrastructure of Cells and Tissues. Lecture, three hours; discussion, one hour. Prerequisites: course 5 or 7, Chemistry 21, 23, 25 or equivalent. Basic life processes at the supramolecular and molecular levels of cells. Functional significance of membrane structure, molecular basis of absorption, secretion and muscle contraction. Conventional and advanced methods in ultrastructural analysis, electron microscopy. Interpretations of structural information. Mr. Sjostrand

155. Analytical Microscopy and Cytology. Lecture, three hours; laboratory, three hours. Prerequisites: Physics 3A, 3B, 3C or 6A, 6B, 6C or equivalent or consent of instructor. A course designed for students in the biological sciences to acquaint them with quantitative cytology with emphasis on bright field, dark field, phase contrast, interference, polarization analysis, fluorescence microscopy and epi-illumination. Mr. James

CM156. Human Genetics. (Formerly numbered M134.) (Same as Biomathematics CM156.) Lecture, three hours; discussion, one hour. Prerequisites: course 8, Chemistry 25. The application of genetic principles in human populations with emphasis on cytogenetics, biochemical genetics, population genetics and family studies. Lectures and readings in the literature will focus on current questions in the fields of medical and human genetics, and the methodologies appropriate to answer such questions. Concurrently scheduled with course CM256. Mr. Merriam, Ms. Spence

157. Gene Manipulation: Genetic Engineering. Lecture, three hours. Prerequisite: course 144 or 136 or consent of instructor. A survey of the methods and applications of recombinant DNA research as applied to both basic scientific research and the biotechnology industry. Mr. Salser

158. Cell Biology (1½ courses). Lecture, three hours; laboratory, six hours. Prerequisites: completion of all courses listed under "Preparation for the Major." The cell biology of eukaryotic cells with emphasis on the correlation of structure and function at the molecular, organellar, and cellular levels. Mr. Cascarano, Mr. James, Mr. Simpson

162. Plant Physiology. Lecture, three hours; laboratory, one hour. Prerequisite: completion of all courses listed under "Preparation for the Major." Water movement within the plant body and between the plant and its environment. Soil genesis, characteristics and plant-soil interrelations. Salt movement across membranes and through tissues. Hormonal control of growth and development. Photomorphogenesis. Photoperiodism and flowering. Photochemical and physiological aspects of photosynthesis. Mr. Laties, Mr. Thornber (F)

163. Plant Physiology Laboratory. Lecture, one hour; discussion, one hour; laboratory, eight hours. Prerequisite: course 162. Students will be introduced to the instrumentation used in Plant Physiology research by performing experiments based on the lecture material in course 162. Subsequently, students working singly or in groups will undertake a research project of their own design. Limited enrollment.

166. Animal Physiology (1½ courses). Lecture, three hours; laboratory, five hours. Prerequisite: completion of all courses listed under "Preparation for the Major." An introduction to physiological principles with emphasis on organ systems and intact organisms. Students with credit for course 167 will not receive credit for this course.

167. Regulatory Physiology (1½ courses). Lecture, three hours; laboratory, five hours. Prerequisite: completion of all courses listed under "Preparation for the Major." An introduction to whole animal and organ physiology. Primary considerations are given to neuronal and endocrine regulation of body functions and integration of organ systems. Students with credit for course 166 will not receive credit for this course. Mr. Engelmann

168. Insect Physiology. Lecture, two hours; laboratory, six hours. Prerequisite: course 158 or 166 or equivalent. Survey of the physiology of insects with emphasis on functional adaptations. Mr. Engelmann

169. Comparative Physiology. Lecture, three hours; laboratory, four hours. Prerequisites: courses 158, 166. A detailed analysis of selected aspects of invertebrate and vertebrate physiology. Mr. Gordon

170. Physiological Ecology of Arthropods. Lecture, three hours; discussion, one hour. Prerequisite: course 166 or equivalent. The physiology of terrestrial arthropods in relation to their distribution and function in natural environments.

171. Principles of Neurobiology. Lecture, three hours; discussion, one hour. Prerequisite: course 166 or consent of instructor. An introduction to basic principles of neurobiology, including a description of the structure of neurons and nervous systems; the ionic mechanisms responsible for generating membrane potentials, action potentials, and synaptic potentials; the properties of synaptic transmission, the information transduction and coding in sensory pathways, and the neural control of movement; development of and trophic interactions between cells of the nervous system. Mr. Eckert, Mr. O'Lague

172A-172B. Introductory Laboratory in Neurophysiology. Laboratory, eight hours each. Prerequisite: course 171 or consent of instructor. Limited enrollment. Laboratory investigation of the function of central and peripheral nervous systems in invertebrates and vertebrates. Emphasis will be on electrophysiological approaches to basic neurophysiological problems. To be taken concurrently.
Mr. Eckert, Mr. O'Lague

173. Anatomy and Physiology of Sense Organs. Lecture, three hours; discussion, one hour. Prerequisite: course 171 or equivalent. The anatomy and physiology of the sense organs. Comparative aspects will be emphasized. Mr. Narins

177. Introductory General Endocrinology. Lecture, three hours; discussion, one hour. Prerequisites: course 158 or 166 or equivalent; one course in biochemistry. Principles of chemical integration in biological systems. Ms. Szego

179. Invertebrate Endocrinology. Lecture, three hours. Prerequisite: course 158 or 166 or consent of instructor. A comprehensive treatment of invertebrate endocrinology. Mr. Engelmann

180. Advanced Topics in General Endocrinology. Lecture, three hours; discussion, one hour. Prerequisite: course 177 or consent of instructor. Detailed consideration of selected mechanisms in endocrine control of growth and differentiation. Ms. Szego

181. Parasitology and Symbiosis (1½ courses). Lecture, three hours; laboratory, six hours. Prerequisites: courses 5, 7. An introduction to the principles, biology, and evolution of infectiousness, symbiosis, and parasitism, emphasizing protozoan and helminth parasites, including those of man. Mr. MacInnis

182. Experimental Parasitology. Laboratory, eight hours. Prerequisite: consent of instructor. Introduction to the use of parasites in experiments concerning basic biological problems and to problems concerning parasitism. Mr. MacInnis

M185. Immunology. (Same as Microbiology M185 and Microbiology and Immunology M185.) Lecture, three hours; discussion, one hour. Prerequisites: course 8, Chemistry 23, 25. Concurrent enrollment in Chemistry 152 or 156 is recommended. Introduction to experimental immunobiology and immunochemistry; cellular and molecular aspects of humoral and cell immune reactions.
Mr. Clark, Mr. Sercarz (F)

M186. Experimental Design in Immunology. (Same as Microbiology M186 and Microbiology and Immunology M186.) Laboratory, twelve hours. Prerequisites: course M185 and consent of instructor. This course will focus on a limited number of situations designed to train the student in organizing and evaluating immunological laboratory experiments. Must be taken concurrently with course M187.
Mr. Clark, Mr. Sercarz (W)

M187. Immunology Seminar (½ course). (Same as Microbiology M187 and Microbiology and Immunology M187.) Discussion, two hours. Prerequisites: course M185 and consent of instructor. Student presentation of selected papers from the immunology literature. Designed to serve as a forum for the critical analysis of research papers. Must be taken concurrently with course M186. Mr. Clark, Mr. Sercarz (W)

188. Seminar on Biology and Society (½ course). Prerequisite: consent of instructor. Investigations and discussions of current socially important issues involving substantial biological considerations, either or both as background for policy and as consequences of policy. Mr. Gordon, Ms. Tobin

190A-190D. Honors Research in Biology (½ to 1 course each). Prerequisites: senior standing and consent of undergraduate advisor. Individual research designed to broaden and deepen the student's knowledge of some phase of biology. Must be taken for at least two quarters and for a total of at least two courses. Grade will only be given upon completion of course 190B. Students may elect to enroll in additional research under courses 190C-190D for a letter grade. A report on progress must be presented to the undergraduate advisor each quarter a 190 course is taken. A maximum of eight units of 190 may be used to fulfill the requirements for the Biology major. (F,W,Sp)

199. Special Studies (½ to 4 courses). Prerequisites: consent of instructor and undergraduate advisor. This consent is based on a written proposal outlining the study or research to be undertaken. The proposal should be worked out in consultation with the instructor and submitted for approval to the Biology undergraduate advisor before the day instruction begins in that quarter. At the end of the quarter a report describing the progress of the study or research and signed by the student and the instructor must be presented to the Biology undergraduate advisor. No limit on credit, but students who wish to carry more than 8 units of 199 in any one quarter must obtain authorization from the departmental Chair and the appropriate Dean. Only one 199 course may be used to fulfill the requirements for the Biology major. (F,W,Sp)

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Biomathematics

(Office: AV-617 Center for Health Sciences

The Department of Biomathematics does not offer an undergraduate degree. The following upper division courses are offered with enrollment restrictions as indicated:

*Upper Division Courses

107. Introduction to Biomathematics in Genetics. Prerequisites: introductory genetics course and consent of instructor. A presentation of mathematical modeling in biology with specific reference to analysis of family data in genetics. Topics include linkage and polygenic inheritance. Ms. Spence

110. Elements of Biomathematics. Prerequisite: calculus. Analysis of deterministic models including some general approaches to the study of homeostasis. Conditions under which deterministic and probabilistic descriptions of biological phenomena are appropriate. Both approaches will be applied to selected examples in epidemiology and enzyme kinetics. Mr. Engel

M153. Introduction to Computational Statistics. (Same as Mathematics M153.) Prerequisite: Mathematics 150C or 152B or equivalent. Statistical analysis of data by means of package programs. Regression, analysis of variance, discriminant analysis, and analysis of categorical data. Emphasis will be on understanding the connection between statistical theory, numerical results, and analysis of real data.
Mr. Jennrich

CM156. Human Genetics. (Formerly numbered M134.) (Same as Biology CM156.) Lecture, three hours; discussion, one hour. Prerequisites: Biology 8, Chemistry 25. The application of genetic principles in human populations with emphasis on cytogenetics, biochemical genetics, population genetics and family studies. Lectures and readings in the literature will focus on current questions in the fields of medical and human genetics, and the methodologies appropriate to answer such questions. Concurrently scheduled with course CM256. Mr. Merriam, Ms. Spence

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

170A-170B-170C. Selected Biomathematical Topics for Researchers in Medicine and Biology. Prerequisite: none for course 170A; for courses 170B and 170C, elementary calculus. Basic techniques for examination of data, planning of experiments, comparison of theory and experiment. Commonly used models (e.g., compartment, transport) will be developed and used to illustrate the latter. Techniques include use of computer. P/NP or letter grade.

171A-171B. Selected Topics for Dental Researchers (½ course). Prerequisite: of particular interest to students in dentistry. Instruction in critical and efficient reading of the dental literature, experimental designs, analysis of data using BMD programs, and some basic modeling techniques. Review of modern biomathematical techniques in craniofacial research and other areas of interest to dentistry.

172. Design, Conduct and Analysis of Clinical Investigations (½ course). Lecture, two hours (five weeks only); discussion, two hours (five weeks only). Topics include: steps in bringing a possible therapy to clinical use; design of studies in animals to assess antitumor response; randomization, historical controls, p-values, size of study, stratification and points; ethics of human experimentation; informed consent; three phases of human studies; indications for various types of controls, prognostic factors, survivorship studies, design of prognostic studies; organization of a clinical trial — administration, comparability, protocols, nursing and clinical standards, data collection and management. P/NP only. Mr. Elashoff

190HA-190HB. Honors Research in Biomathematics. Prerequisites: upper division standing, consent of instructor and departmental Chair. Individual research in some aspect of biomathematics designed to acquaint the student in depth with mathematical models and computer applications in biology. Must be taken for at least two quarters and for a total of at least two courses. A thesis is required for completion of the final course.

199. Special Studies in Biomathematics (½ to 2 courses). Prerequisites: upper division standing and consent of instructor. Special studies in biomathematics, including either reading assignments or laboratory work or both, designed for appropriate training of each student who registers in this course.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Business and Administration (Interdepartmental)

(Office: 1312 Murphy Hall)

Additional Course Work Recommended for Students with an Interest in Business and Administration

The Program in Business and Administration is not a major, but a sequence of supplementa courses designed to prepare students for the complexities of a career in business and administration. Students complete one of the many majors in the College of Letters and Science, as well as the sequence of courses described below.

For example, students interested in international business might wish to major in a foreign language to become familiar with the literature and culture of other countries, and then add this program to gain a basic understanding of economics, accounting and statistics. Other students interested in working for a governmental agency or nonprofit corporation might wish to add this program to a social science major. Students with a particular interest in accounting, banking and finance are directed to the Economics/Business concentration within the Economics major. Students with an interest in a liberal arts area, who are not planning to go to graduate school, may wish to complete this program to prepare for a job in business while pursuing a major of their choice. (NOTE: This program may **not** be taken with an Economics major.)

Completion of this program in addition to a Letters and Science major will give students the basic skills and knowledge most employers seek, as well as preparation for a graduate school MBA degree. Courses used to satisfy either the major or breadth requirements may also be applied to the requirements of this program. Students who complete all 14 courses and who have maintained at least a "C" average in those courses may, upon petition, have a notation placed on their official transcript reading "with completion of additional course work recommended for students with an interest in Business and Administration."

Recommended Program

(1) A basic core of eight interdepartmental courses: Economics 1, 2; Management 1A-1B; Mathematics 50A (or other equivalent elementary statistics course); two courses chosen from English 4, 100W, 131, 136A, 136B, 136C, Speech 1; one course chosen from Mathematics 2, 3E, 4A (or any more advanced course). Core courses must be taken for a letter grade.

(2) A concentration of three courses in *one* of the following areas to build analytical skills:

Quantitative Methods: Engineering 10C or 10S or 10F, Computer Science 20, 30, 141, Economics 141, 147A, 147B, Psychology 142, 144, 150, 151, Sociology 109, 116.

Critical Reasoning: Philosophy 9, 21, 31, Engineering 11, 12, Psychology 112C.

Cognitive Science: Linguistics 1, 10, Psychology 110, 112A, 122, 123, 129C, Engineering M107A.

(3) A concentration of three courses in *one* of the following areas of social science:

Social Processes: Sociology 121, 125, 128, 141, 152, Psychology 137A, 148, 173.

Geography: Geography 145, 146, 148, 149, 150.

History: History 125E, 148A, 148B, 148C, 149A, 149B, 154B, 155A, 155B.

Politics and Administration: Political Science 123, 124, 142, 173, 174, 180, 182A, 182B, 185, 186.

Interested students should contact a Letters and Science counselor for program planning (825-3382).

Chemistry and Biochemistry

(Office: 3010 Young Hall)

Frank A. L. Anet, Ph.D., *Professor of Chemistry.*
Daniel E. Atkinson, Ph.D., *Professor of Biochemistry.*
Mario 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, Ph.D., *Professor of Chemistry.*
Herbert D. Kaesz, 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. Nicol, Ph.D., *Professor of Physical Chemistry.*
Howard Reiss, Ph.D., *Professor of Chemistry.*
Verne N. Schumaker, Ph.D., *Professor of Biochemistry and Molecular Biology.*
Robert L. Scott, Ph.D., *Professor of Physical Chemistry.*
Roberts 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, Ph.D., *Professor of Chemistry and Biochemistry.*
John T. Wasson, Ph.D., *Professor of Geochemistry and Chemistry.*
Charles A. West, Ph.D., *Professor of Biochemistry.*
Francis E. Blacet, Ph.D., D.Sc., *Emeritus Professor of Chemistry.*
Clifford S. Garner, Ph.D., D.Sc., *Emeritus Professor of Chemistry.*
E. Russell Hardwick, Ph.D., *Emeritus Professor of Chemistry.*
Thomas L. Jacobs, Ph.D., *Emeritus Professor of Chemistry.*
James D. McCullough, Ph.D., *Emeritus Professor of Chemistry.*
William G. Young, Ph.D., D.Sc., *Emeritus Professor of Chemistry.*
Jay D. Gralla, Ph.D., *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, Ph.D., *Associate Professor of Biochemistry and Molecular Biology.*
Charles E. Strouse, Ph.D., *Associate Professor of Chemistry.*
Richard L. Weiss, Ph.D., *Associate Professor of Biochemistry.*
Jeffery 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. Murdoch, Ph.D., *Assistant Professor of Chemistry.*
Wayne J. Thompson, Ph.D., *Assistant Professor of Chemistry.*
R. Stanley Williams, Ph.D., *Assistant Professor of Physical Chemistry.*

•

Sandra I. Lamb, Ph.D., *Lecturer in Chemistry.*
Lawrence H. Levine, Ph.D., *Lecturer in Chemistry.*
Arlene A. Russell, M.S., *Lecturer in Chemistry.*

Admission to Courses in Chemistry and Biochemistry

Regular and transfer students who have the prerequisites for the various courses are not thereby assured of admission to those courses. The department may deny admission to any course if a grade of "D" was received in a course prerequisite to that course, or if in the opinion of the department the student shows other evidence of inadequate preparation.

A student may not repeat a chemistry or biochemistry course if that student has credit for a more advanced course which has the first course as a prerequisite.

Preliminary Examination for Chemistry 11A

Students who wish to enroll in course 11A or in course 11AH must take the Chemistry/Mathematics Preliminary Examination in Chemistry *during the enrollment period for the quarter in which they intend to enroll in these courses.* Enrollment usually will be limited to students who have passed the examination. During 1982-83, the Preliminary Examination is scheduled on September 28, 1982, for the Fall Quarter; January 5, 1983, for the Winter Quarter; and March 30, 1983, for the Spring Quarter. These dates may be changed. The time and location of the examination will be posted on the First Year Chemistry Bulletin Board located near 1054 Young Hall (Chemistry Building) about two weeks before the announced date of the examination.

The Majors in Chemistry and Biochemistry

There are three majors available to the student interested in chemistry: the regular Chemistry major, the Biochemistry major and the General Chemistry major. Each of these programs is outlined below. Students may contact Dorothy Seymour, Undergraduate Counselor, for help and advice in the Chemistry and Biochemistry Undergraduate Office, 4016 Young Hall.

Courses taken to fulfill any of the requirements for any of the departmental majors must be taken for a letter grade and not on a Passed/Not Passed basis. Seminar courses, individual study courses and research courses (e.g.,

190, 191) may not be used to satisfy the requirements for the major in Chemistry, Biochemistry or General Chemistry.

Chemistry Major

For students who intend to pursue a career in chemistry.

Preparation for the Major: Chemistry 11A, 11B, 11BL, 11C, 11CL, 21, 23; Biochemistry 25; Physics 8A, 8B, 8C (8D strongly recommended); Mathematics 31A, 31B, 32A-32B, 33A (or former courses 31A-31B-31C, 32A, 32C). No specific foreign language is required; however, a reading knowledge of German (at least at the level of German 3) is strongly recommended for students planning to pursue graduate work in chemistry.

The Major: Chemistry 110A, 110B, 113A, 114 (or 114H), 133A, 133B, 133C, 173 and two other upper division or graduate courses in the department, including at least one laboratory course selected from 136, 144, 154, 174, 184.

Biochemistry Major

The major in Biochemistry is intended for students preparing for careers in biochemistry or in other fields requiring extensive preparation in both chemistry and biology.

Preparation for the Major: Chemistry 11A, 11B, 11BL, 11C, 11CL, 21, 23; Biochemistry 25; Mathematics 31A, 31B, 32A, 33A (or former courses 31A-31B-31C and either 32A or 32C); three courses from Physics 6A*, 6B, 6C, 8A, 8B, 8C, 8D; Biology 5, 8, 8L.

*If physics courses from both the 6 and 8 series are taken, undue duplication must be avoided.

The Major: Chemistry 133A, 133B, 133C, 110A; Biochemistry 156, 157A, 157B, 154; plus one course from each of the following five categories: (1) Microbiology 101; (2) one course from Biology 138, 140, 141, 153, 154, CM156, Microbiology 111; (3) one course from Biology 158, 162, 166, Microbiology 113; (4) one upper division or graduate-level course in biology, biological chemistry or microbiology; (5) one upper divsion or graduate-level course in biology, biological chemistry, chemistry, mathematics, microbiology or physics. Courses chosen to satisfy categories 4 and 5 must be approved by the Biochemistry undergraduate advisor.

General Chemistry Major

The major in General Chemistry is intended for students who wish to acquire considerable chemical background in preparation for careers outside chemistry. The requirements are accordingly quite flexible. It may be appropriate for some students who plan to enter professional schools, such as those of medicine, dentistry or public health.

Preparation for the Major: Chemistry 11A, 11B, 11BL, 11C, 11CL, 21, 23; Biochemistry 25; Mathematics 31A, 31B, 32A, 33A (or former courses 31A-31B-31C and either 32A or 32C); three courses from Physics 6A*, 6B, 6C, 8A, 8B, 8C, 8D.

*If physics courses from both the 6 and 8 series are taken, undue duplication must be avoided.

The Major: Six upper division courses in the department, including at least one in physical chemistry and at least two with laboratory work; six additional upper division courses. A 2.0 average is required in all upper division courses in the department. The program should be coherent in terms of the student's interests and objectives and must be based on a written proposal and approved by the Chemistry undergraduate advisor.

Transfer Students

Transfer students with more than 84 quarter units will be accepted into the departmental majors only if they have completed the equivalent of Chemistry 11A, 11B, 11BL, 11C, 11CL and Mathematics 31A, 31B, 32A. *Recommended: organic chemistry and one year of calculus-based physics.*

An entering transfer student who has satisfactorily completed a year course (including laboratory) in general college chemistry intended for science and engineering students should enter course 21. Transfer students should consult the Chemistry and Biochemistry Undergraduate Office for assistance in planning their programs.

Lower Division Courses

A. Introduction to Chemical Problem Solving (No credit). Lecture and discussion, four hours. Chemistry A displaces 4 units on the student's Study List but yields no credit toward a degree. Enrollment is offered only on a P/NP basis. Prerequisite: either Mathematics 1A (grade of "B" or better) or two years of high school mathematics (grade of "B" or better) or Mathematics 1B (grade of "C" or better) or three years of high school mathematics (grade of "C" or better). Admission may be restricted to students who have taken the Preliminary Exam for Chemistry. An introduction to the problem-solving techniques used in general chemistry, including logarithms, exponential notation, simple functional relationships, and word problems in a chemical context. This is not an introductory course in general chemistry.

2. Introductory Chemistry. Lecture and discussion, four hours. This course is designed to meet part of the College of Letters and Science requirements for nonscience majors and similar requirements in other Colleges. The course deals with the concept of the submicroscopic world of chemistry and ranges from protons to proteins in subject matter. Not open to students with credit for course 11A. Refer to the "College of Letters and Science" section of this catalog for other credit limitations on this course.

Mr. Farrington, Mr. Hardwick (F,W,Sp)

11A. General Chemistry. Lecture, four hours; discussion, one hour. Prerequisites: high school chemistry or equivalent background and three and one-half years of high school mathematics. High school physics recommended. (Students lacking the prerequisites may qualify for admission by exceptional performance on the Chemistry/Mathematics Preliminary Examination.) All students who intend to take this course must take the Chemistry/Mathematics Preliminary Examination that is normally given within 10 days before instruction begins. Enrollment is usually limited to students who have passed the examination. Students appearing for the examination must be prepared to identify themselves. This course, as well as some of the succeeding first-year courses (11B, 11BL, 11C, 11CL), is required of all majors in Chemistry and Biochemistry and many other fields of science and technology. Atomic theory and stoichiometry; states of matter and phase equilibrium; gases; liquids and solutions; acids, bases, and salts; equilibria in gases and solutions; solubility and solubility equilibria; oxidation and reduction.

Mr. Baur, Mr. Hardwick, Mr. Trueblood (F,W,Sp)

11AH. General Chemistry — Honors Sequence. Lecture, four hours; discussion, one hour. Prerequisites: high school chemistry or equivalent background and three and one-half years of high school mathematics. High school physics recommended. (Students lacking the prerequisites may qualify for admission by exceptional performance on the Chemistry/Mathematics Preliminary Examination.) All students who intend to take this course must take the Chemistry/Mathematics Preliminary Examination that is normally given within 10 days before instruction begins. Enrollment is usually limited to students who have passed that examination. An honors course parallel to course 11A. Mr. Gelbart, Mr. Knobler (F)

11B. General Chemistry. Lecture, three hours; discussion, one hour. Prerequisite: course 11A/11AH with a grade of "C–" or higher or consent of instructor. Thermochemistry and thermodynamics; electrochemistry; chemical kinetics; quantum theory and electronic structure of atoms; periodicity of chemical properties.

Mr. Kivelson, Mr. Kaesz, Mr. McTague (F,W,Sp)

11BH. General Chemistry — Honors Sequence. Lecture, three hours; discussion, one hour. Prerequisites: course 11AH with a grade of "B–" or higher or course 11A and consent of instructor. An honors course parallel to course 11B. (F)

11BL. General Chemistry Laboratory (¼ course). Laboratory, four hours. Prerequisite: course 11A with a grade of "C–" or higher or consent of instructor. Course 11B must be taken concurrently or must already have been passed with a grade of "C–" or higher. Enrollment priority, if needed, will be given to those taking course 11B concurrently. Use of the balance; volumetric techniques; equilibria; thermochemistry; and quantitative analysis using volumetric and potentiometric procedures; Beer's Law. (F,W,Sp)

11C. General Chemistry (¾ course). Lecture, two hours. Prerequisite: course 11B/11BH with a grade of "C–" or higher or consent of instructor. Bonding and molecular structure; descriptive inorganic chemistry, presented in terms of the principles discussed in courses 11A and 11B.

11CH. General Chemistry — Honors Sequence (¾ course). Lecture, two hours. Prerequisites: course 11BL with a grade of "B–" or higher or course 11B and consent of instructor. An honors course parallel to course 11C. Mr. El-Sayed, Mr. Kasper (Sp)

11CL. General Chemistry Laboratory (½ course). Laboratory, eight hours. Prerequisite: course 11BL with a grade of "C–" or higher. Course 11C must be taken concurrently or must already have been passed with a grade of "C–" or higher. Enrollment priority, if needed, will be given to those taking course 11C concurrently. Rates of reactions; quantitative volumetric analysis; qualitative inorganic analysis; inorganic synthesis; column chromatography; colorimetric analysis. (F,W,Sp)

15. Organic and Biochemistry for Prenursing and Kinesiology. Lecture and discussion, four hours. Prerequisite: course 11A with a grade of "C–" or higher. Recommended for students in certain areas of kinesiology and in the prenursing, prephysical therapy and predental hygiene curricula. An introduction to the structures and reactions of organic compounds, particularly with respect to their roles and their transformations in living systems. This course does not meet requirements for admission to medical or dental schools nor does it satisfy the requirements of any major in the College of Letters and Science other than certain areas of kinesiology. (F)

15L. Chemistry Laboratory for Prenursing and Kinesiology (¼ course). Laboratory, four hours. Prerequisite: course 15 must be taken concurrently or must already have been completed with a grade of "C–" or higher. An introduction to quantitative work with aqueous solutions and to the preparation, isolation, and characterization of organic compounds, particularly some of those important in living systems. This course does not meet requirements for admission to medical or dental schools. (F)

21. Organic Structure and Reactions. Lecture and discussion, four hours. Prerequisites: courses 11C and 11CL (11CL may be taken concurrently) with grades of "C–" or higher or consent of instructor. Structure, reactivity, and properties of organic compounds. The theory of functional groups, chemical bonds, molecular structure, and stereochemistry of organic compounds.

Mr. Cram, Mr. Murdoch, Mr. Stevens (F,W,Sp)

23. Bioorganic Structure and Reactions. Lecture, three hours; discussion, one hour; laboratory, four hours. Prerequisites: courses 11CL and 21 with grades of "C–" or higher or consent of instructor. Organic structures and reactions of biochemical interest. The classes of compounds most important to biological functions: amino acids, carbohydrates, etc. Sulfur, phosphorous, and anhydride chemistry. Methods of separation, purification and analysis of organic compounds: extraction, crystallization, distillation, and chromatography.

Mr. Clarke, Ms. Lamb, Mr. Stevens

25. Elementary Biochemistry. Lecture, three hours; discussion, one hour; laboratory, four hours. Prerequisite: course 23 with a grade of "C–" or higher or consent of instructor. Protein structure and function; enzyme catalysis; intermediary metabolism; cell constituents; properties and biosynthesis of nucleic acids and proteins. Purification and characterization of biological macromolecules; spectrophotometry; catalysis; enzyme kinetics; gel filtration and paper chromatography; viscosity; utilization of radioisotopes. Mr. Atkinson, Mr. Gralla, Mr. Weiss (F,W,Sp)

96. Special Courses in Chemistry (¼ to 1 course). To be arranged. Prerequisite: consent of Chemistry undergraduate advisor. (F,W,Sp)

*Upper Division Courses

103. Environmental Chemistry. Prerequisites: courses 21, 23, 25 or consent of instructor. Chemical aspects of air and water pollution, solid waste disposal, energy resources, and pesticide effects. Chemical reactions in the environment, and the effect of chemical processes on the environment. Mr. Baur (Sp)

110A. Physical Chemistry: Chemical Thermodynamics. Lecture, four hours; discussion, one hour. Prerequisites: Chemistry 11C, Physics 8B or 6C (may be taken concurrently), Mathematics 31A, 31B, 32A (or former course 31C) or, for life science majors, Mathematics 3C. (An understanding of partial differentiation such as that obtained in Mathematics 32A or 3C is very desirable.) Properties of gases; laws of thermodynamics; free energy; entropy; chemical potential and chemical equilibrium; thermodynamics of solutions. Mr. Baur, Mr. McMillan, Mr. Nicol (F,W,Sp)

110B. Physical Chemistry: Chemical Equilibrium, Electrochemistry, and Kinetics. Lecture, four hours; discussion, one hour. Prerequisites: Chemistry 110A, Physics 8C. Introduction to statistical thermodynamics, kinetic theory of gases, chemical kinetics, phase equilibria, chemical equilibria in solutions, electrochemistry. Mr. McTague, Mr. Trueblood (W,Sp)

110C. Physical Chemistry: Charges, Fields and Matter. Lecture and discussion, four hours. Prerequisite: course 110A. Selection of topics from: Electromagnetic fields in matter—susceptibilities, molar polarization and refraction, multipoles, van der Waals forces; classical EM waves—propagation, refraction, scattering, absorption, optical rotation and rotatory dispersion, magnetic effects; Radiation—multipoles, black-body, Einstein coefficients, lasers; Scattering and diffraction—Rayleigh, Mie, Raman, X-ray, electron, neutron, nuclear—by particles, molecules, lattices; resonance phenomena—light, EPR, NMR, NQR, Mössbauer; Electrolytes—ion activity, conductivity, rate effects. Mr. McMillan (Sp)

113A. Physical Chemistry: Introduction to Quantum Chemistry. Lecture, four hours; discussion, one hour. Prerequisites: Chemistry 11C, Physics 6C or 8C, Mathematics 31A, 31B, 32A, 33A (or former courses 31C *and* 32C). An introduction to the principles and applications of quantum chemistry; atomic structure and spectra; harmonic oscillator; rigid rotor, molecular spectra. Mr. Gelbart, Mr. McTague (F,Sp)

C113B. Physical Chemistry: Introduction to 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, microwave, ESR, NMR, laser spectroscopy and radiationless transitions. May be concurrently scheduled with course C213B.

Mr. Bayes, Mr. Kasper

114. Physical Chemistry Laboratory. Lecture, two hours; laboratory, eight hours. Prerequisites: courses 11CL, 110A, 110B, 113A or consent of instructor. Lecture: techniques of physical measurement, error analysis and statistics, special topics. Laboratory: spectroscopy, thermodynamic measurements, and chemical dynamics.

Mr. Bayes, Mr. Kasper, Mr. Scott (F,W,Sp)

114H. Physical Chemistry Laboratory — Honors Course. Lecture, two hours; laboratory, eight hours. Prerequisites: courses 11CL, 110A, 110B, 113A with grades of "B" or better or consent of instructor. Lecture: techniques of physical measurement, error analysis and statistics, special topics. Laboratory: topics in physical chemistry to be selected in consultation with the instructor. Mr. Bayes, Mr. Nicol, Mr. Strouse

C115A-C115B. Quantum Chemistry. Lecture, four hours; discussion, one hour. Prerequisites: course 113A, Mathematics 31A, 31B, 32A-32B, 33A (or former courses 31C *and* 32C). Recommended: knowledge of differential equations equivalent to Mathematics 135A or Physics 131 and of analytic mechanics equivalent to Physics 105A. Course C115A or Physics 115B is prerequisite to C115B. Postulates and systematic development of nonrelativistic quantum mechanics; expansion theorems; wells; oscillators; angular momentum; hydrogen atom; matrix techniques; approximation methods; time dependent problems; atoms; spectroscopy; magnetic resonance; chemical bonding. Students entering course C115A will normally be expected to take course C115B the following quarter. These two courses are designed for chemistry students with a serious interest in quantum chemistry. May be concurrently scheduled with courses C215A-C215B.

Mr. Gelbart, Mr. Heller

***[1]121. Special Topics in Physical Chemistry.** Prerequisite: course 110B (course 113A and Physics 8D recommended). Each offering of the course covers several topics that are of considerable research interest and will be presented at a level suitable for students who have completed the junior year courses in physical chemistry. (Sp)

C123A-C123B. Classical and Statistical Thermodynamics. Lecture, four hours; discussion, one hour. Prerequisite: course 110B or 156 (course 113A recommended). Rigorous presentation of the fundamentals of classical thermodynamics. Principles of statistical thermodynamics: probability, ensembles, partition functions, independent molecules and the perfect gas. Applications of classical and statistical thermodynamics selected from diatomic polyatomic gases, the solid and fluid states, phase equilibria, electric and magnetic effects, ortho-para hydrogen, chemical equilibria, reaction rates, the imperfect gas, nonelectrolyte and electrolyte solutions, surface phenomena, high polymers, gravitation. May be concurrently scheduled with courses C223A-C223B. Mr. Knobler, Mr. Scott

***[1][2]125. Computers in Chemistry.** Lecture, three hours. Prerequisites: courses 110A, 110B, 113A and a working knowledge of FORTRAN IV or PL/1. Discussion of computer techniques, including matrix manipulation, solution of differential equations, data acquisition and instrumental control, and their applications to chemical problems in quantum mechanics, thermodynamics, and kinetics.

Mr. Kasper, Mr. Levine (F)

133A. Intermediate Organic Chemistry. Lecture and quiz, three hours; laboratory, four hours. Prerequisites: courses 21, 23, 25 (25 may be taken concurrently) with grades of "C" or higher or consent of instructor. Lecture: Structure, reactivity and spectroscopic properties of organic compounds. Laboratory: Methods of organic reactions, synthesis, isolation and characterization.

Mr. Chapman, Mr. Murdoch (F,W)

133AG. Intermediate Organic Chemistry (½ course). Lecture and quiz, three hours. Open only by consent of the Chemistry graduate advisor to graduate students who have not taken course 133A at this institution. Mr. Chapman, Mr. Murdoch (F,W)

133B. Intermediate Organic Chemistry. Lecture and quiz, three hours; laboratory, four hours. Prerequisite: course 133A with a grade of "C–" or higher. Lecture: Reactions, mechanisms and synthesis in organic chemistry; common classes of compounds and reactions. Laboratory: Methods of organic reactions, synthesis, isolation and characterization.

Mr. Chapman, Mr. Murdoch (W,Sp)

133BG. Intermediate Organic Chemistry (½ course). Lecture and quiz, three hours. Open only by consent of the Chemistry graduate advisor to graduate students who have not taken course 133B at this institution. Mr. Chapman, Mr. Murdoch (W,Sp)

133C. Intermediate Organic Chemistry. Lecture and quiz, three hours; laboratory, four hours. Prerequisite: course 133B with a grade of "C–" or higher. Lecture: Reactions, mechanisms and synthesis in organic chemistry; complex molecules and natural products; polymers. Laboratory: Methods of organic reactions, synthesis, isolation and characterization.

Mr. Chapman, Mr. Murdoch (F,Sp)

133CG. Intermediate Organic Chemistry (½ course). Lecture and quiz, three hours. Open only by consent of the Chemistry graduate advisor to graduate students who have not taken course 133C at this institution. Mr. Chapman, Mr. Murdoch (F,Sp)

136. Organic Structural Methods. Lecture, two hours; laboratory, eight hours. Prerequisites: courses 133A, 133B, 133C or equivalent with grades of "C–" or higher or consent of instructor. A laboratory course in organic structure determination by chemical and spectroscopic methods; microtechniques.

Mr. Foote (F)

C143A. Structure and Mechanism in Organic Chemistry. Lecture, three hours; discussion, one hour. Prerequisites: courses 133C (may be taken concurrently), 110B, 113A or equivalent with grades of "C–" or higher or consent of instructor. Mechanisms of organic reactions. Acidity and acid catalysis; linear free energy relationships; isotope effects. Molecular orbital theory; photochemistry; pericyclic reactions. May be concurrently scheduled with course C243A. Mr. Chapman

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

C143B. Mechanism and Structure in Organic Chemistry. Lecture, three hours; discussion, one hour. Prerequisite: course C143A with a grade of "C – " or higher or consent of instructor. Mechanisms of organic reactions; structure and detection of reactive intermediates. May be concurrently scheduled with course C243B. Mr. Chapman, Mr. Stevens

144. Laboratory Methods in Organic Synthesis. Lecture, two hours; laboratory, eight hours. Prerequisite: course 133C or equivalent instruction including spectroscopic methods of organic chemistry with a grade of "C – " or higher or consent of instructor. Laboratory methods of synthetic organic chemistry including reactions under inert atmosphere, semimicroscale reaction techniques, synthesis of natural products and molecules of theoretical interest.
Mr. Jung (Sp)

144G. Laboratory Methods in Organic Synthesis (½ course). Lecture, two hours. Consists of the lecture portion *only* of course 144. Open only by consent of the Chemistry graduate advisor to graduate students who have not taken course 144 at this institution and who do not wish to take the laboratory portion of course 144. Mr. Jung

152. Biochemistry. Lecture, four hours; discussion, one hour. Prerequisite: course 25. Survey of biochemistry. May not be used in the Chemistry or Biochemistry major. Not open to students with credit for course 157A. Mr. Boyer (F)

154. Biochemical Methods. Lecture and quiz, two hours; laboratory, eight hours. Prerequisite: course 25; course 157A or 152 recommended. Applications of biochemical procedures to metabolic reactions; properties of living systems; enzymes; proteins; nucleic acids and other tissue constituents.
Mr. Gralla, Mr. Jordan, Mr. Schumaker (F,W,Sp)

156. Physical Biochemistry. Lecture, four hours; discussion, one hour. Prerequisite: course 110A. Solution thermodynamics and electrochemistry of biochemical systems; enzyme kinetics; physical biochemistry of proteins and membranes.
Mr. Eisenberg, Mr. Reisler, Mr. Schumaker (F,Sp)

157A. Biochemistry. Lecture, four hours; discussion, one hour. Prerequisites: courses 156, 133B (133B may be taken concurrently). Enzymes; metabolic pathways and their integration and regulation; biological energetics. Mr. Atkinson, Mr. Jordan (W)

157B. Biochemistry. Lecture, four hours; discussion, one hour. Prerequisite: course 157A. Biosynthetic metabolism; synthesis of nucleic acids and proteins, and control of these processes.
Mr. Atkinson, Mr. Clarke, Mr. Jordan (Sp)

173. Structural Inorganic Chemistry. Lecture, three hours. Prerequisites: courses 113A, 110A (110A may be taken concurrently); course 133B recommended. Introductory survey of structure and bonding in inorganic compounds; molecular stereochemistry; donor-acceptor interactions; coordination compounds of the transition metals; elements of crystal field and ligand field theory.
Mr. Hawthorne, Mr. Kaesz, Mr. Zink (F,Sp)

174. Inorganic and Metalorganic Laboratory Methods. Lecture, two hours; laboratory, eight hours. Prerequisites: courses 173, 133A or consent of instructor. Synthesis of inorganic compounds including air-sensitive materials; dry-box, vacuum line and high-pressure techniques; Schlenck methods; chromatographic and ion exchange separations.
Mr. Hawthorne, Mr. Kaesz (W)

C175. Inorganic Reaction Mechanics. Lecture, three hours. Prerequisites: courses 110A, 110B, 113A or equivalent. Survey of inorganic reactions; mechanistic principles; electronic structure of metal ions; transition-metal coordination chemistry; inner- and outer-sphere and chelate complexes; substitution, isomerization and racemization reactions; stereochemistry; oxidation — reduction, free — radical, polymerization and photochemical reactions of inorganic species. May be concurrently scheduled with course C275. Mr. Hawthorne

C176. Group Theory and Applications to Inorganic Chemistry. Lecture, three hours. Prerequisites: courses 113A, 173. Group theoretical methods; molecular orbital theory; ligand field theory; electronic spectroscopy; vibrational spectroscopy. May be concurrently scheduled with course C276A.
Mr. Strouse, Mr. Zink

184. Chemical Instrumentation. Lecture and quiz, two hours; laboratory, eight hours. Prerequisite: course 110A. Theory and practice of instrumental techniques of chemical and structural analysis including atomic absorption spectroscopy, gas chromatography, mass spectrometry, nuclear magnetic resonance, polarography, x-ray fluorescence and other modern methods.
Mr. Strouse, Mr. Wasson (F,Sp)

190. Undergraduate Thesis Research. Prerequisites: two quarters of Chemistry 199 on related material and approval of the undergraduate advisor and research director. Final quarter of an integrated one-year research project. Can consist of experimental and/or theoretical research or, in some cases, a comprehensive review of a given area. A thesis embodying the totality of the year's work is to be submitted, and an oral presentation will be made. This course is suggested, but not required, for those seeking departmental honors at graduation. (F,W,Sp)

196. Special Courses in Chemistry (¼ to 1 course). To be arranged. Prerequisite: consent of Chemistry undergraduate advisor. (F,W,Sp)

199A-199ZZ. Directed Individual Study or Research for Undergraduate Students (½ to 2 courses). To be arranged with faculty member who will direct the research. Prerequisites: advanced junior standing with a 3.0 GPA or senior standing in the major and consent of departmental Chair. A proposal must be received one week prior to the first day of the quarter. Graded on P/NP basis only. Additional details on requirements and application may be obtained from the undergraduate counselor, 4016 Young Hall.
(F, W, Sp)

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Chemistry/Materials Science (Interdepartmental)

(Office: 6531 Boelter Hall)

Major in Chemistry/Materials Science

This major is designed for students who are interested in solid state chemistry, the preparation of engineering materials such as semiconductors, glasses, ceramics, metals and polymers, the reactivity of such materials in different environments and how chemical compositions affect properties. It provides appropriate preparation for graduate studies in many fields emphasizing interdisciplinary research involving chemistry, engineering and applied science.

Preparation for the Major

Mathematics 31A, 31B, 32A-32B, 33A (this is the revised calculus sequence; students who have completed 31C must complete the old sequence — 31A-31B-31C, 32A-32B-32C), Physics 8A, 8B, 8C, 8D, Engineering 10C or 10F, 14, Chemistry 11A or 11AH, 11B or 11BH, 11C or 11CH, 11BL or 11CL, 21 (may be replaced by 133A if offered as part of the major), English 3.

The Major

Chemistry 110A, 110B, 113A, C113B or C115A-C115B, 114, 173, one or two courses from C123A, C123B, 133A, 133B, 133C, 174, C175, C176; Engineering 144A, 146A, 147A, three to four courses from 140D, 141, 142A, 143A, 145A, 145B, 146F, 147B, 147E, two courses from 142L, 144L, 146L.

For further information, contact Professor John D. Mackenzie, Engineering/Materials Science, 6531 Boelter Hall (825-3539).

Chicano Studies (Interdepartmental)

(Office: 3121 Campbell Hall)

Major in Chicano Studies

This multidisciplinary program leading to the Bachelor of Arts degree in Chicano Studies is designed to provide systematic instruction for liberal arts and preprofessional majors who wish concentrated study of the Chicano experience. Viewed as developmental, the program subjects the Chicano reality to critical investigation and analysis, including the social, economic, educational, historical, political and psychological analysis of the Chicano.

This major is recommended for students who plan to prepare themselves for graduate study, as well as students preparing for public service careers. Students are encouraged to spend up to one year in either (a) a service agency in the Chicano community or (b) in a professional research project on the Chicano experience.

Preparation for the Major

One course from each of the following departments: Anthropology 22, 5 or 6; Economics 1 or 2; History 6A, 6B or 6C; Political Science 1; Sociology 1; Spanish 5 or its equivalent. Students must complete prerequisites for all courses selected.

The Major

This consists of three elements, one of which is optional (students must complete prerequisites for all courses in the major):

(1) *Major Core* (eight courses): Education 102; English 105; History 159A-159B, 197; Political Science 147; Sociology 124* or 155*; Spanish 141* or M149*.

(2) *Major Concentration:* Four courses in one discipline selected from the following: Anthropology 115P, 135P, 135Q, 136P, 138, M140, 150, 154, 166, 167, 185; Economics 110, 120, 121, 150, 151, 152, 172; English 104, 106, 171, 172, 173, 174, 188, 189, 190; History 147B, 153, 154B, 160, 162, 163; Political Science 115, 142, 149, 171, 172B, 173, 174, 181, 182A, 186, 190, 191; Psychology 127, 130, 134, 135, 136A, 137A, 137B, 137C, 143, 175; Sociology 109, 113, 120, 123, 125, 140, 142, M143 and 155* or 124*; Spanish 100, 103, 105, 109, 115, M118, 121A, 121B, 137, 139, 142A, 142B and 141* or M149*. The student may petition the Committee in Charge of the Major to include in the Major Concentration area a course not on the approved list. CED courses may be applied by petition.

*Course may not be used for both the Major Core and Major Concentration.

(3) *Optional Multidisciplinary Senior Thesis:* Prerequisite: senior standing. Chicano Studies majors will have the option during their senior year to enroll in two 199 courses in their Major Concentration area, with the intention of producing a Chicano Studies undergraduate thesis related to the Major Concentration. Enrollment in the two 199 courses will be with the advice and consent of a faculty member. The first quarter course will include thesis conceptualization and formulation, along with preliminary data collection for the thesis. The second quarter course will entail completion of the data collection, analysis of the data and termination of the thesis. The Multidisciplinary Senior Thesis is optional.

Course Limitations

Not more than two 199 courses may be applied on the Major Concentration; 199 courses applied on the Multidisciplinary Senior Thesis option may not also be used on the Major Concentration area. Registration in special studies courses (199) must be approved by the departmental Chair and either the Chair or advisor for the Chicano Studies major in writing. Not more than two CED courses may be applied on the Major Concentration.

For further information, contact Dr. Carlos Haro, Chicano Studies Research Center, 3121 Campbell Hall (825-2363).

Classics

(Office: 7349 Bunche Hall)

Philip Levine, Ph.D., *Professor of Classics.*
Bengt T. M. Löfstedt, Ph.D., *Professor of Mediaeval Latin (Chair).*
Jaan Puhvel, Ph.D., *Professor of Classics and Indo-European Studies.*
Milton V. Anastos, Ph.D., *Emeritus Professor of Byzantine Greek and History.*
Paul A. Clement, Ph.D., *Emeritus Professor of Classics and Classical Archaeology.*
Albert H. Travis, Ph.D., *Emeritus Professor of Classics.*
Ann L. T. Bergren, Ph.D., *Associate Professor of Classics.*
Bernard D. Frischer, Ph.D., *Associate Professor of Classics.*
Michael W. Haslam, Ph.D., *Associate Professor of Classics.*
Steven Lattimore, Ph.D., *Associate Professor of Classics and Classical Archaeology.*
David L. Blank, Ph.D., *Assistant Professor of Classics.*
Andrew R. Dyck, Ph.D., *Assistant Professor of Classics.*
Thomas N. Habinek, Ph.D., *Assistant Professor of Classics.*
Katharine C. King, Ph.D., *Assistant Professor of Classics and Comparative Literature.*

•

Helen C. Caldwell, M.A., *Emeritus Senior Lecturer in Classics.*
Barbara E. Killian, M.A., *Emeritus Lecturer in Classics.*
Evelyn Venable Mohr, M.A., *Emeritus Senior Lecturer in Classics.*

Major Fields in the Department

The student may take the major in Classical Civilization, in Greek, in Latin or in the Classics (i.e., Greek and Latin). Students considering a major in the department should consult the advisor as soon as possible in their University career, but in no case later than the point at which they are about to take upper division courses.

The Major in Classical Civilization

The purpose of the Classical Civilization major is to enable students to acquire a balanced, yet focused, view of the ancient civilizations of Greece and Rome, both historically unique and universally typical human creations. The approach to the subject is accordingly both causal and comparative. The areas of study include the elements of culture — religion, mythology, philosophy, art, literature, language, the socioeconomic system and politics. The requirements of the major encourage both breadth and depth: eight of the fourteen upper division requirements (four from this department and four from other departments) must be satisfied through course work in one of the four areas of concentration listed below; the remaining six upper division courses taken in this department may be chosen to reflect the student's varied interests in the areas outside of his concentration. The culmination of the program will be a senior paper, which will be written sometime during the student's senior year under the supervision of one of his professors and which will enable the student to demonstrate his grasp of both the scholarship in his area of concentration and the interdisciplinary approach fostered by this major. While this major is not designed to qualify the student for graduate study in classics, it does not preclude a transition to advanced study in classics or related fields.

Preparation for the Major

Classics 10 and 20. Note also prerequisites for related courses in other departments.

The Major

Required: (1) Classics 195 (Senior Paper) and nine upper division courses in this department, of which no more than three may be chosen from either Greek 100-130 or Latin 100-150 and of which four must be selected from the courses listed below under any one of the four areas of concentration; (2) any four *related courses* in other departments listed below in the student's chosen area of concentration. Total required: 14 courses.

Areas of Concentration

(1) Language and Society: Classics 180 (prerequisites: Greek 1-3 and Latin 1-3), three courses from either Latin 100-150 or Greek 100-130. *Related courses:* Anthropology M140, Communication Studies 100, Linguistics 100, M150, 170, Philosophy 127A, 127B, 172.

(2) Religion and Mythology: Classics 150, 161, 162, 166A, 166B, 168. *Related courses:* Anthropology 133P, 156, English M111A, Ancient Near East 170, 171.

(3) Literature and Society: Classics 141, 142, 143, 150, 162. *Related courses:* Humanities 102, C105, C107, C111, Anthropology 133R, 150, 152, 154, M163, 185, Communication Studies 100, 142, English 109, 190, History 115A-115B-115C, 116A-116B, 117A-117B, 118, Philosophy 101A, 101B, 102, Political Science 111A, Sociology 125, 159, Theater Arts 102A, 102D.

(4) Ancient Art, Architecture and Urbanistics: Classics 150, 151B, 151C, 151D (new courses are under study and will be added). *Related courses:* Art 103A, 103B, 103C, 103D, 105A, Geography 151, Sociology 125, same History and Anthropology courses as above under 3.

Preparation for the Other Majors

Required: Greek 1, 2, 3 and Latin 1, 2, 3 or equivalent.

The Major in Greek

Required: (1) Nine upper division courses in Greek, including Greek 110; (2) one upper division course in Latin; (3) Classics 142 and

either Classics 141 or 143; (4) two courses in Greek or Roman history (History 115B-115C, 116A-116B, 117A-117B); (5) two additional courses in one or two of the related areas: classical archaeology (Classics 151A, 151B, 151C, 151D), classical linguistics (Classics 180), classical mythology (Classics 161, 162, 168), Greek and Roman religion (Classics 166A, 166B), ancient philosophy (Philosophy 101, 102, Greek 121, 122, 123, 124), Byzantine civilization (Classics M170A, M170B), medieval Latin literature (Latin 131, 133). Total required: 16 courses.

The Major in Latin

Required: (1) Nine upper division courses in Latin, including Latin 110; (2) one upper division course in Greek; (3) Classics 143 and either Classics 141 or 142; (4) two courses in Greek or Roman history (History 115B-115C, 116A-116B, 117A-117B); (5) two additional courses in one or two of the related areas: classical archaeology (Classics 151A, 151B, 151C, 151D), classical linguistics (Classics 180), classical mythology (Classics 161, 162, 168), Greek and Roman religion (Classics 166A, 166B), ancient philosophy (Philosophy 101, 102, Greek 121, 122, 123, 124), Byzantine civilization (Classics M170A, M170B), medieval Latin literature (Latin 131, 133). Total required: 16 courses.

The Major in Classics (Greek and Latin)

Required: (1) Twelve upper division courses, six in Greek and six in Latin, including Greek 110 and Latin 110; (2) one of Classics 141, 142, 143; (3) one course in Greek or Roman history (History 115B-115C, 116A-116B, 117A-117B); (4) one additional course in two of the related areas: classical archaeology (Classics 151A, 151B, 151C, 151D), classical linguistics (Classics 180), classical mythology (Classics 161, 162, 168), Greek and Roman religion (Classics 166A, 166B), ancient philosophy (Philosophy 101, 102, Greek 121, 122, 123, 124), Byzantine civilization (Classics M170A, M170B), medieval Latin literature (Latin 131, 133). Total required: 16 courses.

Note: Students in any of these three majors are permitted to take Greek 200A-200B-200C and Latin 200A-200B-200C (see *UCLA Graduate Catalog*). *Two* of these courses may be counted as replacing *one* course in Requirement 3 of the Greek and Latin majors and Requirement 2 of the Classics major, as well as two courses in Requirement 1 of all three majors, thereby reducing the total number of required courses by one.

JOINT MAJOR FIELDS WITH OTHER DEPARTMENTS

Preparation for the English/Greek Major

English 4, 10A, 10B, 10C; Greek 1, 2, 3.

The Major

(1) Seven courses selected from English 140-190 in consultation with an advisor in the Department of English; (2) seven upper division or graduate courses in Greek, including 100 and either 101A or 101B, chosen in consultation with an advisor in the Department of Classics (of these seven courses at least two will be in poetry and two in prose). Total required: 14 courses.

Preparation for the English/Latin Major

English 4, 10A, 10B, 10C; Latin 1, 2, 3.

The Major

(1) Seven courses selected from English 140-190 in consultation with an advisor in the Department of English; (2) seven upper division or graduate courses in Latin, including 105A and 113, chosen in consultation with an advisor in the Department of Classics (of these seven courses, at least two will be in poetry and two in prose). Total required: 14 courses.

Courses Which Do Not Require a Knowledge of Greek or Latin

Classics 10, 20, M70, 141, 142, 143, 150, 151A, 151B, 151C, 151D, 161, 162, 165, 166A, 166B, 168, M170A, M170B.

Classics

Lower Division Courses

10. Survey of Classical Greek Culture. Lectures, many illustrated, on Greek life and culture from the age of Homer to the Roman conquest. Discussion of art, literature, philosophy, and mythology. A knowledge of Greek is not required. Mr. Lattimore

20. Survey of Roman Civilization. A study of life and culture of Rome from the time of its foundation to the end of antiquity. A survey of art, literature, and political thought of the Romans. Selections from Latin authors are read in translation. A knowledge of Latin is not required. Mr. Frischer

M70. Survey of Mediaeval Greek Culture. (Formerly numbered 145A.) (Same as History M70.) Classical roots and mediaeval manifestation of Byzantine civilization: political theory, Roman law, pagan critique of Christianity, literature, theology, and contribution to the Renaissance (including the discovery of America). Mr. Dyck

Upper Division Courses

141. A Survey of Greek Literature in English. A study of classical Greek literature, exclusive of the drama, with readings in English. Ms. Bergren, Mr. Haslam

142. Ancient Drama. A study of the major Greek and Latin dramas in translation. Mr. Dyck, Mr. Haslam

143. A Survey of Latin Literature in English. A study of classical Latin literature, exclusive of the drama, with readings in English. Mr. Dyck, Mr. Frischer

144. A Survey of Greek and Roman Epic in Translation. Homer's *Iliad* and *Odyssey*, Vergil's *Aeneid* and Ovid's *Metamorphoses* will be studied in translation. Ms. King

150. The Female in Antiquity. Lecture, three hours. An interdisciplinary analysis of the status of women in antiquity. Myth, art, literature and historical sources are studied through current anthropological and psychoanalytic methodology. Special emphasis on the concept of the female in Classical thought. Ms. Bergren

151A. Classical Archaeology: The Aegean Bronze Age. (Formerly numbered 151D.) The course is a survey of the prehistoric art and archaeology of the Greek lands. A knowledge of Greek is not required.

151B. Classical Archaeology: Graeco-Roman Architecture. (Formerly numbered 151A.) A general introduction to the study of Aegean, Greek and Roman architecture. A knowledge of Greek and Latin is not required. Mr. Lattimore

151C. Classical Archaeology: Graeco-Roman Sculpture. (Formerly numbered 151B.) A general introduction to the study of Aegean, Greek and Roman sculpture. A knowledge of Greek and Latin is not required. Mr. Lattimore

151D. Classical Archaeology: Graeco-Roman Painting. (Formerly numbered 151C.) A general introduction to the study of Aegean, Greek and Roman painting. A knowledge of Greek and Latin is not required. Mr. Lattimore

152. The Ancient City. A study of urban planning in the Ancient World with particular attention to the cities of Classical Greece and Rome, but with consideration also to comparable developments in the Ancient Near and Far East. There will be examination of questions of architectural space and organization, of the form, design and function of the major municipal areas and buildings, and of the provision of public amenities by detailed reference to significant archaeological sites and contemporary sources. Ms. Raschke

161. Introduction to Classical Mythology. The origins of classical myth; the substance of divine myth and heroic saga; the place of myth in religion; a survey of the study of classical mythology. Ms. Bergren, Mr. Lattimore, Mr. Puhvel

162. Classical Myth in Literature. The use of myth in the principal authors and genres of Greek and Roman literature with examples of its influence in later literatures. Ms. Bergren, Mr. Lattimore

165. Ancient Athletics. A study of ancient Greek and Roman athletics and their connections with religion, politics, literature and art. Mr. Frischer, Mr. Lattimore

166A. Greek Religion. A study of the religion of the ancient Greeks. Mr. Dyck

166B. Roman Religion. A study of the religion of the ancient Romans. Mr. Frischer

168. Introduction to Comparative Mythology. Prerequisite: course 161 or consent of instructor. The religious, mythical, and historical traditions of Greece and Rome compared with each other and with those of other ancient Near Eastern and European societies. Mr. Puhvel

M170A. Byzantine Civilization. (Same as History M122A.) Emphasis is laid on Byzantine Theology. Mr. Dyck

M170B. Byzantine Civilization. (Formerly numbered 145C.) (Same as History M122B.) Literature, relations with Rome, and the Renaissance. Mr. Dyck

180. Introduction to Classical Linguistics. Prerequisites: Greek 3, Latin 3. Basics of the comparative grammar of Greek and Latin in relation to one another and in the frame of Indo-European linguistics. Mr. Puhvel

195. Senior Paper. Enrollment is limited to seniors majoring in Classical Civilization. Supervised through individual consultation with an appropriate member of the regular Classics faculty, the student will write a research paper on a topic of his own choosing within his area of concentration in the major.

199. Special Studies in Classics (½ to 2 courses). Prerequisites: senior standing and consent of instructor.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Greek

Lower Division Courses

1. Elementary Greek. Lecture, five hours per week.

2. Elementary Greek. Lecture, five hours per week. Prerequisite: course 1.

3. Elementary Greek. Lecture, five hours per week. Prerequisite: course 2.

40. The Greek Element in English. A knowledge of Greek is not required. A study of the derivation and usage of English words of Greek origin: analysis into their component elements directed toward understanding of form and meaning.

Upper Division Courses

Note: Greek 3 is prerequisite to 100. Greek 100 is prerequisite to 101-107 and 110-124.

100. Readings in Greek Prose. Prerequisite: course 3. Plato's *Apology* or a text of comparable difficulty is read.

101A. Homer: *Odyssey.* Ms. Bergren, Ms. King, Mr. Puhvel

101B. Homer: *Iliad.* Ms. Bergren, Ms. King, Mr. Puhvel

102. Lyric Poets. Selections from Archilochus to Bacchylides. Ms. Bergren, Mr. Haslam

103. Aeschylus. Ms. Bergren, Mr. Haslam

104. Sophocles. Ms. Bergren, Mr. Haslam

105. Euripides. Mr. Frischer, Mr. Haslam, Ms. King

106. Aristophanes. Mr. Haslam

107. Theocritus. Mr. Frischer, Mr. Lattimore

110. The Study of Greek Prose. Work in sight reading and grammatical analysis of Attic prose texts; writing the Attic prose. Mr. Haslam

111. Herodotus. Ms. Bergren, Mr. Lattimore

112. Thucydides. Mr. Haslam, Mr. Lattimore

113. Attic Orators. Mr. Dyck, Mr. Haslam

121. Plato. Mr. Frischer, Ms. King

122. Plato: *Republic.* Ms. Bergren, Mr. Haslam

123. Aristotle: *Poetics and Rhetoric.* Mr. Haslam

124. Aristotle: *Ethics.* Mr. Dyck, Mr. Frischer

130. Readings in the New Testament. Prerequisite: course 3. Mr. Haslam

131. Readings in Later Greek. Prerequisite: course 100. Topics treated will vary from year to year; they will include "Longinus," On the Sublime; Marcus Aurelius; Arrian; the Second Sophistic; Plutarch; later epic; epigram; epistolographi Graeci. Mr. Dyck

132. Survey of Byzantine Literature. Prerequisite: course 100. Readings will be based on (1) *Anthology of Byzantine Prose.* ed. Nigel Wilson and (2) *Oxford Book of Medieval and Modern Greek Verse,* ed. C.A. Trypanis, or if this is unavailable, *Poeti bizantini,* ed. R. Cantarella. In addition, necessary historical and cultural background will be provided by readings and lectures. Mr. Dyck

133. Readings in Byzantine Literature. Prerequisite: course 132. Topics to be treated will vary from year to year; they will include Procopius, Agathias, Michael Psellus, the Alexiad of Anna Comnena and Digenis Akritas. Mr. Dyck

199. Special Studies in Greek (½ to 2 courses). Prerequisites: senior standing and consent of instructor.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Latin

Lower Division Courses

1. Elementary Latin. Lecture, five hours per week.

1G. Elementary Latin for Graduate Students (No credit). Offered concurrently with course 14, being identical in scheduling and content.

2. Elementary Latin. Lecture, five hours per week. Prerequisite: course 1.

2G. Intermediate Latin (Intensive) (No credit). Prerequisite: course 2 or 14 with a grade of "B" or better or consent of instructor. Review of grammar; reading of selected portions of Latin Prose ranging from Classical to Medieval, with emphasis on historical texts.

3. Elementary Latin. Lecture, five hours per week. Prerequisite: course 2.

14. Elementary Latin (Intensive) (2 courses). The intensive course in Latin will cover all the declensions of nouns and adjectives, all conjugations in the indicative mood and the primary uses of the subjunctive mood. Emphasis will be given to the development of the ability to read easy selections of classical prose.

15. Intermediate Latin (Intensive) (2 courses). Prerequisite: course 2 or 14 with a grade of "B" or better or consent of instructor. Review of grammar; reading of selected portions of Latin prose ranging from Classical to Medieval, with emphasis on historical texts.

40. The Latin Element in English. A knowledge of Latin is not required. A study of the derivation and usage of English words of Latin origin; analysis into their component elements directed toward understanding of form and meaning.

Upper Division Courses

Note: Latin 3 is prerequisite to Latin 104, 105A, 107, 111, 113. One of the latter is normally prerequisite to all other 100-series courses in Classical Latin authors.

100. Readings in Latin Prose and Poetry. Lecture, three hours. Prerequisite: course 3 or equivalent. Close study of a prose text supplemented with related readings in poetry. Attention to historical and cultural context. This course is normally prerequisite to other courses in the Latin 100 series. Mr. Habinek

101. Plautus. Mr. Löfstedt

102. Terence. Mr. Löfstedt

103. Lucretius. Mr. Frischer

104. Ovid. Ms. Bergren

105A. Vergil: Selections from Aeneid I-VI. Ms. King, Mr. Levine

105B. Vergil: Advanced Course. Ms. King

106. Catullus. Mr. Levine, Mr. Haslam

107. Horace: Odes and Epodes. Mr. Levine, Mr. Frischer

108. Roman Elegy. Selections from Catullus, Tibullus, and Propertius. Mr. Frischer, Mr. Levine

109. Roman Satire. Selections from the *Epistles* of Horace, the *Satires* of Juvenal, and the *Epigrams* of Martial. Mr. Levine

110. The Study of Latin Prose. Work in sight reading and grammatical analysis of classical prose texts; writing of classical prose. Mr. Dyck

111. Livy. Mr. Haslam, Mr. Löfstedt

112. Tacitus. Mr. Frischer, Mr. Löfstedt

113. Cicero: The Orations. Mr. Dyck, Mr. Frischer

114. Roman Epistolography: Cicero and Pliny. Mr. Dyck, Mr. Frischer

115. Caesar. Mr. Dyck, Mr. Frischer

116. Petronius. Mr. Löfstedt

117. Sallust.

118. Seneca. A selection of Seneca's works will be read in Latin. Mr. Löfstedt

120. The Vulgate. Lecture, three hours. Prerequisite: course 3 or 15 or consent of instructor. Reading of selected chapters of St. Jerome's translation of the Bible. Interest is centered on un-Classical features of the Latin. Mr. Löfstedt

130. Introduction to Mediaeval Latin. Prerequisite: course 3 or 15 or consent of instructor. Reading of easy prose texts, with interest centered on basic language training. Mr. Löfstedt

131. Mediaeval Latin Prose. Prerequisite: course 130 or consent of instructor. Extensive reading of selected texts in prose; interest is centered on the idiosyncrasies of Mediaeval Latin. Mr. Löfstedt

133. Mediaeval Latin Poetry. Prerequisite: one upper division language course in Latin or consent of instructor. Mr. Löfstedt

199. Special Studies in Latin (½ to 2 courses). Prerequisites: senior standing and consent of instructor.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Related Upper Division Courses in Other Departments

Ancient Near East (Near Eastern Languages) 170. Introduction to Biblical Studies.

171. Old Testament: Hebrew and Septuagint Texts.

Art 103A. Greek Art.

103B. Hellenistic Art.

103C. Roman Art.

History 115A-115B-115C. History of the Ancient Mediterranean World.

116A-116B. History of Ancient Greece.

117A-117B. History of Rome.

121A-121B. Medieval Europe.

123A-123B. Byzantine History.

Indo-European Studies 132. European Archaeology: The Bronze Age.

M150. Introduction to Indo-European Linguistics.

Philosophy 101A. Plato—Earlier Dialogues.

101B. Plato—Later Dialogues.

102. Aristotle.

Courses on Other Campuses

Exchange and resource-sharing programs make it possible for UCLA students to take classics and classics-related courses at other schools in the Southern California area, e.g., UCSB, USI, USC. The undergraduate advisor should be consulted for specific details.

Communication Studies (Interdepartmental)

(Office: 232 Royce Hall)

Donald E. Hargis, Ph.D., *Emeritus Professor of Communication Studies.*
Patrice French, Ph.D., *Associate Professor of Communication Studies and Psychology.*
Paul I. Rosenthal, Ph.D., *Associate Professor of Communication Studies (Chair).*

•

I. Geoffrey Cowan, LL.B., *Lecturer in Communication Studies.*
Janet Weathers, Ph.D., *Lecturer in Communication Studies.*

The major in Communication Studies seeks to provide the student with a comprehensive knowledge of the nature of human communication, the symbol systems by which it functions, the environments in which it occurs, its media and its effects. The major draws its resources from the social sciences, humanities and fine arts. The specialization in Mass Communication centers upon formal and institutional communication systems and the social contexts in which they function. The specialization in Interpersonal Communication centers upon face-to-face communicative interaction in the small group environment. Students selecting the major must complete the required lower division prerequisites and a minimum of 16 upper division courses as set forth below.

Enrollment in the major is limited. Admission to the major will be by application to the Committee in Charge. Applications are available in 232 Royce Hall (206-8446, 825-3303).

For purposes of breadth requirements, the Communication Studies major is classified within the social sciences division.

Preparation for the Major

Communication Studies 10, Linguistics 1, Psychology 10, Sociology 1. Linguistics 2 is required for students who elect to specialize in Interpersonal Communication.

The Major

Required core courses: Communication Studies 100 and 101 and one course from Anthropology M140, Communication Studies 102 or Linguistics 100.

Specializations

Mass Communication: (1) Theory and Method—Required courses: Communication Studies 140, 152 and either Communication Studies 147 or Sociology 122, and one course from Political Science 141, Psychology 137B or Sociology 150; (2) Modes of Mass Communication—Two courses chosen from Communication Studies 160, 165, 170; (3) Media and Media History — Two courses chosen from Journalism 192, Theater Arts 106A, 108, 110A and either Theater Arts 116 or Communication Studies 175; (4) Electives (five courses)—Two courses chosen from Communication Studies 115, 120, 130, Psychology 135 or Sociology 154, Psychology 137A or Sociology 152, Sociology 155; three courses chosen from one of the following three groups: (a) Language Theory—Communication Studies 142, 150, Linguistics 100, 170, Philosophy 172, Psychology 123; (b) American Studies — English 101B, 101C, 115, History 148A, 148B, 148C, 150A, 150B, 156A, 156B, Political Science 114A, 114B; (c) Social Systematics — Anthropology 133P, 133R, 135P, 142A, 142B, Sociology 144A, 144B and either Sociology 151 or Anthropology 134.

Interpersonal Communication: (1) Theory—Psychology 135 or Sociology 154, Psychology 137A or Sociology 152; (2) Methods—Three courses chosen from Communication Studies 115, 120, Management 182, Psychology 174; (3) Heterogeneous Groups Communication—Three courses chosen from Anthropology 166, Communication Studies 130, Sociology 124, 155; (4) Electives (five courses)—Two courses chosen from Communication Studies 140, Communication Studies 147 or Sociology 122, Communication Studies 152, 160, 165, 170; three courses chosen from one of the following three groups: (a) Language Theory—Communication Studies 142, 150, Linguistics 100, 170, Philosophy 172, Psychology 123; (b) Media and Media History—Journalism 192, Theater Arts 106A, 108, 110A and either Communication Studies 175 or Theater Arts 116; (c) Social Systematics—Anthropology 133P, 133R, 135P, 142A, 142B, Sociology 144A, 144B or either Anthropology 134 or Sociology 151.

Lower Division Course

10. Introduction to Communication Studies. An introduction to the fields of mass communication and interpersonal communication. Study of modes, media, and effects of mass communication, interpersonal processes, and communication theory.

Upper Division Courses

100. Communication Theory. Prerequisite: Communication Studies 10, Linguistics 1, Sociology 1, Psychology 10 or consent of instructor. Analysis of the fundamental nature of human communication; its physical, linguistic, psychological and sociological bases. Study of theoretical models explicating the process and constituents of the communicative act. Ms. French

101. Freedom of Communication. Analysis of legal, political and philosophical issues entailed in the rights of free expression, access to an audience, and access to information. Study of court decisions governing freedom of communication in the United States. Mr. Cowan, Mr. Rosenthal

102. The Code of Human Communication. Prerequisite: Communication Studies 10, Sociology 1, Psychology 10, Linguistics 1 or consent of instructor. The structural analysis and description of human communication codes; the development of language; characteristics of the source, channels and destination in human communication. Ms. French

115. Dyadic Communication and Interpersonal Relationships. Prerequisite: course 100. This course will emphasize the developmental approach to the study of communication in dyadic relationships. Differences in the stages of relationships will be analyzed in terms of communication rules and verbal and nonverbal messages. Ms. Weathers

120. Principles and Types of Group Communication. Prerequisite: course 100 or consent of instructor. Analysis of the purposes, principles, and types of small group communication. Particular emphasis upon the organization of and participation in problem-solving discussion. Ms. Weathers

130. Cultural Factors in Interpersonal Communication. Prerequisite: course 100 or consent of instructor. Study of cultural factors as they affect the quality and processes of interpersonal communication; exercises in the participation, analysis, and criticism of inter-ethnic and interracial communications in the small-group configuration. Ms. Weathers

140. Theory of Persuasive Communication. Prerequisite: course 100 or consent of instructor. The dynamics of communication designed to influence human conduct; analysis of the structure of persuasive discourse; integration of theoretical materials drawn from relevant disciplines of the humanities and social sciences. Mr. Rosenthal

142. Rhetorical Theory. Prerequisite: course 100 or consent of instructor. Survey of the major classical and neoclassical treatises on rhetoric. Analysis of the theories of Plato, Aristotle, Cicero, Quintilian, St. Augustine, Blair, Whately, Campbell, and other leading works in the theory of rhetoric.

147. Mass Communication and Social Systems. Prerequisite: course 100 or consent of instructor. Comparative analysis of major theories about relationships between mass media and social systems from the interpersonal to the international level; emphasis on empirical research.

150. Analysis of Communication Content. Prerequisite: course 100 or consent of instructor. Study of methodologies for the qualitative and quantitative analysis of the content of communications. Ms. French

152. Analysis of Communication Effects. Prerequisite: course 100 or consent of instructor. Survey of experimental and field research on the effects of communications. Study of source, message, and environmental factors affecting audience response.

155. Communication Technology and Public Policy. An introduction to modern communication technology and policy, with special attention to current policy issues, the institutions which make policy decisions, and the social, economic and technological trends which create policy problems. Modern communication technologies surveyed include computer-communication networks, cellular communication systems, teleservices, high resolution television and satellite communications. Mr. Rothblatt

160. Political Communication. Prerequisites: courses 100 and 101 or consent of instructor. Study of the nature and function of communication in the political sphere; analysis of contemporary and historical communications within established political institutions; state papers; deliberative discourses; electoral campaigns.

165. Agitational Communication. Prerequisites: courses 100 and 101 or consent of instructor. Theory of agitation; agitation as a force for change in existing institutions and policies in a democratic society. Intensive study of selected agitational movements and the technique and content of their communications.

170. Legal Communication. Prerequisites: courses 100 and 101 or consent of instructor. Study of the trial and appellate processes as systems of communication. Analysis of the elements of the juridical process as they affect the quality of communication content. Study of the rules of evidence, jury behavior, and the structure of legal discourse. Mr. Rosenthal

175. Criticism and the Public Arts. Prerequisite: course 10 or consent of instructor. An introduction to methods and problems of criticism in the public arts. Several types of critical methods will be studied: formalistic, analogue, pragmatic, and aesthetic criticism. Topics include the definition of art and criticism, the aesthetic media, genre and resources of film, television, theatre and public discourse, the varieties of critical method, the problems of critical judgment.

197. Undergraduate Honors Proseminar. Prerequisites: senior standing; grade-point average of 3.5 in Communication Studies major and 3.3 overall. Variable topic course involving specialized study of selected aspects of the field of human communication. Enrollment is limited.

199. Special Studies (½ to 2 courses). Prerequisites: senior standing and consent of instructor. A course of independent study for senior undergraduates who desire an intensive or specialized investigation of selected research topics. To be arranged with the member of the faculty who will direct the study.

199H. Special Studies for Honors Candidates (½ to 2 courses). Prerequisites: admission to Honors Program and senior standing. A course of independent study for honors undergraduates who desire an intensive or specialized investigation of selected research topics. To be arranged with the member of the faculty who will direct the study.

Comparative Literature (Interdepartmental)

(Office: 334D Royce Hall)

The Comparative Literature Program does not offer an undergraduate degree. For detailed information on graduate degrees offered by this program, please refer to the *UCLA Graduate Catalog*.

Council on Educational Development

(Office: 246 Kinsey Hall)

The Council on Educational Development (CED) was created by the Los Angeles Division of the Academic Senate in May 1968. Please refer to the "Resources to Help You" section earlier in this catalog for further information.

Cybernetics (Interdepartmental)

(Office: 4731 Boelter Hall)

Major in Cybernetics

This major provides an introduction to quantitative foundations of information processing, communication, control and system analysis, accompanied by complementary studies of models and phenomena arising in the life sciences, health sciences, bioengineering and social sciences. The major is appropriate preparation for employment or for graduate or professional studies emphasizing interdisciplinary activity. Technical courses for the major are offered in the School of Engineering and Applied Science, and accompanying course work is taken in biology, psychology, linguistics, mathematics, the School of Medicine and related disciplines. Options may be arranged within the major to feature: (1) cybernetics and biology; (2) cybernetics and premedical studies; (3) cybernetics and psychology; (4) mathematical system analysis; (5) cybernetics and linguistics; (6) computing aspects of cybernetics and bioengineering.

Preparation for the Major

Biology 5, Chemistry 11A, Engineering 10C or 10F or 10S, Mathematics 31A, 31B, 32A-32B, 33A, 33B, Physics 8A or 6A, 8C or 6B; two courses selected from Biology 6, 7, 8 and Chemistry 11B, 11C, 21, 23, 25 and two laboratories selected from Biology 6L, 8L, Chemistry 11BL, 11CL; two additional courses selected from these biology and chemistry series or from Computer Science 20, 30, Physics 6C, 8B, 8D, 8E, Psychology 10, 41. The major advisor will recommend selections appropriate to the various options. In general, Cybernetics majors are encouraged to complete as much as possible of the lower division biology, chemistry and physics series at some time during their four-year program.

The Major

Fourteen courses as follows: two courses in group (a) below; five courses from not more than two of the groups (a), (b), (c), (d); three courses in group (e); three courses from groups (e) and (f); one course selected from any of the groups (a) through (g).

The groups are: (a) upper division courses in biology, microbiology, organic chemistry and biochemistry (chemistry courses numbered 133 through 157) and physiological psychology (Psychology 115 through 118E); (b) Linguistics 100, 103, 104, 120A, 120B, 125, 164, C165A, C165B; (c) Psychology 110 through 112E, 120 through 124, 150, 151; (d) courses in mathematics numbered 110 and above; (e) courses in system science numbered Engineering 120 through 129; (f) upper division courses in computer science, electrical sciences and engineering (Engineering 100, 100B, 100L and 110 through M118), biocybernetics (Engineering M196B); (g) other upper division courses for which the student is eligible in chemistry, physics, engineering, biological chemistry, biomathematics, physiology, public health.

Minimum Standards

Each course taken in preparation for the major and in the major itself must be completed with a letter grade of "C−" or higher. Furthermore, each student in the major must maintain an average of 2.5 or better in upper division courses in the major and in the lower division mathematics courses of the "Preparation for the Major."

For further information, contact Professor Joseph J. DiStefano, Engineering Systems, 4731K Boelter Hall (825-7482, 825-4033).

Dance

(Office: 205 Women's Gym)

Elsie Dunin, M.A., *Professor of Dance.*
Pia Gilbert, *Professor of Dance.*
Carol Scothorn, M.A., *Professor of Dance (Chair).*
Marion Scott, *Professor of Dance.*
Allegra Snyder, M.A., *Professor of Dance.*
Emma Lewis Thomas, Ph.D., *Professor of Dance.*
Alma M. Hawkins, Ed.D., *Emeritus Professor of Dance.*
Doris Siegel, *Associate Professor of Dance.*
Erma Alperson, Ph.D., *Associate Professor of Dance.*
Judy Susilo, M.A., *Assistant Professor of Dance and Ethnic Arts.*

•

Charles Berliner, M.F.A., *Lecturer in Dance.*
Gloria Bowen, *Lecturer in Dance.*
William De Young, M.F.A., *Lecturer in Dance.*
Gary Faltico, Ph.D., *Lecturer in Dance.*
Angelia Fisher, M.A., *Lecturer in Dance.*
Kathe Howard, M.A., *Lecturer in Dance.*
Martha Kalman, M.A., *Lecturer in Dance.*
Margalit Oved Marshall, *Lecturer in Dance.*
Barbara Mattingly, *Lecturer in Dance.*
Emilio Pulido-Huizar, B.A.C., *Lecturer in Dance.*
Ilene Serlin, M.S., *Acting Assistant Professor of Dance.*
Mia Slavenska, *Lecturer in Dance.*
Suenobu Togi, *Lecturer in Dance.*
Martin Tracy, M.A., *Lecturer in Dance.*
Medha von Essen, M.S., *Lecturer in Dance.*
Melinda Williams, M.A., *Lecturer in Dance.*

The Dance major offered in the College of Fine Arts leads to the Bachelor of Arts degree. For requirements, see the "College of Fine Arts."

Students who wish to confer with the departmental counselor regarding program planning and major requirements should see Wendy Urfrig, 205 Women's Gym (825-3951, 825-8537).

Preparation for the Major

Dance 30A, 30B, 35, 36A-36B-36C, 37A-37B-37C, 38A-38B, 70.

The Major

A total of 14 courses including Dance 111A-111B, 150A-150B-150C, 151A, 151B, 152A, 152B, 153A-153B-153C, C154, 158A-158B; two courses (8 units) chosen from upper division dance electives.

Admission to the Major

Readiness for admission to the upper division major is determined by a screening and evaluation conducted during Spring Quarter of the sophomore year.

All entering transfer students are auditioned for placement in technique and choreography classes.

Lower Division Courses

10A-10B-10C. Fundamentals of Creative Dance (½ course each). For non-Dance majors. Courses must be taken in sequence. Basic modern dance skills with emphasis on body awareness, alignment, movement range, rhythmic coordination and the exploration of the concepts of space, time and energy in dance improvisation and composition. Ms. Williams

11A-11B-11C. Creative Dance (½ course each). Prerequisite: course 10C or consent of instructor. For non-Dance majors. Continuation of modern dance skills with increased emphasis on principles of structure and form in dance composition. Ms. Williams

30AF-30AW-30AS. Fundamentals of Ballet (½ course per year). Prerequisite: major in Dance or consent of instructor. This course is offered on an In Progress basis, which requires students to complete the full three-quarter sequence, at the end of which time a grade is given for all quarters of work. Students are admitted in the Fall Quarter only. Study of ballet techniques and principles including dance terminology. Ms. Bowen

30BF-30BW-30BS. Fundamentals of Ballet (½ course per year). Prerequisite: major in Dance or consent of instructor. This course is offered on an In Progress basis, which requires students to complete the full three-quarter sequence, at the end of which time a grade is given for all quarters of work. Study of ballet techniques and principles including dance terminology. Students are admitted in the Fall Quarter only. Ms. Bowen

35. Music Analysis for Dance (½ course). Study of the elements of music, music structures, and their relationship to dance, with emphasis on rhythmic analysis, dance accompaniment and teacher-accompanist roles. Mrs. Gilbert

36A-36B-36C. Fundamentals of Creative Dance (½ course each). Open only to Dance majors. Study of dance through varied experience emphasizing the increasing ability to develop a skilled body-instrument, to respond to movement creatively and to understand structure and form in beginning dance composition. Principles and elements of dance and their relationship to other art forms. Ms. Williams

37A-37B-37C. Creative Dance (½ course each). Prerequisite: course 36C. A continuing study of dance with emphasis on movement principles and choreography. Ms. Copperman

38A-38B. Dance Notation (½ course each). Study of labanotation with experience in recording and interpreting dance scores with emphasis on reading skills. Mr. Tracy

46A-46B. Fundamentals of Movement (½ course each). Prerequisite: consent of instructor. Study of the fundamentals of movement with emphasis on experiencing body awareness, exploring movement potential, and structuring of dance forms. Consideration of cultural influences on expressive forms. Ms. Susilo

50. Introduction to Dance (½ course). An introduction to the many and varied theoretical aspects of dance as a discipline. Mrs. Synder

52. Introduction to Dance Theatre (½ course). Prerequisite: course 36A or consent of instructor. Study of the interaction of the aesthetic components of dance theater. Mrs. Siegel

70. Introduction to Performance in Ethnic Dance (½ course). Study of basic movement in ethnic dance forms. Mrs. Dunin

71A-71Q. Performance Courses in Ethnic Dance (½ course each). May not be repeated for credit. **(A)** Dance of Bali; **(B)** Dance of Africa; **(E)** Dance of India; **(F)** Dance of Israel; **(G)** Dance of Japan; **(H)** Dance of Java; **(J)** Dance of Mexico; **(M)** Dance of Spain; **(P)** Dance of Yugoslavia; **(Q)** Dance of Korea.

*Upper Division Courses

111A-111B. Analysis of Human Movement. Prerequisite: course 111A must be completed before enrollment in 111B. A study of the biological and physical principles of movement and the effects of movement upon the structure of and function of the human body. Mr. Tracy

111C. Analysis of Human Movement. Prerequisites: courses 111A-111B. In-depth study of selected topics introduced in courses 111A and 111B. Mr. Tracy

112A-112F. Intermediate Modern Dance Technique (½ course each). Prerequisite: course 150C or consent of instructor. Synthesis of previous dance experience, advanced technique, and individual and group choreography. Ms. Copperman, Ms. Dally

114A-114F. Advanced Contemporary Dance (½ course each). Prerequisite: course 153C or consent of instructor. Advanced technique in contemporary dance with emphasis on performing skills.

116. Improvisation in Dance (½ course). Prerequisite: major in Dance or consent of instructor. Practical study of the art of improvisation with emphasis on centering, spontaneity, and the generation of new movement materials and forms as soloist and within the group. Ms. Dally

127. Foundation of Dance Education. Prerequisite: major in Dance or consent of instructor. Analysis and application of principles of movement and choreography in the teaching of modern dance in junior colleges and higher education. Ms. Williams

128. Dance as Culture in Education. Prerequisite: course 70A or consent of instructor. Analysis of theoretical and practical aspects of ethnic dance forms with special reference to teaching in higher education. Mrs. Dunin

131A-131B-131C. Intermediate Ballet (½ course each). Prerequisite: course 30B or consent of instructor. Open only to Dance majors. Courses must be taken in sequence. Study of advanced techniques and principles of classical ballet including phrasing, combinations, and repertory works. Ms. Slavenska

132A-132F. Advanced Ballet (½ course each). Prerequisite: course 131C. Advanced technique in classical ballet with emphasis on performing skills. Ms. Slavenska

140A-140B-140C. Dance Cultures of the World. A survey of dance in selected cultures, the role of dance in society; consideration of style, rhythmic structure, historical background and related folklore. Lectures illustrated with demonstrations, film, slides and recordings. **(A)** Africa (folk and tribal traditions); **(B)** Asia (art, tribal and folk traditions); **(C)** North American Indians (tribal and folk traditions). Mrs. Snyder (F,Sp), Ms. Susilo (W)

141A-141B. Dance Forms. Prerequisites: courses 46A-46B or consent of instructor. A study that considers the physical environmental and cultural influences upon ritual and social dance forms while preparing students for basic observational and recording techniques. Includes the learning and application of beginning skills in Labanotation. Not open to students with credit for former courses 47A-47B-47C. Mrs. Dunin

142. Dance in the Balkans. Prerequisite: course 71P. An introduction to the dance of the Balkans, factors influencing its development and social functions, consideration of relationship of dance to other art forms. Mrs. Dunin

143. Dance in India. Prerequisite: course 71E. An introduction to the dance of India, factors influencing its development and social functions, consideration of relationship of dance to other art forms. Ms. von Essen

144. Dance in Indonesia. Prerequisite: course 71A or 71H. An introduction to the dance of Indonesia, factors influencing its development and social functions, consideration of relationship of dance to other art forms. Ms. Susilo

145. Dance in Japan. Prerequisite: course 71G. An introduction to the dance of Japan, factors influencing its development and social functions, consideration of relationship of dance to other art forms.

146. Dance in Latin America. Prerequisite: course 71J. An introduction to the dance of Latin America, factors influencing its development and social functions, consideration of relationship of dance to other art forms. Mr. Pulido-Hulzar

150A-150B-150C. Advanced Dance. Prerequisite: course 37C. Choreography with emphasis on the use of composed music, the group composition, and the theatrical environment; synthesis of previous dance experience, theories and technique of outstanding dance artists; principles of human movement to dance. Mrs. Scothorn

151A. History of Dance in Western Culture, Origins to 1600. Trends in the evolution of dance in Western Civilization are studied from their origins in the Middle East through the European Renaissance period. Mrs. Thomas

151B. History of Dance in Western Culture, Early Baroque to the Present. The evolvement of dance as an art form in historical context, with particular emphasis on the development of style in any given period. The shift from European court entertainment to American theatrical presentation is studied chronologically from the early 1600's on. Mrs. Thomas

152A. Lighting Design for Dance Theater (½ course). Prerequisite: course 36C or consent of instructor. Study of aesthetics, principles and technical elements of lighting for dance. Mrs. Siegel

152B. Costume and Scenic Design Concepts for Dance Theater (½ course). Lecture, two hours; laboratory, two hours. Prerequisite: course 37C or consent of instructor. General study of costume history, selected historical styles and introductory drawing as a conceptual basis for visual awareness in theatrical dance design. Designer-choreographer relationships are explored. Mr. Berliner

152C. Advanced Studies in Dance Theater Lighting (½ to 1 course). Lecture, four hours; laboratory, four or more hours. Prerequisite: course 152A or consent of instructor. Analysis of diverse dance theater lighting problems at an advanced level and individual development of creative solutions. Mrs. Siegel

153A-153B-153C. Choreography and Repertory (½ course each). Prerequisite: course 150C. Independent work in solo and group choreography. Exploration of various styles and forms. Performance in repertory works. Ms. Scott

C154. Music as Dance Accompaniment. Prerequisite: course 35 or consent of instructor. Piano and percussion improvisation for dance. Choreographer-composer relationships. History of music for the dance with emphasis on contemporary trends. Music for the dance performance. May be concurrently scheduled with course C254. Mrs. Gilbert

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

155. Form and Structure in Choreography. Prerequisite: major in Dance or consent of instructor. A study of the craft of choreography as taught by selected artists including Louis Horst, Doris Humphrey and Helen Tamaris. Attention will be given to their concepts of form and structure as well as philosophic bases on which these approaches were formed. Ms. Scott

158A-158B. Philosophical Bases and Trends in Dance (1½ courses). Prerequisite: course 158A must be completed before enrollment in 158B. Critical analysis of dance as a creative experience and the role of professional and educational dance in our society. Study of selected approaches to current development in dance. Mrs. Gilbert

159. Advanced Dance Notation. Prerequisites: courses 38A-38B. Intermediate and advanced Labanotation. Reconstruction and score preparation in ballet, modern, and ethnic dance. Mr. Tracy

160. Creative Dance for Children. Prerequisite: major in Dance or consent of instructor. Approaches to teaching dance as an expressive medium for children with emphasis on concepts and principles. (Weekly lab with children.) Ms. Williams

165A-165F. Movement Dynamics and Personality Growth (½ course each). (Formerly numbered 165A-165B-165C.) Prerequisite: course 150C or consent of instructor. This two-year sequential course focuses on group processes and dynamics, both at the nonverbal (movement) and verbal modes of experience. The course works toward achieving a significant level of psychological insight by the student, to assist in functioning professionally as an effective dance/movement therapist. Ms. Serlin

171A-171P. Performance Courses in Ethnic Dance (½ course each). Each course may be repeated, with consent of instructor, for a maximum of four units. Prerequisite: corresponding course in 71A-71P series (i.e., 71A is prerequisite to 171A, 71B is prerequisite to 171B, etc.). **(A)** Dance of Bali; **(B)** Dance of Ghana; **(E)** Dance of India; **(F)** Dance of Israel; **(G)** Dance of Japan; **(H)** Dance of Java; **(J)** Dance of Mexico; **(L)** Dance of Scotland; **(M)** Dance of Spain; **(P)** Dance of Yugoslavia.

190A-190B-190C. Advanced Dance Performance (½ course each). Prerequisite: consent of instructor. The study of performance of major choreography. Mrs. Scothorn, Ms. Scott

191. Repertory Dance Tour (½ to 1 course). Prerequisite: major in Dance or consent of instructor. Creation and performance of dance concerts in the community with special emphasis on the problems of the touring dance company with a variable repertoire. Mrs. Scothorn

197A-197B. Proseminar: Dance Perspectives (½ course each). Prerequisite: upper division standing or consent of instructor. Consideration of the aesthetic evolving from the work of the great artists of our time.

199. Special Studies in Dance (½, 1 or 2 courses). Prerequisites: senior standing and consent of instructor.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Related Courses in Other Departments

Anthropology 133R. Aesthetic Anthropology.
Art 5A, 5B, 5C. Introduction to Art.
50. Ancient Art.
51. Medieval Art.
54. Modern Art.
55. Africa, Oceania and Native America.
56. Asian Art.
57. Renaissance and Baroque Art.
110A, 110B, 110C. European Art.
110D, 110E. Contemporary Art.
161J. Video Imagery.
English 80. Major American Authors.
85. The American Novel.
90. Shakespeare.
100A. Introduction to Poetry.
100B. Introduction to Drama.
101C. Recent American Fiction.
112. Children's Literature.
133A-133B-133C. Creative Writing: Poetry.
134A-134B-134C. Creative Writing: Short Story.
135A-135B-135C. Creative Writing: Drama.
167. The Drama, 1842 to the Present.
Humanities 1A, 1B, 1C. World Literature.
Music 2A-2B. Introduction to the Literature of Music.
132A-132B. Development of Jazz.
135A-135B-135C. History of the Opera.
140A-140B-140C. Musical Cultures of the World.
Theater Arts 5A, 5B, 5C. History and Drama of the Theater.
20. Acting Fundamentals.
102A, 102B. Selected Topics on the History of the European Theater.
105. Main Currents in Theater.
118A, 118B. Creative Dramatics.
122. Makeup for the Stage.
188. The Aesthetics of Visual Communication.

Dentistry

(Office: A3-042 Dentistry)

The School of Dentistry does not offer an undergraduate degree. For detailed information on graduate degrees offered by this School, please consult the *Announcement of the UCLA School of Dentistry.*

Diversified Liberal Arts (Interdepartmental)

(Office: 1312 Murphy Hall)

Certificate Program in Diversified Liberal Arts

In order to earn a credential to teach in California elementary schools, a student must complete the Teacher Credential Program in the Graduate School of Education and either earn a satisfactory score on the Commons Section of the National Teachers Examination or complete the Diversified Liberal Arts Program (DLAP) in the College of Letters and Science.

To earn the Certificate in Diversified Liberal Arts, the student must simultaneously complete all the requirements for the bachelor's degree in the College of Letters and Science. In addition, the student must complete required and elective courses in four areas: (1) English, (2) mathematics and the physical or life sciences, (3) social sciences, (4) humanities, fine arts and foreign language.

Requirements for one of the areas will normally be satisfied by the student's major; in addition, the student must complete seven courses (28 units) in each of two other areas and eight courses (32 units) in the fourth area. The student decides in which area to complete the eighth course. A grade of "C" or better must be earned in all courses specifically required for the program (i.e., English 120A, Mathematics 38A-38B, 104, History 7A, 7B, 151A or 151B). A "C−" or a Passed grade is not acceptable in these courses. A minimum "C" (2.0) grade-point average is required in each of the four areas; no grade lower than "C−" is acceptable. In addition to those courses listed above, courses in preparation for or on the student's major and in satisfaction of the English composition requirement may not be taken P/NP.

Courses in divisions outside the major, which are required as preparation for or as part of the major, may be applied toward the area course requirements. However, no course may be applied in more than one area. Students will be expected to satisfy breadth requirements of the College of Letters and Science, but courses used to satisfy the breadth requirements may be applied on the Diversified Liberal Arts Program.

Students who plan to pursue the Diversified Liberal Arts Program should begin to take courses in their freshman year that will fulfill these requirements. Students must petition for admission to the program and are advised to do so as soon as possible. Transfer students may petition to have suitable courses completed at other institutions applied to the course requirements of this program. The Dean of the College will certify completion of the program.

For further information about the Diversified Liberal Arts Program, contact a counselor in the College of Letters and Science, Window 4, 1312 Murphy Hall (825-3382). For information regarding the Teacher Credential Program in the Graduate School of Education, students *must* see a counselor in 201 Moore Hall (825-8326).

Area 1. English

Composition and Grammar (Required): Two courses: English 120A plus one course in satisfaction of the English composition requirement. If the student wishes to complete the Area 1 requirements with additional composition and grammar, the courses must be chosen from the following: English 130, Linguistics 1, 2, 100.

Literature (Required): One course from English 10A, 10B, 10C, 70, 75, 80, 85, 90, 112, 113, Humanities 1A, 1B, 1C and all upper division courses in English literature for which the student has the prerequisites. The student may complete more than one course from this list to satisfy the Area 1 course requirement.

Speech (Required): One course from Communication Studies 10, 100, Speech 1, 2, 107. The student may complete more than one course from this list to fulfill the Area 1 course requirement.

Area 2. Mathematics and the Physical or Life Sciences

Mathematics (Required): Mathematics 38A-38B and 104. Substitutions of other courses in mathematics may be made with the written approval of the Department of Mathematics and the Dean of the College of Letters and Science.

Physical or Life Sciences (Required): A minimum of 12 units in physical sciences and/or life sciences, apart from mathematics.

The remaining courses for Area 2 may be selected from any courses in the physical or life sciences that satisfy breadth requirements (mathematics courses may be included).

Area 3. Social Sciences

History (Required): One course from History 7A, 7B, 151A, 151B. Other courses that the student may elect to fulfill the total area course requirement are those listed as fulfilling the social science breadth requirements.

Area 4. Humanities, Fine Arts and Foreign Language

Although there are no specific course requirements, courses applied in this area must be selected from those courses listed as fulfilling the humanities breadth requirements. The following courses may also be applied in Area 4: any courses in foreign language and Dance 10A, 10B, 10C; Music 1, 113A, 113B; Theater Arts 118A, 118B, 119.

Earth and Space Sciences

(Office: 3806 Geology)

[17]Orson L. Anderson, Ph.D., *Professor of Geophysics.*
[17]Arthur L. Boettcher, Ph.D., *Professor of Geochemistry and Geophysics.*
[17]Friedrich H. Busse, Ph.D., *Professor of Geophysical Fluid Dynamics.*
Donald Carlisle, Ph.D., *Professor of Geology and Mineral Resources.*
John M. Christie, Ph.D., *Professor of Geology.*
[17]Paul J. Coleman, Jr., Ph.D., *Professor of Geophysics and Space Physics.*
Wayne A. Dollase, Ph.D., *Professor of Geology.*
[17]W. Gary Ernst, Ph.D., *Professor of Geology and Geophysics (Chair).*
Clarence A. Hall, Jr., Ph.D., *Professor of Geology.*
David D. Jackson, Ph.D., *Professor of Geophysics.*
[17]Isaac R. Kaplan, Ph.D., *Professor of Geology and Geochemistry.*
[17]William M. Kaula, D.Sc., *Professor of Geophysics.*
[17]Margaret G. Kivelson, Ph.D., *Professor of Space Physics (Vice-Chair).*
Helen Tappan Loeblich, Ph.D., *Professor of Paleontology and Geology.*
[17]Robert L. McPherron, Ph.D., *Professor of Space Physics and Geophysics.*
Clemens A. Nelson, Ph.D., *Professor of Geology.*
Gerhard Oertel, Dr.rer.nat., *Professor of Geology.*
John L. Rosenfeld, Ph.D., *Professor of Geology.*
[17]J. William Schopf, Ph.D., *Professor of Paleobiology.*
Gerald Schubert, Ph.D., *Professor of Geophysics and Planetary Physics.*
[17]Ronald L. Shreve, Ph.D., *Professor of Geology and Geophysics.*
[17]John T. Wasson, Ph.D., *Professor of Geochemistry and Chemistry.*
Kenneth D. Watson, Ph.D., *Professor of Geology.*
[17]Robert E. Holzer, Ph.D., *Emeritus Professor of Geophysics.*
George Peter Bird, Ph.D., *Associate Professor of Geophysics and Geology.*
Donald J. DePaolo, Ph.D., *Associate Professor of Geochemistry and Geology.*
Walter E. Reed, Ph.D., *Assistant Professor of Geology.*
Paul M. Davis, Ph.D., *Assistant Professor of Geophysics.*
Michael J. DeNiro, Ph.D., *Assistant Professor of Geochemistry.*
William I. Newman, Ph.D., *Assistant Professor of Planetary Physics.*

•

Mario E. Bauer, Ph.D., *Professor of Chemistry.*
Kyle D. Bayes, Ph.D., *Professor of Chemistry.*
Lawrence C. Bonham, Ph.D., *Lecturer in Petroleum Geology.*
William M. Bruner, Ph.D., *Adjunct Professor of Geology.*
Robert E. Jones, B.S., *Lecturer in Geology.*
[17]Leon Knopoff, Ph.D., *Professor of Geophysics and Physics.*
Alfred R. Loeblich, Ph.D., *Adjunct Professor of Paleontology and Geology.*
Ajit K. Mal, Ph.D., *Professor of Engineering and Applied Science.*
Paul M. Merifield, Ph.D., *Lecturer in Engineering and Environmental Geology.*
Malcolm F. Nicol, Ph.D., *Professor of Physical Chemistry.*
Everett C. Olson, Ph.D., *Emeritus Professor of Botany.*
LouElla R. Saul, M.S., *Senior Museum Scientist.*
Floyd F. Sabins, Jr., Ph.D., *Lecturer in Geology.*
Gerhard Stummer, B.S., *Lecturer in Geology.*
Takeo Susuki, D.Sc., *Senior Museum Scientist and Lecturer.*
Peter P. Vaughn, Ph.D., *Professor of Zoology.*
Morton G. Wurtele, Ph.D., *Professor of Atmospheric Dynamics.*
Michio Yanai, D.Sc., *Professor of Atmospheric Dynamics.*

Undergraduate Study

The programs described below are designed to provide the student majoring in Earth and Space Sciences with broad training in curricula leading to the Bachelor of Science degree in Geology or Geophysics. Students intending eventually to work toward a doctorate may want to attain reading proficiency in one or more appropriate foreign languages, required by many graduate schools.

Students majoring in the department should confer with the appropriate undergraduate counselor at or before the beginning of each quarter. Sample undergraduate programs for the majors in Geology and in Geophysics are available in the advising office.

Bachelor of Science in Geology

Geology Specialty

Preparation for the Major: Earth and Space Sciences 1, 2, 51A, 51B, 51C; Biology 2; Chemistry 11A, 11B, 11BL, 11C, 11CL; Mathematics 31A, 31B, 32A; Physics 8A, 8B and 8C or 6B.

The Major: Earth and Space Sciences 103 or 141, 111A, 111B, 111C or 136C, 112, 115 or 120B, 121A-121B, 135; *four* additional courses from Earth and Space Sciences 103, 114, 119, 122, 128A, 128B, 129, M130, M131, 132, 133, 136A, 136B, 137, M139, 141, 144, 150.

Engineering Geology Specialty

Preparation for the Major: Earth and Space Sciences 1, 51A, 51B, 51C; Biology 2; Chemistry 11A, 11B, 11BL, 11C, 11CL; Mathematics 31A, 31B, 32A, 33A; Physics 8A, 8B, 8C.

The Major: Earth and Space Sciences 103 or 141, 111A, 111B, 111C or 136C, 112, 121A-121B, 135, M139; Engineering 108, 184A, 184B, 185A, 185B; *one* course from Earth and Space Sciences 103, 137, 141, 150; Geography M102, Engineering 184D.

Paleobiology Specialty

Preparation for the Major: Earth and Space Sciences 1, 2, 51A, 51B, 51C; Biology 5, 6, 6L; Chemistry 11A, 11B, 11BL, 11C, 11CL, 21, 23; Mathematics 31A, 31B, 32A or 3A, 3B, 32A.

The Major: Earth and Space Sciences 111A, 111B, 111C, 112, 115 or 120B, 132, 141; *eight* courses from Chemistry 25, Public Health 101A, 101B, Biology 100, 101, 102, 103, 104, 105, 110, 111, 120, 122, 123, Earth and Space Sciences M117, M118, 119, 121A, 121B, 133, 144.

Geochemistry Specialty

Preparation for the Major: Earth and Space Sciences 1, 51A, 51B, 51C; Biology 2; Chemistry 11A, 11B, 11BL, 11C, 11CL, 21; Mathematics 31A, 31B, 32A, 33A (Mathematics 32B, 33B recommended); Physics 8A, 8B, 8C (Physics 8D recommended).

The Major: Earth and Space Sciences 111A, 111B, 111C or 136C, M130, M131; Chemistry 110A, 110B, 113A, 114 (or Chemistry 23 and 25 or 184 or Earth and Space Sciences 132); *three* courses from Earth and Space Sciences 103, 112, 119, 121A, 121B, 128A, 128B; Chemistry 23; *two* earth and space sciences or chemistry courses on approval of the advisor.

Nonrenewable Natural Resources Specialty

Preparation for the Major: Earth and Space Sciences 1, 2, 51A, 51B, 51C; Biology 2; Chemistry 11A, 11B, 11BL, 11C, 11CL; Mathematics 31A, 31B, 32A; Physics 8A, 8B and 8C or 6B.

The Major: Earth and Space Sciences 103, 111A, 111B, 111C, 112, 121A-121B, 128A or 128B, 135, 136C, 137; *three* courses from Earth and Space Sciences 128A or 128B, 129, 136A, 136B, 138, M139, 140, 141, 150.

Bachelor of Science in Geophysics

Applied Geophysics Specialty

Preparation for the Major: Earth and Space Sciences 1, 51A, 51B, 51C; Chemistry 11A; Mathematics 31A, 31B, 32A-32B, 33A, 33B; Physics 8A, 8B, 8C, 8D; Engineering 10F.

The Major: Earth and Space Sciences 111A, 111B, 112, 122, 136A, 136B, 136C; Physics 105A, 105B, 110A, 110B, 114; *three* courses from Earth and Space Sciences 101, 111C, 129, M131, 137, 138, M139, M154, 205, 265; Mathematics 140A-140B-140C, 152A-152B; Physics 112A, 115A, 116, 131A, 131B; or other courses on approval of the advisor.

Geophysics and Space Physics Specialty

Preparation for the Major: Earth and Space Sciences 1, 9; Chemistry 11A, 11B, 11BL, 11C, 11CL; Mathematics 31A, 31B, 32A-32B, 33A, 33B; Physics 8A, 8B, 8C, 8D.

The Major: Earth and Space Sciences 122, M149, M154; Physics 105A, 105B, 110A, 110B, 112A; Physics 131A or Mathematics 145A; *three* courses from Earth and Space Sciences 101, 119, M131, 136A, 136B, 150, 205, 233, Atmospheric Sciences 153, one of Mathematics 140A, 140B or 140C; *three* science electives on approval of the advisor.

Students planning to do graduate work in specialized careers in earth science should aim to take, when possible, appropriate courses in departments outside the major in addition to those already specified. Suggested graduate programs for various fields of emphasis are available in the Student Affairs Office, 3683 Geology, and will provide guidelines in choosing upper division courses.

Qualified undergraduate students may, upon consent of their advisors and the instructor, take Earth and Space Sciences graduate courses numbered from 200 to 250.

Honors in Geology or Geophysics

The Honors Program in Geology or Geophysics is intended to provide exceptional students an opportunity for advanced research and study under the tutorial guidance of a member of the faculty. Requirements for admission to candidacy are the same as those required for admission to the Honors Program of the College of Letters and Science. Qualified students wishing to enter the program must submit a completed application form to the Departmental Honors Committee near the end of their junior year. Honors in Geology or Geophysics are awarded upon graduation to those students who have a cumulative GPA of 3.4, who have completed at least 20 graded courses at the University of California, and who have completed a minimum of two quarters (8 units) of course 199H leading to the preparation of a satisfactory honors thesis. Students demonstrating exceptional ability will be awarded Highest Honors.

Lower Division Courses

1. Fundamentals of Earth Science. Elements of earth science; study of earth materials; the nature and interpretation of geologic evidence; study of geologic processes; historical aspects of geology. (F,W,Sp)

2. Earth History. Prerequisite: course 1. Methods of historical science; consideration of special problems relating to the physical and biological evolution of the earth from earliest time to the present. Mr. Nelson (W)

3. Evolution: Solar System, Earth, Life. A nonmathematical course for the general University student. Origin and evolution of the solar system, emphasizing the planets Mercury, Venus, Earth, and Mars. Internal evolution of the earth and its geologic consequences (including oceans and atmosphere). Evolution of life; its interaction with the terrestrial environment.

5. Earth Science and Society: Geological Ecological Interactions. Geologic aspects of major environmental problems with emphasis on lithosphere-biosphere interactions. Problems of exploration and exploitation of fossil fuel resources. Comparison of society-produced materials and natural cycles. Mr. Reed (Sp)

8. Earthquakes. The causes and effects of earthquakes, with special emphasis on the problems of living with earthquakes in Southern California. Topics include the relationship between earthquakes and local and regional geology, types of earthquakes, past and future earthquakes in California, earthquake engineering, disaster preparedness, and prospects for predicting or controlling earthquakes. Mr. Bird (W)

9. Origin and Evolution of the Solar System. Properties of the sun, planets, asteroids and comets. Astronomical observations relevant to understanding the solar system and its origin. Dynamical problems, including examination of fallacious hypotheses. Meteoritic evidence regarding the earliest history of the solar system. Chemical models of the solar nebula. Space exploration and its planning. Mr. Wasson (W)

10. Geology of California. Prerequisite: course 1. General survey of major geologic features and geologic history of California; its relationship to large scale crustal motions of western North America and the eastern Pacific. Environmental geology; study of geologic hazards such as earthquakes, landslides; aspects of urban geology. Mr. Nelson (Sp)

15. Introduction to Oceanography. Not open for credit to students with credit for Biology 25. Processes responsible for the chemical composition of the ocean, and current circulation patterns. Sea floor spreading and morphology of the ocean floor. Biological productivity, marine ecology, and minerals forming in the ocean. Mr. DeNiro, Mr. Kaplan (F)

20. Natural History of Southern California. Identification, distribution, diversity of plants, animals, and communities; environmental factors influencing distribution in alpine to lower desert life zones. Identification, interpretation, and physical history of rocks, landforms, and structural geologic features within the physiographic regions of Southern California. Emphasis is on field based learning related to integrated aspects of natural history. Mr. Hall (Sp)

51A. Mineralogy-Petrology. Prerequisite: course 1, completion of chemistry requirement recommended or consent of instructor. Mineralogic crystal chemistry; relation of physical properties to structure. Structural classification and petrogenesis of the main rock-forming minerals. Laboratory study of crystallography and identification of minerals in igneous, sedimentary and metamorphic rocks. Mr. Dollase (F)

51B. Mineralogy-Petrology. Prerequisites: course 51A and an introductory course in high school or college physics or consent of instructor. Principles of optical crystallography. Utilization of optical properties to identify non-opaque minerals in immersion media and in thin section. Sufficient theory is presented to understand the operations performed in the laboratory. Mr. Dollase (W)

51C. Mineralogy-Petrology. Prerequisite: course 51B. Composition, occurrence, and origin of igneous, sedimentary, and metamorphic rocks; megascopic and microscopic study of rocks. Mr. Watson (Sp)

Upper Division Courses

***100. Principles of Earth Science.** Designed for nonmajors. Fundamentals of physical geology and earth history; major problems of geology, such as continental drift and development of large scale features of the earth; physical and biological evolution. Not open to students with credit for course 1. Mr. Oertel (W)

101. Introduction to Geophysics and Space Physics. Prerequisites: Physics 8A, 8B, 8C, Mathematics 31A, 31B, 32A. A survey of geophysics, the physics of the planets, their atmospheres, and the interplanetary medium, with emphasis on topics of current research interest. The course is designed primarily for students majoring in a physical science or mathematics. Mr. Coleman (F)

103. Intermediate Petrology. Prerequisite: course 51C. Microscopic and megascopic study of selected suites of igneous, sedimentary, and metamorphic rocks; their composition, occurrence, and origin. Mr. Watson (W)

***105. Earth Science and Society: Nonrenewable Resources and Geological Hazards.** Prerequisite: course 1 or consent of instructor. An enquiry into the alternatives, opportunities and constraints imposed upon the activities and aspirations of mankind by geological processes and by the characteristics of earth materials. Topics include the nature of non-petroleum mineral resources, mineral and environmental depletions and conservation, the recognition of geological hazards and possible responses. Open to nonmajors. Mr. Carlisle

111A. Elements of Field Geology. Prerequisites: courses 1, 2 or consent of instructor; majors must have completed course 51C or be enrolled concurrently in course 51A; course 112 normally is taken concurrently. Techniques of geologic mapping; preparation of geologic reports; methods of mapping faults and folds, sedimentary, igneous, and metamorphic terrains, and Quaternary deposits; introduction to field methods in engineering and environmental geology, petroleum geology, and mining geology and mineral exploration; interpretation of geologic maps; field exercises in pace-and-compass topographic and geologic mapping. Mr. Shreve

111B. Stratigraphic and Field Geology. Prerequisite: course 111A or consent of instructor. Principles of stratigraphy; geologic mapping of a selected area; preparation of a geologic report. Mr. DePaolo, Mr. Hall (W)

111C. Field Geology. Prerequisite: course 111B or consent of instructor. Interpretation of geologic maps and aerial photographs; plane table mapping; geologic mapping of a selected area; preparation of a geologic report. Mr. Boettcher, Mr. Christie (Sp)

111AG-111BG-111CG. Field Geology (½ to 1 course each). Prerequisite: graduate standing or consent of instructor. Geologic mapping, principles of stratigraphy, structural geology and map interpretation.

112. Structural Geology. Prerequisite: course 111A normally is taken concurrently or consent of instructor. Planar and linear structures at different scales in sedimentary, metamorphic, and igneous rocks. Faults and folds, their description, classification, and dynamic analysis. Deformation, strength, fracture, and rheological properties of rocks. Mr. Christie (F)

*†**114. Intermediate Structural Geology.** Prerequisite: course 112 or consent of instructor. Large scale tectonics. The major structural features of the continental and oceanic crust of the earth; their geometry, geological and geophysical characteristics and theories as to their mode of origin. Orogenesis, continental drift, sea-floor spreading and plate tectonics. Methods of structural analysis and interpretation of geological structures. Mr. Oertel

115. Principles of Paleontology. Principles governing the evolution and distribution of fossils; the geologic history of plants, invertebrates and vertebrates. Mrs. Loeblich (F)

M117. Vertebrate Paleontology. (Same as Biology M117.) Prerequisite: Biology 110. Recommended: a course in general geology. Limited enrollment. The fossil record of the evolution of the vertebrates, with emphasis on the morphology of primitive forms in the series from fish to mammal. Mr. Vaughn (Sp)

*†**M118. Paleobotany.** (Same as Biology M118.) Prerequisite: one course in biological science or consent of instructor. Recommended: course 2 or equivalent. Survey of morphology, paleobiology, and evolution of vascular and nonvascular plants during geologic time, with particular emphasis on major evolutionary events. Mr. Schopf (Sp)

119. Continental Drift and Sea Floor Spreading. Prerequisite: senior standing in earth and space sciences, physics or mathematics. Evidence for continental drift and sea-floor spreading from age-dating of marine sediments and continents and from seismic, magnetic and heat-flow data. Description of sea-floor topography and sediments. Processes at mid-ocean rises and edges of plates. Description of events on the continental margins. Biological and biostratigraphic implications. Field work at option of instructor. Mr. Christie (Sp)

120A. Rubey Colloquium: Major Advances in Earth Science. Prerequisite: upper division standing. Lectures on major advances in earth science. Series of lectures to be offered by distinguished authorities (including regular faculty). Supervision of continuity and assessment of student performance by a faculty member. Series of lectures or short courses to cover topics such as continental drift or plate tectonics, nonrenewable natural resources, geologic hazards, geophysics, geochemistry (i.e., aspects of physical or chemical geology). Students should consult the department prior to enrolling in order to ascertain course content. Content or subjects will vary from year to year.

120B. Rubey Colloquium: Major Advances in Earth Science. Prerequisite: upper division standing. Lectures on major advances in earth science. Series of lectures to be offered by distinguished authorities (including regular faculty). Supervision of continuity and assessment of student performance by a faculty member. Series of lectures or short courses to cover topics such as major events in the evolution of life, paleoecologic interpretation, paleobiologic aspects of continental drift, origin of life, etc. (i.e., aspects of biogeology). Students should consult the department prior to enrolling in order to ascertain course content. Content or subjects to vary. Laboratory work may be required. When required, students also will register for Earth and Space Sciences 199 (Special Studies in Earth and Space Sciences, ½ course).

121A-121B. Advanced Field Geology (1½ courses each). Prerequisites: courses 111A, 111B, 111C or 136C or consent of instructor; to be taken concurrently. Problems in field geology; preparation of geologic maps and cross-sections; preparation of written geologic reports in the field and a final written summary geologic report of selected areas. (Sum)

*†**122. Physics of the Earth.** Prerequisites: Physics 8A, 8B, 8C, Mathematics 31A, 31B, 32A or consent of instructor. Application of physics to the structure and evolution of the solid earth. Seismology, convection and heat flow, gravity, geomagnetism, rock magnetism, and the relation of these topics to plate tectonics and other problems of current geophysical interest. Mr. Anderson

128A. Mineral Deposits. Prerequisite: course 51C. Origin and occurrence of important mineral deposits with emphasis on chalcophile elements and sulfide ores. (Alternates yearly with course 128B.) Mr. Carlisle (Sp)

*†**128B. Mineral Deposits.** Prerequisite: course 51C. Origin and occurrence of important mineral deposits with emphasis on siderophile and lithophile elements and their minerals. (Alternates yearly with course 128A.) Mr. Carlisle

*†**129. Coal (½ course).** Prerequisites: courses 51C, 111A, 111B, 111C or 136C or consent of instructor. Coal resources and reserves of the major coal-bearing stages. Geological methods of estimating coal reserves and cost of extraction. Theories of coal formation. New geophysical techniques for estimating reserves. Regional analysis of the issues in transporting energy from the coal deposits to urban centers of usage. Mr. Anderson

M130. Isotope Geochemistry. (Same as Geophysics and Planetary Physics M130.) Prerequisites: junior or senior standing in physical or biological science and consent of instructor. Theoretical aspects of geochronology, particularly Carbon-14 dating. Application of radioisotopes to the hydrologic cycle and to atmospheric circulation. Stable isotope distribution in nature. Exchange mechanisms and their applications to paleotemperatures, hydrology, mineral formation and origin of biological deposits. (Alternates yearly with course M131.) Mr. Kaplan (F)

*†**M131. Geochemistry.** (Same as Geophysics and Planetary Physics M131.) Prerequisite: junior or senior standing in chemistry, physics or earth and space sciences. Origin and abundance of the elements and their isotopes; distribution and chemistry of the elements in the earth, oceans, and atmosphere; chemistry of the earth's interior, phase transformations at high pressure and temperature. (Alternates yearly with course M130.) Mr. DePaolo

132. Principles of Biogeochemistry. Prerequisite: Chemistry 21. Organic substances as evidence for origin and biochemical evolution of life; origin and development of petroleum; comparative properties of recent and ancient sediments, and application of molecular stratigraphy to modern and ancient sediments. Mr. DeNiro (W)

133. Regional Geology. Prerequisites: courses 111A, 111B, 111C or 136C or consent of instructor. Application of geologic, stratigraphic, paleontologic, biologic and climatic principles to a specific province or provinces. Emphasis on tectonic evolution of selected regions. Mr. Ernst

135. Introduction to Applied Geophysics. Prerequisites: Physics 8A, 8B, 8C or 6B, Mathematics 31A, 31B, 32A or consent of instructor. Principles and techniques of gravimetric, seismic, magnetic and other geophysical methods of exploration for ores, petroleum and other economic minerals. Students may not receive credit for this course and course 136A. Mr. Jackson

136A. Applied Geophysics. Prerequisites: Physics 8A, 8B, 8C, 8D, Mathematics 33A or consent of instructor. Seismic reflection and refraction, Fourier analysis and deconvolution, vibroseis, synthetic seismograms, marine seismics, seismic interpretation, gravity and magnetic fields, inversion uniqueness and depth rules. Students may not receive credit for this course and course 135. Mr. Davis

136B. Applied Geophysics. Prerequisite: course 136A or consent of instructor. Principles and techniques of exploration for mineral deposits using natural and artificial electric and magnetic fields. Methods covered include self potential, resistivity, induced polarization, electromagnetics, magnetotellurics, magnetics. Mr. McPherron

136C. Field Geophysics. (Formerly numbered 169.) Prerequisite: course 135 or 136A or consent of instructor. Application of seismic, gravimetric, magnetic, and other geophysical methods to geologic and engineering problems. Practical aspects of geophysical exploration including planning, data collection, data reduction, and interpretation. Field work on unsolved problems. Mr. McPherron

137. Petroleum Geology. Prerequisites: courses 111A, 111B, 111C or 136C or consent of instructor. Geology applied to exploration for and production of natural gas and petroleum; techniques of surface and subsurface geology; problems of petroleum geology.

138. Mining and Exploration Geology. Prerequisite: course 51C. Geological principles applied to the exploration for and evaluation of mineral deposits; geological techniques at operating mines; mine economics; exploration geology and mineral resource economics. Mr. Watson (F)

M139. Engineering and Environmental Geology. (Same as Architecture and Urban Planning M195.) Prerequisite: course 1 or 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. Merifield (F)

140. Nonrenewable Resource Extraction. Prerequisite: course 128A or 128B or 138 or consent of instructor. The elements of mining and recovery of nonpetroleum and mineral resources; associated geological and economic considerations for the resource analyst and geologist. Mr. Carlisle (Sp)

141. Sedimentology. Prerequisite: course 111B taken concurrently or consent of instructor. Characteristics of sediment particles, dynamics of sedimentary processes and process-significance of sedimentary features. Interpretation of depositional environments is strongly emphasized. Mr. Reed (W)

144. Marine Geology. Prerequisite: senior standing. Recent marine sedimentology, and geochemistry; oceanography morphology, structure and geologic history of the ocean basins. Mr. Kaplan (Sp)

M149. Introduction to Fluid Dynamics. (Same as Atmospheric Sciences M149.) Prerequisites: Physics 131A, 131B or consent of instructor. Equations of fluid motion. Circulation theorems. Irrotational flow. Vortex motion. Surface and internal gravity waves. Rotating frame. Viscous flow. Mr. Schubert (F)

150. Remote Sensing for Earth Sciences. Prerequisite: open to upper division and graduate students. Remote sensing related to the development of natural resources. Characteristics of the electromagnetic spectrum and review of remote sensing devices. Applicability to land use classification, soil survey, urban studies, vegetation classification; emphasis on geologic interpretation of imagery. Mr. Sabins (W)

M154. Solar Terrestrial Physics. (Same as Atmospheric Sciences M154.) Prerequisite or concurrent: Physics 110B. Particle and electromagnetic emissions from the sun under quiet and under disturbed conditions. The solar wind. The magnetospheres and the ionospheres of the earth and other planets. Geomagnetic phenomena. Aurora and airglow. Mr. Venkateswaran (F)

190. Earth and Space Sciences Colloquium (½ course). Prerequisite for nonmajors: consent of instructor. Current topics of research in the Department of Earth and Space Sciences. To be taken on a Passed/Not Passed basis. May be repeated for credit. Mr. Rosenfeld (W)

195G. Field Geology for Graduate Students (½ course). Field mapping; preparation of a geologic report. Graded P/NP. Mr. Hall (F)

199. Special Studies in Earth and Space Sciences (½ to 2 courses). Students may be allowed to take course more than once for credit.

199H. Honors Research in Earth and Space Sciences. Prerequisites: senior standing and consent of the Departmental Honors Committee. Individual research designed to broaden and deepen the student's knowledge of some phase of earth and space sciences.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

East Asian Studies (Interdepartmental)

(Office: 9381 Bunche Hall)

Major in East Asian Studies

This major is designed to serve students who wish to study and/or reside in the Chinese- and Japanese-speaking areas of East Asia and the Asian American communities.

Preparation for the Major

History 9B-9C; Oriental Languages 1A-1B-1C or 9A-9B-9C or a parallel Cantonese sequence; Oriental Languages 11A-11B-11C or 19A-19B-19C. Students planning to pursue classical Chinese in the major will need Oriental Languages 13A-13B-13C in addition to the above courses.

The Major

This consists of three parts:

(1) Four courses selected from the following: Anthropology 175S, Asian American Studies 100A, 100B, Geography 186, History 161, 182A, 182B, 182C, 183, 184, 187A, 187B, 187C, Political Science 135, 136, 159, 160, Sociology 134.

(2) Five courses selected from the following: any courses in the social sciences listed above under item 1 not being used to satisfy that requirement; any upper division courses in the Department of Oriental Languages not being used to satisfy other parts of the major requirements; any new upper division courses relevant to East Asian or Asian American studies (including no more than three CED courses) which may be approved by the Executive Committee of the College on the recommendation of the Advisory Committee; Art 114B, 114C, 115B, 115C; Dance 140B, 145; Music 140B, 141, 145, 146A, 146B, 146C, 147A, 147B*.

(3) The prescribed courses in one of the following areas (courses offered to satisfy this requirement will not also satisfy other parts of the major requirements): (a) *language:* Oriental Languages 121A-121B and two other upper division courses in Chinese or Oriental Languages 119A-119B and two other upper division courses in Japanese; (b) *archaeology:* any four of the following: Oriental Languages 170A, 170B, Anthropology 112*, 115Q*, 115R*; (c) *geography:* Geography 132 or 133, 186 and two additional upper division geography courses; (d) *history:* four upper division or graduate courses in East Asian or Southeast Asian history (History 182A, 182B, 182C, 183, 184, 187A, 187B, 187C, 190A, 190B, 197 when in the East Asian field); (e) *political science:* Political Science 115* and three courses selected from the following: Political Science 135, 136, 159, 160, 161, C197 when in the East Asian field; (f) *sociology:* Sociology 124* and three courses selected from the following: Sociology 113*, 126*, 134*, 151*, 154.

For further information, contact Professor David M. Farquhar, History, 9381 Bunche Hall (825-3078).

*Courses so marked have prerequisites which are not included among the courses mentioned here.

Economics

(Office: 2263 Bunche Hall)

Armen A. Alchian, Ph.D., *Professor of Economics.*
William R. Allen, Ph.D., *Professor of Economics.*
Robert W. Clower, D.Litt. (OXON.), *Professor of Economics.*
Michael R. Darby, Ph.D., *Professor of Economics.*
Harold Demsetz, Ph.D., *Professor of Economics.*
George W. Hilton, Ph.D., *Professor of Economics.*
Werner 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. Leamer, Ph.D., *Professor of Economics.*
Axel Leijonhufvud, Ph.D., *Professor of Economics.*
John J. McCall, 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., LL.B., *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., LL.D., *Emeritus Professor of Economics.*
Earl J. Miller, Ph.D., LL.D., *Emeritus Professor of Economics.*
Dudley F. Pegrum, Ph.D., *Emeritus Professor of Economics.*
Bryan C. Ellickson, Ph.D., *Associate Professor of Economics.*
George G. S. Murphy, Ph.D., *Associate Professor of Economics.*
Joseph M. Ostroy, 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 D. Friedman, Ph.D., *Assistant Professor of Economics.*
John C. Haltiwanger, Ph.D., *Assistant Professor of Economics.*
David K. Levine, Ph.D., *Assistant Professor of Economics.*
Steven Wildman, Ph.D., *Assistant Professor of Economics.*
Benjamin Yu, Ph.D., *Assistant Professor of Economics.*
Sean R. Becketti, M.A., *Acting Assistant Professor of Economics.*
Mark W. Plant, M.A., *Acting Assistant Professor of Economics.*
Marc S. Robinson, A.B., *Acting Assistant Professor of Economics.*
Kenneth Sokoloff, M.A., *Acting Assistant Professor of Economics.*

Objective of the Major in Economics

The undergraduate program in economics is designed for students who wish to gain a thorough understanding of economic analysis. Emphasis is on economic principles applied to the resolution of interpersonal conflicts of interest and the coordination of productive activity in a world of scarce resources. Because students must gain a thorough theoretical and technical competence before extensive study of the applied specializations in the discipline, the analytic core of the major in Economics is closely structured. Some courses are appropriate for nonmajors, but the curriculum is most suitable for students who wish to make the study of economics their primary focus in their undergraduate education.

The undergraduate major in Economics provides analytical training in reference to socio-economic phenomena and develops the capacity for general problem solving, independent thought and research. Moreover, the major provides an excellent theoretical background for those pursuing graduate education in law, management, public administration, journalism, social welfare, architecture and urban planning and education, as well as economics.

Pre-Economics Major

While students are completing the lower division preparation courses for economics, they should be classified as Pre-Economics majors. When students have completed the preparation courses for the major, they must petition to enter the major at the Economics undergraduate advisor's office.

Please Note: Students who have completed at least 84 quarter units as of the beginning of Fall 1980 have the option of (1) completing the economics preparation and major requirements as set forth in the 1979-80 *UCLA General Catalog* or (2) completing the requirements as set forth below. The student must complete one option. The student may not mix the options. Students with less than 84 quarter units as of the beginning of Fall 1980 must complete the preparation and major requirements as listed below.

Preparation for the Major

Required: Economics 1, 2, 40 or 41 (or Management 115 or Mathematics 50A as a substitute for Economics 40 or 41); two lower or upper division courses in the social sciences other than economics, which may be taken Passed/Not Passed; two courses in calculus (e.g., Mathematics 3A, 3B or 3A, 3E or 31A, 31B, which may be taken Passed/Not Passed. Mathematics 3E is specifically designed for Economics majors. Students may not complete the calculus requirement with Mathematics 4A and/or 4B). Students must complete all premajor courses with a 2.0 ("C") grade in *each* course and must petition for major status by the time they attain 135 quarter units. Under special circumstances an Economics major in upper division standing who earns "B+" or better in Economics 100 may be permitted to substitute this course for Economics 1 and 2 by petition.

The Major

Required: Ten upper division courses in economics which must include: Economics 101A, 101B, 102 and at least one course in three different fields in economics chosen from the list below. It is preferable for the student to complete Economics 101A, 101B and 102 in separate, consecutive quarters prior to taking economics field courses. Economics 100 may not be included among the ten upper division courses. One or two of the ten courses may include UCLA Graduate School of Management courses 120 and/or 130. (Learning Center courses or courses transferred from other institutions may not be applied to this option.) A 2.0 grade-point average is required in upper division economics courses; a 2.0 GPA is also required in management courses applied toward the major. (A grade-point deficiency in economics courses cannot be offset by grade points earned in management courses and vice versa.) Upon consent of the instructor, students may take an upper division course for which they do not have prerequisites.

Fields for the Major

Economic Theory (courses 101A, 101B, 102, 103, 106, 107); *Economic Development* (courses 111, 112); *Regional Economics* (courses 120, 121); *Public Finance* (courses 130, 131, 133, 135); *Statistics, Mathematical Economics and Econometrics* (courses 141, 144, 145, 146, 147); *Labor Economics* (courses 150, 151, 152); *Money and Banking* (courses 160, 161); *Government and Industry* (courses 170, 171, 172, 175); *Economic Institutions* (courses 180, 181, 182, 183); *International Economics* (courses 190, 191, 192).

Undergraduate Advising

There is an undergraduate advising office located in 2253 Bunche Hall. The advisor is available for consultation on matters relating to curriculum and major requirements, course evaluations, special programs and career planning.

Major in Economics/System Science

The major is described later in this section of the catalog.

Lower Division Courses

1. Principles of Economics. Lecture, three hours; discussion, one hour. Not open to students with credit for course 100. An introduction to the principles of economic analysis, economic institutions, and issues of economic policy. Emphasis on allocation of resources and distribution of income through the price system.

2. Principles of Economics. Lecture, three hours; discussion, one hour. Not open to students with credit for course 100. An introduction to the principles of economic analysis, economic institutions, and issues of economic policy. Emphasis on aggregative economics, including national income, monetary and fiscal policy, and international trade.

3. Lower Division Research Seminar in Micro Economics. Prerequisite: course 1. Class enrollment limited to ten freshman or sophomore students. Seminar in which students do an intensive research project under guidance of regular faculty. Student selects topic in consultation with instructor; subjects limited to materials covered in course 1. Student writes paper and presents to seminar.

4. Lower Division Research Seminar in Macro Economics. Prerequisite: course 2. Class enrollment limited to ten freshman or sophomore students. Seminar in which students do an intensive research project under guidance of regular faculty. Student selects topic in consultation with instructor; subjects limited to material covered in course 2. Student writes paper and presents to seminar.

10. Evolution of Economic Institutions in America. Not open to students with credit for course 183. The historical development of the present American economic system and its performance over time, especially as revealed by the quantitative data of modern research. Mr. Murphy

40. Introduction to Statistical Methods. (Formerly numbered 140.) Not open to students with credit for Mathematics 50A-50B, 150A-150B-150C, 152A-152B or Management 115. Elements of statistical analysis. Presentation and interpretation of data; descriptive statistics; theory of probability and basic sampling distributions; statistical inference, including principles of estimation and tests of hypotheses; introduction to regression and correlation.

41. Statistics for Econometrics. Lecture, three hours. Prerequisites: two courses in calculus. Not open to students with credit for course 40, Mathematics 50A-50B, 150A-150B-150C, 152A-152B or Management 115. Probability spaces and probability measures; conditional probability; random variables; expected values; the normal distribution; estimation and hypothesis testing. Designed for students planning to take courses 147A, 147B. Mr. Levine

*Upper Division Courses

Courses 1 and 2 or 100 are prerequisite to all upper division courses in economics.

100. Economic Principles and Problems. Lecture, three hours. Not open to students with credit for course 1 or 2. Under special circumstances an Economics major in upper division standing who earns "B+" or better in course 100 may be permitted to substitute this course for Economics 1 and 2 by petition. A one-quarter course presenting the principles of economics with applications to current economic problems.

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

101A. Micro Economic Theory. Prerequisites: two courses in calculus or consent of instructor. The laws of demand, supply, returns, and costs; price and output determination in different market situations. Mr. Hirshleifer, Mr. Ostroy, Mr. Riley

101B. Micro Economic Theory. Prerequisite: course 101A. Theory of factor pricing and income distribution; general equilibrium; implications of the pricing process for the optimum allocation of resources; interest and capital. Mr. Hirshleifer, Mr. Ostroy

102. Macro Economic Theory. Prerequisites: two courses in calculus or consent of instructor. Theory of income, employment, and the price level. Analysis of secular growth and business fluctuations; introduction to monetary and fiscal policy. Mr. Clower, Mr. Darby, Mr. Thompson

103A-103Z. Upper Division Research Seminar: Applications of Economic Theory. (Formerly numbered 103.) Prerequisites: course 101A and others as set by instructor. Limited enrollment seminars in which the student usually writes a research paper on a topic chosen in consultation with instructor. Mr. Intriligator, Mr. Robinson

M103A. Political and Economic Issues in the Proliferation of Nuclear Weapons. (Same as Political Science M139.) The course provides an interdisciplinary approach to the problem of nuclear proliferation. It will also deal with the economic aspects of the acquisition of nuclear weapons and economic aspects of nuclear energy treating technological, bargaining and stability issues. Offered alternate years. Mr. Intriligator

103B. Economics of Energy. Prerequisites: courses 101A, 101B, 102. The topics covered in this course will include pricing and taxation of exhaustible resources, interactions between energy and the economy, institutions such as OPEC and oil price controls, oil debt and the balance of payments, energy conservation and future technologies. Mr. Robinson

106. Economic History of American Ethnic Groups. Prerequisite: course 101A. A critical analysis of variables affecting the income, occupations, and general economic progress of American ethnic groups. Such ethnic characteristics as demographic profile, regional distribution, skill level, and time of arrival will be considered, together with such societal characteristics as discrimination and public policy. Mr. Sowell

107. History of Economic Theory. A survey of economic analysis from Grecian antiquity to the early 20th century, concentrating on the 18th and 19th centuries; special attention to selected writers, including Aristotle, the Mercantilists, the Physiocrats, Hume, Smith, Malthus, Ricardo, Marx, Marginalists, and Marshall. Mr. Allen, Mr. D. D. Friedman, Mr. Sowell

110. Economic Problems of Underdeveloped Countries. Lecture, three hours. This course is restricted to students not majoring in Economics, Economics/Business or Economics/System Science. A survey of the major issues of development economics. Economic structure of low income countries and primary causes for their limited economic growth. Economic goals and policy alternatives open to their leaders. Possible roles of developed countries. Mr. Edwards

111. Theories of Economic Growth and Development. Lecture, three hours. Prerequisite: course 101A. Growth models, theory of production under constraints, relative factor prices and their impact on choice of technology, investment criteria, role of the market, economic planning in less developed areas. Mr. Edwards

112. Policies for Economic Development. Prerequisite: course 111 or 102. Suggested strategies for economic development: inflation, balanced growth, industry vs. agriculture, import substitution, export oriented expansion, foreign aid, and others will be considered. Selected case studies. Mr. Edwards

120. Introduction to Urban and Regional Economics. Lecture, three hours. Prerequisite: course 101A or consent of instructor. A survey of the broad range of policy and theoretical issues that are raised when economic analysis is applied in an urban setting. Topics include urbanization and urban growth, housing markets, location decisions of households and firms, transportation, urban labor markets and the local public sector. Mr. Ellickson, Mr. Hirsch

121. Urban Economic Analysis. Lecture, three hours. Prerequisites: courses 120, 101A, 101B or consent of instructor. Urban economic analysis requires the development of analytical tools that are different in some respects from the standard methodology presented in course 101A or 101B. This course focuses on the construction and implementation of these tools with applications to urban location decisions, housing, transportation, labor markets and the local public sector. Mr. Ellickson, Mr. Hirsch

130. Public Finance. Prerequisites: courses 101A, 101B or consent of instructor. Contrast between organization of economic activity by government and by the private sector. Analysis of alternative norms for governmental activity. Methods of assessing benefits of alternative public expenditure projects and burdens of alternative forms of taxations. The use of fiscal policy to achieve economic targets. Techniques of debt management and their interaction with monetary policy.

Mr. Haltiwanger, Mr. Plant, Mr. Robinson

131. Nonproprietary Organization. Prerequisites: courses 101A, 101B, completion of math requirement for the major. Use of economic techniques to study behavior of nonproprietary institutions such as government, cooperatives, unions, nonprofit firms, etc. Attention paid to behavior within these organizations as well as aggregates characterizing actions of the organization itself. Models of political behavior, and effect of decision rules and agenda on political outcomes studied.

Mr. Haltiwanger, Mr. Plant, Mr. Robinson

133. State and Local Finance. Prerequisite: course 130. The division of functions and revenues between state and local governments; the revenues, expenditures, and indebtedness of these governments. Analyses of state and local tax systems. Mr. Hirsch

M135. Economic Models of the Political Process. (Same as Political Science M103.) Prerequisites: Economics 101A, a basic course in political science and junior/senior status. This seminar is jointly offered by the Economics and Political Science Departments, and consent of instructor is required. The course examines conceptions and applications of two different processes of political interaction, the cooperative (as in public choice) and the conflictual (as in warfare) making use of economic models of choice and equilibrium. Mr. Hirshleifer

141. Principles of Statistical Decision. Prerequisite: course 40 or equivalent. Errors of the first and second kind; economic loss functions; prior probabilities and Bayes' Theorem. Analysis of classical and Bayesian approaches. Application to inventory and production problems. The value of information, and implications for sampling design.

Mr. Ellickson, Mr. Hirshleifer, Mr. McCall

144. Introduction to Mathematical Methods in Economics. (Formerly numbered 145.) Prerequisites: courses 101A, 101B and two courses in calculus. An introduction to the use of calculus in economic analysis. Topics covered include partial differentiation, optimization, integration and differential and difference equations with applications to the theory of the household and the firm, capital theory and economic dynamics.

Mr. Ellickson, Mr. Intriligator, Mr. Riley

145. Topics in Mathematical Economics. Prerequisite: course 144 (formerly numbered 145). Detailed course description should be obtained from instructor. Possible topics include: theory of economic growth; competitive equilibrium analysis; examination of market failure and the role for market intervention. Mr. Ellickson, Mr. Ostroy

146. Linear Models in Economics. Prerequisite: a course in calculus. An introduction to matrices and matrix algebra, with applications to economics, specifically input-output, Markov chains and linear models of econometrics.

Mr. Ellickson, Mr. Intriligator, Mr. Riley

147A. Introduction to Econometrics. (Formerly numbered 147.) Lecture, three hours. Prerequisites: two courses in calculus and Economics 41 or Mathematics 150A-150B or 152A-152B or consent of instructor. An introduction to econometrics, including a review of matrix algebra and statistical theory; the linear regression model; model specification; data collection; estimation and hypothesis testing; and an introduction to simultaneous equations models. An original econometric paper is required.

Mr. Cotterman, Mr. Ellickson, Mr. Intriligator

147B. Applications of Econometrics. (Formerly numbered 147.) Lecture, three hours. Prerequisite: course 147A. Econometric models and data; forecasting, policy analysis, estimation of simultaneous equations models, applications of econometrics. A major original econometric paper is required.

Mr. Cotterman, Mr. Ellickson, Mr. Intriligator

150. Wage Theory. Prerequisites: courses 101A, 101B or consent of instructor. The supply and demand for labor. Analysis of government, union and other constraints on the competitive system of wage determination. Wage level and structure. Wages and human capital theory.

Mr. Cotterman, Mr. Plant, Mr. Sowell

151. Labor, Wages and Income. Prerequisite: course 150 or consent of instructor. Selected topics in labor theory; income distribution; business cycles and unemployment; investments in human capital and life cycles; migration; human fertility; marriage and divorce, etc. Mr. Cotterman, Mr. Sowell

152. Economics of Trade Unions. Prerequisite: course 150 or consent of instructor. Economic analysis of strikes, boycotts, lockouts, right to work, seniority, work-rules, pensions, fringe benefits. The evolution of trade unions and the legislative framework within which they operate are also considered.

Mr. Hilton

160. Money and Banking. Principles of money and banking in the United States; legal and institutional framework; money supply process; instruments, effects, and practice of monetary policy.

Mr. Darby, Mr. D. Friedman, Mr. Wildman

161. Monetary Theory. Prerequisite: course 160. The nature of money and monetary exchange; level and term structure of interest rates; level and growth rate of money; transmission of monetary shocks; theory and practice of monetary policy.

Mr. Darby, Mr. Clower

170. Industrial Organization: Structure and Control. Prerequisite: course 101A. Economic and institutional foundations of public regulation of industry; the measurement and control of competition, monopoly and collusion; economic examination of antitrust; determinants of market structure; empirical evidence of structure and performance of industries.

Mr. Demsetz, Mr. Klein, Mr. Yu

171. Industrial Organization: Theory and Tactics. Prerequisite: course 101A. Study of pricing and output decisions of firms under conditions of less than perfect competition or monopoly; theories of oligopoly and monopolistic competition; information costs and advertising; examination of pricing practices such as price discrimination, tie-in selling, predatory pricing and resale price maintenance.

Mr. Demsetz, Mr. Klein, Mr. Yu

172. Economic Analysis of Laws and Legal Institutions. Prerequisite: course 101A. Application of economic theory to legal rule formulation: study of the economic nature and consequences of alternative legal arrangements with special reference to property rights. Application of economic theory to analysis of effects of laws relative to property, contracts, torts, crimes, taxation and constitutional issues. Analysis of the legal process. Mr. Demsetz, Mr. Hirsch

175. Economics of Transportation. The economic characteristics of transport; the functions of the different agencies; pricing and resource allocation in transport; public regulation of transport; urban transport; the modern transport problem.

Mr. D.D. Friedman, Mr. Hilton

180. Comparative Economic Systems. Lecture, three hours. Prerequisites: courses 101A, 101B. A comparative analysis of capitalist and socialist economies. Pure models will be discussed and attention will be paid to actual economies selected in the light of those models and the march of events.

Mr. Murphy

C181. Development of Economic Institutions in Western Europe. Prerequisite: upper division status. European economic history, 900-1914. Custom, command, and market modes of organization. Evolution of property rights, contract forms, and monetary arrangements. Decline of feudal institutions, especially serfdom. The open field village and enclosures. Crafts manufacturing and guild organization. Factories, industrial firms, and unions. Development of banking and central banking. The public finances and the role of government. May be concurrently scheduled with course C281. Mr. Leijonhufvud

182. Centralized Economics Systems. Lecture, three hours. Prerequisites: courses 101A, 101B. This course will provide an introduction to the theory of centralized systems and an examination of some centralized economies. Considerable attention will be paid to the economy of the U.S.S.R.; some attention will be given to other economies selected in light of the centralized model and with a view to the march of current events. Mr. Murphy

183. Development of Economic Institutions in the United States. Not open to students with credit for course 10. A study of the changing economic conditions in the U.S. from colonial times to the early 20th century and the effects of these changes on American society. Mr. Sokoloff

190. International Economics. Not open to students with credit for course 191 or 192. A general introduction to international economics, based upon an examination of the theory of trade and the means and significance of balance of payments adjustments, with analysis of major issues of international commercial and monetary policy confronting national and international agencies. Mr. Becketti

191. International Trade Theory. Prerequisite: course 101B. Not open to students with credit for course 190. The theory of international trade: the bases, direction, terms, volume, and gains of trade. The effects of tariffs, quantitative restrictions, and international integration. The effects of free and restricted trade on economic welfare and political stability. Mr. Leamer

192. International Finance. Prerequisite: course 102. Not open to students with credit for course 190. Emphasis on the interpretation of the balance of payments and the adjustment to national and international equilibria, through changes in price levels, exchange rates, and national income. Other topics include: making international payments, determination of exchange rates under various monetary standards, capital movements, exchange controls, and international monetary organization. Mr. D. Friedman

199. Special Studies in Economics (½ to 1 course). Prerequisites: senior standing and consent of instructor. A student may count this course only once in satisfying his major in Economics; he may take it a second time to meet University graduation requirements.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Economics/ Business

(Office: 2256 Bunche Hall)

This program is a concentration within the Economics major for students who wish a business orientation in their undergraduate studies. It is designed for those who plan careers in accounting, banking or finance. This major is NOT designed to be adequate preparation for the CPA examination. It consists of the basic Economics program plus appropriate courses in accounting, finance and managerial economics.

Admission to the Major

Resources for the program are limited, and only 250 students per year are admitted. Applications for admission are handled exclusively by the Department of Economics and are available once or twice a year only. All applicants must have completed at least 72 quarter units, one twelve-unit quarter of residence in regular session at UCLA and all courses listed under "Preparation for the Major." In addition, each applicant must be enrolled in regular session at the time of application and have an overall grade-point average of 3.0 AND an average of 3.0 in their economics courses.

NOTE: The requisite grade-point averages plus the completion of the "Preparation for the Major" do not guarantee admission to the program. Admission to the major is on a competitive basis, using the above qualifications as minimum standards for consideration.

Preparation for the Major

Economics 1, 2; Economics 40 or 41 or Mathematics 50A; Management 1A, 1B; Mathematics 3A and 3B *or* 3A and 3E *or* 31A and 31B (Mathematics 3E is specifically designed for Economics and Economics/Business majors).

The Major

Economics 101A, 101B, 102; five other upper division courses in economics in at least two different fields; five upper division courses in management selected from the following: Management 120, 122, 124, 227A, 130, 133 (or Economics 103C, but not both), 140. The department also recommends, but does not require, that all students in this major complete a course in elementary computer programming (e.g., Engineering 10C or 10F or 10S).

Minimum Grade Standards

Students in this concentration must maintain a 3.0 grade-point average throughout their programs and must have a 3.0 GPA (computed separately) for both management and economics courses in order to graduate (i.e., a grade-point deficiency in economics courses *cannot* be offset by grade points earned in management courses and vice versa when computing the upper division grade-point minimum of 3.0 for graduation).

For further information, contact Sheryl Massis, Economics, 2256 Bunche Hall (825-1011).

Economics/System Science (Interdepartmental)

(Office: 4532 Boelter Hall)

Major in Economics/System Science

This major is an alternative to the regular departmental major in Economics and combines work in the Department of System Science (School of Engineering and Applied Science) with preparation in economic theory and in those aspects of mathematics and statistics that are necessary for the study of quantitative aspects of economics and systems theory. The major is appropriate for students who plan graduate study with emphasis on such areas as economic theory, mathematical economics, econometrics, feedback and control systems, optimization, computing techniques, and the modeling and analysis of various socioeconomic systems.

Preparation for the Major

Economics 1 and 2; Engineering 10C or 10F; Mathematics 31A, 31B, 32A-32B, 33A, 33B.

The Major

Fourteen upper division courses are required consisting of six courses in economics selected from those numbered Economics 101 and above; six courses in system science selected from the series numbered Engineering 120 through 129; two courses in mathematics selected from those numbered Mathematics 110 and above.

Selections from economics must include the following: Economics 101A, 101B, 102 and at least one of Economics 144, 145, 146, 147. System science selections must be taken from Engineering 120A, 120B, 121A, 122A, 124A, 128A, 129A or the laboratory course 128L.

Highly recommended system science selections include Engineering 120A in the area of probability and stochastic processes, Engineering 121A, 122A, 128A in the area of dynamic systems and Engineering 129A in the area of numerical methods and optimization.

For purposes of the College breadth requirements, this major is considered to be in the division of physical sciencee. Economics/System Science majors may not offer courses in economics as breadth courses in the social sciences.

Minimum Standards

Each course taken in the major and in preparation for the major must be completed with a letter grade of "C–" or better, and in these courses a grade-point average of at least 2.5 is required.

For further information, contact the System Science Departmental Administrator, 4532 Boelter Hall (825-6830) or Lora Clarke, Economics Counselor, 2253 Bunche Hall (825-5118).

Education

(Office: 244 Moore Hall)

The Graduate School of Education does not offer an undergraduate degree. The following upper division courses are offered with enrollment restrictions as indicated:

Upper Division Courses

100A. Cultural Foundations of Education (½ course). Prerequisite: consent of instructor. Analysis of significant problems and issues in contemporary American education using historical, philosophical, sociological and organizational perspectives. Examines the politics of schooling, the organizational structure of school systems, and philosophical concepts of the aims and functions of schooling and education.

100B. Cross-Cultural Foundations of Education (½ course). Prerequisite: consent of instructor. Analysis of significant problems and issues in the history, culture and current affairs of particular ethnic minority groups in the United States. Patterns of intergroup and school-community relations, and methods for teaching minority students. Includes field experiences.

102. The Mexican-American and the Schools. Prerequisite: consent of instructor. Review of research and teaching strategies. Analysis of school policies and practices, and their effect on the development of Mexican-American and Chicano youth and communities.

M108. Sociology of Education. (Same as Sociology M143.) Prerequisite: Sociology 1 or 101. Study of social processes and interaction patterns in educational organizations; the relationship of such organizations to aspects of society, social class and power; social relations within the school, college and university; formal and informal groups, subcultures in educational systems; roles of teachers, students and administrators. Mr. O'Shea, Ms. Wrigley

112. Psychological Foundations of Education. Prerequisite: consent of instructor. Analysis of learning processes in school situations. Examines processes of human motivation, the affective, cognitive, social and personal development of children and adolescents, the evaluation of learning, individual differences, and the implications of relevant theory and research for instructional practices.

113. Instructional Psychology. Major psychological approaches to teaching. Processes of learning and motivation in the instructional setting. The psychology of teaching methods. Issues in the design and evaluation of instruction. Mr. Keislar

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 application of research and theory to special education problems. Mr. Hewett

125B. Principles for Teaching Exceptional Individuals. Prerequisite: consent of instructor. Examines 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.

M148. Women in Higher Education. (Same as Women's Studies M148.) Prerequisite: upper division standing. The course examines the education and career development of women in higher education. Specifically, it focuses on undergraduate and graduate women; women faculty and administrators; curricula, programs and counseling services designed to enhance women's educational and career development, affirmative action and other recent legislation. Ms. Astin

180. Social Psychology of Higher Education. An overview of significant studies in the Social Psychology of Higher Education. Focusing on institutional characteristics and students' interpersonal and intrapersonal processes, special emphasis is upon identifying and explaining the effects of the college experience upon student development and achievement. Mr. Trent

M197. Senior Seminar in Women's Studies. (Same as Women's Studies M197.) Discussion, three hours; laboratory, one hour. Prerequisites: Women's Studies 100 plus two other women's studies courses; seniors and juniors by consent of instructor. Designed for students completing work in Women's Studies. Each student pursues research on a specific topic concerning women, explores frameworks for understanding female experience (biological, economic, historical and psychological) and refines methods for research. Fulfills social science or humanities breadth requirement. Ms. Astin

199. Special Studies (½ to 2 courses). Prerequisites: senior standing and consent of instructor. Independent study of individual problems.

Graduate Courses

For complete descriptions of graduate-level courses offered by this School, please refer to the *UCLA Graduate Catalog.*

Engineering and Applied Science

(Office: 7400 Boelter Hall)

CHEMICAL, NUCLEAR AND THERMAL ENGINEERING

(Office: 5531 Boelter Hall)

Douglas N. Bennion, Ph.D., *Professor of Engineering and Applied Science.*

Harry Buchberg, M.S., *Professor of Engineering and Applied Science.*

Ivan Catton, Ph.D., *Professor of Engineering and Applied Science.*

Robert W. Conn, Ph.D., *Professor of Engineering and Applied Science.*

Traugott H. K. Frederking, Ph.D., *Professor of Engineering and Applied Science.*

Sheldon K. Friedlander, Ph.D., *Professor of Engineering and Applied Science.*

William E. Kastenberg, Ph.D., *Professor of Engineering and Applied Science.*

Eldon L. Knuth, Ph.D., *Professor of Engineering and Applied Science.*

Anthony F. Mills, Ph.D., *Professor of Engineering and Applied Science.*

Ken Nobe, Ph.D., *Professor of Engineering and Applied Science (Chair).*

David Okrent, Ph.D., *Professor of Engineering and Applied Science.*

Gerald C. Pomraning, Ph.D., *Professor of Engineering and Applied Science.*

Lawrence B. Robinson, Ph.D., *Professor of Engineering and Applied Science.*

William D. Van Vorst, Ph.D., *Professor of Engineering and Applied Science.*

Ahmed R. Wazzan, Ph.D., *Professor of Engineering and Applied Science.*

F. Eugene Yates, M.D., *Professor of Medicine and Engineering and Applied Science.*

[18]Joseph W. McCutchan, M.S., *Emeritus Professor of Engineering and Applied Science.*

George E. Apostolakis, Ph.D., *Associate Professor of Engineering and Applied Science.*

Vijay K. Dhir, Ph.D., *Associate Professor of Engineering and Applied Science.*

Vincent L. Vilker, Ph.D., *Associate Professor of Engineering and Applied Science.*

Yoram Cohen, Ph.D., *Assistant Professor of Engineering and Applied Science.*

Steven M. Dinh, Sc.D., *Assistant Professor of Engineering and Applied Science.*

Saeed Fathi-Afshar, Ph.D., *Assistant Professor of Engineering and Applied Science.*

Nasr M. Ghoniem, Ph.D., *Assistant Professor of Engineering and Applied Science.*

Owen I. Smith, Ph.D., *Assistant Professor of Engineering and Applied Science.*

•

Manuel M. Balzer, Ph.D., *Adjunct Professor of Engineering and Applied Science.*

Leslie Cave, B.Sc., *Adjunct Professor of Engineering and Applied Science.*

Robert C. Erdmann, Ph.D., *Adjunct Professor of Engineering and Applied Science.*

B. John Garrick, Ph.D., *Adjunct Professor of Engineering and Applied Science.*

Julius Glater, M.S., *Adjunct Associate Professor of Engineering and Applied Science.*

Irving M. Pearson, Ph.D., *Adjunct Professor of Engineering and Applied Science.*

Milton S. Plesset, Ph.D., *Adjunct Professor of Engineering and Applied Science.*

Kenneth A. Solomon, Ph.D., *Adjunct Assistant Professor of Engineering and Applied Science.*

Chauncey Starr, Ph.D., *Adjunct Professor of Engineering and Applied Science.*

Robert J. Taylor, Ph.D., *Adjunct Professor of Engineering and Applied Science.*

COMPUTER SCIENCE

(Office: 3731 Boelter Hall)

Algirdas A. Avizienis, Ph.D., *Professor of Engineering and Applied Science.*

Bertram Bussell, Ph.D., *Professor of Engineering and Applied Science.*

David G. Cantor, Ph.D., *Professor of Mathematics and Engineering and Applied Science.*

Jack W. Carlyle, Ph.D., *Professor of Engineering and Applied Science.*

Wesley W. Chu, Ph.D., *Professor of Engineering and Applied Science.*

[18]Joseph J. DiStefano, III, Ph.D., *Professor of Engineering and Applied Science and Medicine.*

Gerald Estrin, Ph.D., *Professor of Engineering and Applied Science (Chair).*

Sheila A. Greibach, Ph.D., *Professor of Engineering and Applied Science.*

Walter J. Karplus, Ph.D., *Professor of Engineering and Applied Science.*

Leonard Kleinrock, Ph.D., *Professor of Engineering and Applied Science.*

Allen Klinger, Ph.D., *Professor of Engineering and Applied Science.*

David F. Martin, Ph.D., *Professor of Engineering and Applied Science.*

Lawrence P. McNamee, Ph.D., *Professor of Engineering and Applied Science.*

Michel A. Melkanoff, Ph.D., *Professor of Engineering and Applied Science.*

Richard R. Muntz, Ph.D., *Professor of Engineering and Applied Science.*

[18]Judea Pearl, Ph.D., *Professor of Engineering and Applied Science.*

Gerald J. Popek, Ph.D., *Professor of Engineering and Applied Science.*

[18]Jacques J. Vidal, Ph.D., *Professor of Engineering and Applied Science.*

[18]Chand R. Viswanathan, Ph.D., *Professor of Engineering and Applied Science.*

Thomas A. Rogers, Ph.D., *Emeritus Professor of Engineering and Applied Science.*

Daniel M. Berry, Ph.D., *Associate Professor of Engineering and Applied Science.*

Alfonso F. Cardenas, Ph.D., *Associate Professor of Engineering and Applied Science.*

Milos D. Ercegovac, Ph.D., *Associate Professor of Engineering and Applied Science.*

Emily P. Friedman, Ph.D., *Associate Professor of Engineering and Applied Science.*

Mario Gerla, Ph.D., *Associate Professor of Engineering and Applied Science.*

D. Stott Parker, Jr., Ph.D., *Assistant Professor of Engineering and Applied Science.*

David A. Rennels, Ph.D., *Assistant Professor of Engineering and Applied Science.*

Robert C. Uzgalis, *Assistant Professor of Engineering and Applied Science.*

•

Thelma Estrin, Ph.D., *Professor of Engineering and Applied Science in Residence.*

William B. Kehl, A.M., *Adjunct Lecturer in Engineering and Applied Science.*

Leon Levine, M.S., *Senior Lecturer in Engineering and Applied Science.*

[19]Vance C. Tyree, M.S., *Adjunct Assistant Professor of Engineering and Applied Science.*

ELECTRICAL ENGINEERING

(Office: 7732 Boelter Hall)

Nicolaos G. Alexopoulos, Ph.D., *Professor of Engineering and Applied Science.*

Frederick G. Allen, Ph.D., *Professor of Engineering and Applied Science.*

Lee W. Casperson, Ph.D., *Professor of Engineering and Applied Science.*

Francis F. Chen, Ph.D., *Professor of Engineering and Applied Science.*

Robert S. Elliott, Ph.D., *Professor of Engineering and Applied Science.*

Harold R. Fetterman, Ph.D., *Professor of Engineering and Applied Science.*

A. Theodore Forrester, Ph.D., *Professor of Engineering and Applied Science and Physics.*

Neville C. Luhmann, Jr., Ph.D., *Professor of Engineering and Applied Science.*

H. J. Orchard, M.Sc., *Professor of Engineering and Applied Science.*
F. W. Schott, Ph.D., *Professor of Engineering and Applied Science.*
Oscar W. Stafeudd, Jr., Ph.D., *Professor of Engineering and Applied Science.*
Gabor C. Temes, Ph.D., *Professor of Engineering and Applied Science.*
[16]Chand R. Viswanathan, Ph.D., *Professor of Engineering and Applied Science (Chair).*
Alan N. Willson, Jr., Ph.D., *Professor of Engineering and Applied Science.*
Cavour W. Yeh, Ph.D., *Professor of Engineering and Applied Science.*
Louis L. Grandi, M.S., *Emeritus Professor of Engineering and Applied Science.*
W. D. Hershberger, Ph.D., *Emeritus Professor of Engineering and Applied Science.*
Ellis F. King, M.S., *Emeritus Professor of Engineering and Applied Science.*
Kang-Lung Wang, Ph.D., *Associate Professor of Engineering and Applied Science.*
Jack Willis, B.Sc., *Associate Professor of Engineering and Applied Science.*
Douglas N. Green, Ph.D., *Assistant Professor of Engineering and Applied Science.*
Kenneth W. Martin, Ph.D., *Assistant Professor of Engineering and Applied Science.*
Dae-Son Pan, Ph.D., *Assistant Professor of Engineering and Applied Science.*

•

Aldo G. DiLoreto, Ph.D., *Adjunct Professor of Engineering and Applied Science.*
Clifford E. Gilbert, B.Sc., *Visiting Lecturer in Engineering and Applied Science.*
Siegfried G. Knorr, Ph.D., *Adjunct Associate Professor of Engineering and Applied Science.*
[16]Vance C. Tyree, M.S., *Adjunct Assistant Professor of Engineering and Applied Science.*

ENGINEERING SYSTEMS

(Office: 7619 Boelter Hall)

[16]Joseph J. DiStefano, III, Ph.D., *Professor of Engineering and Applied Science and Medicine.*
John A. Dracup, Ph.D., *Professor of Engineering and Applied Science.*
Cornelius T. Leondes, Ph.D., *Professor of Engineering and Applied Science.*
John H. Lyman, Ph.D., *Professor of Engineering and Applied Science and Psychology (Chair).*
Herbert B. Nottage, Ph.D., *Professor of Engineering and Applied Science.*
Philip F. O'Brien, M.S., *Professor of Engineering and Applied Science.*
Russell R. O'Neill, Ph.D., *Professor of Engineering and Applied Science.*
[16]Judea Pearl, Ph.D., *Professor of Engineering and Applied Science.*
Richard L. Perrine, Ph.D., *Professor of Engineering and Applied Science.*
Allen B. Rosenstein, Ph.D., *Professor of Engineering and Applied Science.*
Moshe F. Rubinstein, Ph.D., *Professor of Engineering and Applied Science.*
Allen R. Stubberud, Ph.D., *Professor of Engineering and Applied Science, Resident at Irvine.*
William W. G. Yeh, Ph.D., *Professor of Engineering and Applied Science.*
Ralph M. Barnes, Ph.D., *Emeritus Professor of Engineering and Applied Science and Production Management.*
Edward P. Coleman, Ph.D., *Emeritus Professor of Engineering and Applied Science.*
[16]J. Morley English, Ph.D., *Emeritus Professor of Engineering and Applied Science.*
Warren A. Hall, Ph.D., *Emeritus Professor of Engineering and Applied Science.*
W. Julian King, M.E., *Emeritus Professor of Engineering and Applied Science.*
[16]Joseph W. McCutchan, M.S., *Emeritus Professor of Engineering and Applied Science.*
Russell L. Perry, M.E., *Emeritus Professor of Engineering and Applied Science, Resident at Riverside.*
Arthur F. Pillsbury, Engineer, *Emeritus Professor of Engineering and Applied Science.*
Bonham Campbell, E.E., *Associate Professor of Engineering and Applied Science.*
Michael K. Stenstrom, Ph.D., *Associate Professor of Engineering and Applied Science.*

•

Norman C. Dalkey, Ph.D., *Adjunct Professor of Engineering and Applied Science.*
Gary L. Gasca, B.A., *Visiting Lecturer in Engineering and Applied Science.*
Julius Glater, M.S., *Adjunct Associate Professor of Engineering and Applied Science.*
Alfred C. Ingersoll, Ph.D., *Professor of Engineering and Applied Science in Residence.*
Don Lebell, Ph.D., *Adjunct Professor of Engineering and Applied Science.*
Melvin W. Lifson, Ph.D., *Visiting Lecturer in Engineering and Applied Science.*
Kenneth R. Pfeiffer, Ph.D., *Visiting Lecturer in Engineering and Applied Science and Psychology.*
Robert V. Phillips, B.S., *Adjunct Professor of Engineering and Applied Science.*
Arnold M. Ruskin, Ph.D., *Adjunct Professor of Engineering and Applied Science.*

MATERIALS SCIENCE AND ENGINEERING

(Office: 6531 Boelter Hall)

Alan J. Ardell, Ph.D., *Professor of Engineering and Applied Science.*
Rointan F. Bunshah, D.Sc., *Professor of Engineering and Applied Science.*
David L. Douglass, Ph.D., *Professor of Engineering and Applied Science.*
William J. Knapp, Sc.D., *Professor of Engineering and Applied Science.*
John D. Mackenzie, Ph.D., *Professor of Engineering and Applied Science (Chair).*
Kanji Ono, Ph.D., *Professor of Engineering and Applied Science.*
Aly H. Shabaik, Ph.D., *Professor of Engineering and Applied Science.*
[16]George H. Sines, Ph.D., *Professor of Engineering and Applied Science.*
Christian N. J. Wagner, Dr. rer. nat., *Professor of Engineering and Applied Science.*
Alfred S. Yue, Ph.D., *Professor of Engineering and Applied Science.*
Daniel Rosenthal, Ph.D., *Emeritus Professor of Engineering and Applied Science.*
William Klement, Jr., Ph.D., *Associate Professor of Engineering and Applied Science.*

•

Samuel B. Batdorf, Ph.D., *Adjunct Professor of Engineering and Applied Science.*
Bruce B. Dunn, Ph.D., *Visiting Associate Professor of Engineering and Applied Science.*
Ryoichi Kikuchi, Ph.D., *Adjunct Professor of Engineering and Applied Science.*
Frederick F. Lange, Ph.D., *Adjunct Professor of Engineering and Applied Science.*
Martin H. Leipold, Ph.D., *Adjunct Professor of Engineering and Applied Science.*
Morris A. Steinberg, D.Sc., *Adjunct Professor of Engineering and Applied Science.*

MECHANICS AND STRUCTURES

(Office: 5732 Boelter Hall)

Andrew F. Charwat, Ph.D., *Professor of Engineering and Applied Science.*
Julian D. Cole, Ph.D., *Professor of Engineering and Applied Science and Mathematics.*
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. Fourney, Ph.D., *Professor of Engineering and Applied Science (Chair).*
Peretz Friedmann, Sc.D., *Professor of Engineering and Applied Science.*
Gary C. Hart, Ph.D., *Professor of Engineering and Applied Science.*
Robert E. Kelly, Sc.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 C. Meecham, 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.*
Richard B. Nelson, Sc.D., *Professor of Engineering and Applied Science.*
Lucien A. Schmit, Jr., M.S., *Professor of Engineering and Applied Science.*
[16]George H. Sines, Ph.D., *Professor of Engineering and Applied Science.*
Richard Stern, Ph.D., *Professor of Engineering and Applied Science.*
Russell A. Westmann, Ph.D., *Professor of Engineering and Applied Science.*
Joseph S. Beggs, D.Ing., *Emeritus Professor of Engineering and Applied Science.*
[15]C. Martin Duke, 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.*
Poul 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.*
James S. Gibson, Ph.D., *Assistant Professor of Engineering and Applied Science.*
Peter A. Monkewitz, Ph.D., *Assistant Professor of Engineering and Applied Science.*

•

Robert E. Englekirk, Ph.D., *Adjunct Associate Professor of Engineering and Applied Science.*
George J. Tauxe, M.S., *Emeritus Senior Lecturer in Engineering and Applied Science.*
George E. Warren, Ph.D., *Adjunct Professor of Engineering and Applied Science.*
Edward R. Wood, D.Engr., *Adjunct Professor of Engineering and Applied Science.*
Harold T. Yura, Ph.D., *Adjunct Professor of Engineering and Applied Science.*

SYSTEM SCIENCE

(Office: 4532 Boelter Hall)

A. V. Balakrishnan, Ph.D., *Professor of Engineering and Applied Science and Mathematics (Chair).*
Hector O. Fattorini, Ph.D., *Professor of Mathematics and 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. Wiberg, Ph.D., *Professor of Engineering and Applied Science and Anesthesiology.*
Kung Yao, Ph.D., *Professor of Engineering and Applied Science.*
Richard E. Mortensen, Ph.D., *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.*

•

George J. Ruzicka, Ph.D., *Adjunct Associate Professor of Engineering and Applied Science.*

Undergraduate Required Courses

Lower Division: 10 courses

Upper Division: The student is to select 8 core courses (32 units) from the 5 subject areas as listed below. The minimum and maximum number of units allowed in each of the 5 subject areas is also given.

Subject Areas (5); Courses (12)

(1) *Computer Processes*
Course: 124A
Units: 0-4

(2) *Electrical Sciences*
Courses: 100, 100B
Units: 4-8

(3) *Mechanics*
Courses: 102, 103, 108
Units: 8-12

(4) *Systems*
Courses: 106B, 121C, 127B
Units: 4-8

(5) *Thermal and Materials Science*
Courses: 14, 105A, 105D
Units: 8-12

Students following pre-1976-77 catalogs are referred to the respective catalogs for further information.

School Courses

11, 12, 104, 104C-104D, 193A, 194A, 194B, 196A, 291C, 470A-470D*, 471A-471B-471C*, 472A-472D*, 473A-473B*, 596, 597A, 597B, 597C, 598, 599.

*Open only to Engineering Executive Program students.

Departmental Course Offerings

Chemical, Nuclear and Thermal Engineering Courses

130A, 131A, 132A, 133A, 134A, 134B, 134C, 135A, 135AL, 135B, 135BL, 135C, 135D, 135E, 135F, 136A, 136B, 136C, 137, 137A, 137B, 137C, 137D, 137E, 138, 138A, 138B, 139A, 139AC, 139B, 139BC, 192A, 192B, 192C, 199C, 230A, 230B, 230C, 230D, 231A, 231B, 231C, 231D, 231E, 231F, 232B, 233A, 234A, 235A, 235B, 235C, 235D, 236A, 236B, 236C, 236D, 236E, 237A, 237B, 237C, 237D, 237E, 238, 238A, 238B, 238C, 238D, 238E, 239AA-239AZ, 239BA-239BZ, 239CA-239CZ, 239DA-239DZ, 239EA-239EZ, 239FA-239FZ, 239GA-239GZ, 239S, 240, M250, M251, M252.

Computer Science Courses

5, 20, 30, 99, 111, 112, 130, 131, 132, 141, 151A, 151B, 152A, 152B, 171, 172, 173, 174, 181, 183, 199, 201, 202, 212A, 212B, 212C, 215, 216, 218A, 219, 221, 231A, 231B, 232A, 232B, 234B, 234C, 239, 241A, 241B, 242A, 243A, 243B, 249, 251A, 252A, 253A, 253B, 254A, 255B, 256A, 257A, M258A-M258B-M258C, 259, 270A, 271A, 271B, 271C, 273A, M274A, M274B, M274C, M274Z, 275A, 276A, 276B, 276C, 277A, 279, 280A-280ZZ, 281A, 281D, 284A-284ZZ, 287A, 289A-289ZZ, 497D-497E, 596, 597A, 597B, 597C, 598, 599.

Electrical Engineering Courses

110A, 110B, 110C, 111A, 111B, 113A, 113B, 115A, 115B, 115C, 115D, 115E, 115F, 116A, 116B, 116C, 116D, 116E, 116L, 116M, 116N, 117A, 117B, 117D, 117E, 117L, 117X, M118, 195A, 199B, 201, 210A, 210B, 210C, 210D, 210E, 210F, 213A, 213B, 213C, 213D, 213S, 214A, 214B, 214C, M214D, M214E, 215A, 215B, 215C, 215D, 215E, 216A, 216B, 216C, 216D, 216E, 217A-217B, 217C, 217E, 219A, 219B, 219C, 219D, 219E, 219X, M258A-M258B-M258C.

Engineering Systems Courses

106A, 106C, 106D, M107A, 109, 171A, 171C, 173, 174A, 174B, 176A, 180A, 180B, 181A, 184A, 184B, 184D, 184E, 193B, M196B, 199D, 270A, 271A, 271B, 271C, 271D, 272D, M274A, M274B, M274C, 274J, 274K, M274Z, 276A, 277A, 277B, 280A, 280B, 284A, 284B, 284C, 284D, 284E, 284F, 284G, 284H, M288A, M288B, M288C, M296A, M296B, M296C.

Materials Science and Engineering Courses

15, 140D, 140E, 140X, 141, 142A, 142L, 143A, 143L, 144A, 144L, 145A, 145B, 146A, 146B, 146F, 146L, 147A, 147B, 147E, 147L, 148, 149C, 149E, 199E, 240A, 240B, 241, 242A, 243A, 243B, 243C, 244, 245C, 246A, 246B, 246D, 247A, 247B, 247C, 248A.

Mechanics and Structures Courses

150A, 150B, 151, 153A, 153B, 153C, 154A, 154B, 155, 156A, 157, 157A, 157B, 158A, 160, 161A, 162A, 162B, 162C, 163, 164, 165A, 165B, 165C, 165L, 166, 167A, 167B, 167C, 167L, 167X, 169A, 169L, 185A, 185B, 191A, 192A, 192B, 192C, 199F, 250A, 250B, 250C, 251A, 251B, 251C, 252A, 252B, 253A, 253B, 253C, 254A, 255A, 255B, 256A, 256B, 256C, 256F, M257A, M257B, 259A, 259B, 262A, 263A, 263B, 263C, 264A, 265A, 265B, 265C, 266A, 267A, 267C, 267E, 267S, 268A, 268B, 269A, 269B, 269C, 269D, 285A, 285B, 285C, 285D, 285E, 285L, 286A, 286B, M291A, M291B, M292A, M292B.

System Science Courses

120A, 120B, 121A, 122A, 124A, 128A, 128L, 129A, 192A, 192B, 192C, 200A, 200C, 200D, 201A-201ZZ, 220A, 220B, 220G, 221, 222A, 222B, 222C, 222EA-222EZ, M222F, M222G, 227A, 227B, 227C, 227EA-227EZ, 227F, 227G, 229A, 229B, 229C, 229EA-229EZ, 229J-229K-229L, 272A, 272B, 272BA-272BZ, 272C, 273A, 273B, 275A, 275B, M291A, M291B.

Engineering

Lower Division Courses

10C. Introduction to Programming. (Formerly numbered 10.) Lecture, four hours; recitation, two hours. Recommended for Math/Computer Science and Engineering majors (emphasis on numerical problems). Open to graduate students on S/U grade basis only. Not open to students with credit for Engineering 10, 10F or 10S. Exposure to computer organization and capabilities. Basic principles of programming (using PASCAL as the example language): algorithmic, procedural problem solving. Program design and development. Control structures and data structures. Human factors in programming and program design. Mr. Levine (F,W,Sp)

10F. Introduction to Programming/FORTRAN. (Formerly numbered 10.) Recommended for Chemical, Nuclear and Thermal Engineering Department and Mechanics and Structures Department majors (emphasis on numerical problems). Open to graduate students on S/U grade basis only. Not open to students with credit for Engineering 10, 10C or 10S. Description and use of FORTRAN programming language. Selected topics in programming techniques. Programming and running of several numeric problems. Mr. Levine (F,W,Sp)

10S. Introduction to Programming. (Formerly numbered 10.) Lecture, four hours; recitation, two hours. Recommended for all majors except Math/Computer Science and Engineering (emphasis on non-numerical problems). Open to graduate students on S/U grade basis only. Not open to students with credit for Engineering 10, 10C or 10F. Exposure to computer organization and capabilities. Basic principles of programming (using PASCAL as the example language): algorithmic, procedural problem solving. Program design and development. Control structures and data structures. Human factors in programming and program design. Mr. Levine (F,W,Sp)

11. Patterns of Problem Solving. An introduction to patterns of reasoning in the process of problem solution and decision making. Exposure to concepts, theories and techniques in the analysis and synthesis of total systems in our complex technological civilization. Mr. Rubinstein (F,W,Sp)

12. Applied Patterns of Problem Solving. Prerequisite: course 11. An application of the tools and methods discussed in Engineering 11, to three specific problems of a social and technical nature. Mr. Rubinstein (Sp)

14. Science of Engineering Materials. Prerequisites: Chemistry 11A, 11B, 11BL, Physics 8A, 8B (8C may be taken concurrently). Not open for credit to students with credit for Engineering 107B. General introduction to different types of materials used in engineering designs: metals, ceramics, plastics and composites, relationship between structure (crystals and microstructure) and properties of technological materials. Illustration of their fundamental differences, and their applications in engineering. Mr. Ono (F,W,Sp)

15. Introduction to Manufacturing Engineering. Manufacturing processes, materials and design in manufacturing; productivity, competitive aspects of manufacturing, manufacturing planning, production scheduling, flexible manufacturing systems, economic and social aspects of manufacturing. Mr. Shabaik (F)

Upper Division Courses

100. Electrical and Electronic Circuits. Lecture, four hours; recitation, one hour. Prerequisites: Mathematics 31A, 31B, 32A, 33A, 33B, Physics 8C. Electrical quantities, circuit principles, signal waveforms, A.C. circuits, semiconductor devices, small signal models, amplifiers, electrical and electronic instruments. Mr. Luhmann (F,W,Sp)

100B. Engineering Electromagnetics. Lecture, four hours; recitation, one hour. Prerequisites: Physics 8C, Mathematics 32A-32B or 33A, 33B. Electromagnetic field concepts; Maxwell's Equations; static and quasistatic fields; field energy; energy flow and the Poynting vector; electromechanical interactions; waves in unbounded media and on two-wire transmission lines; reflection and refraction; lossy media; skin effect; analogs to electromagnetic fields. Mr. Alexopoulos (F,W,Sp)

100L. Circuit Analysis Laboratory (½ course). Prerequisites: Physics 8C, Engineering 100 which should be taken concurrently. Experiments with circuits containing linear and nonlinear devices; transient and steady state behavior of circuits. Mr. Luhmann (F,W,Sp)

102. Mechanics of Particles and Rigid Bodies. Lecture, three hours; recitation, two hours. Prerequisites: Mathematics 33A, Physics 8A. Newtonian mechanics (statics and dynamics) of particles and rigid bodies. Fundamental concepts of mechanics. Statics, kinematics, and kinetics of particles and rigid bodies. Impulse-momentum and work-energy relationships. Applications. Mr. Mingori (F,W,Sp)

103. Elementary Fluid Mechanics. Lecture, three hours; recitation, two hours. Prerequisites: Mathematics 32B, 33A, Physics 8B. An introductory course dealing with the application of the principles of mechanics to the flow of compressible and incompressible fluids. Mr. Meecham (F,W,Sp)

104. Introduction to Experimental Techniques (½ course). Principles of simple machining operations, engineering drawing practices, soldering and welding techniques, vacuum systems, glassblowing, American standard sizes and color-codes, effective presentation of results. One lecture-demonstration per week. May be taken before junior year. To be graded on P/NP basis. Mr. Stern (F,Sp)

104C-104D. Undergraduate Research Laboratory. Laboratory, eight hours. Prerequisite: senior standing. Two-quarter comprehensive projects in experimental engineering—research or design—involving laboratory work. Students may submit projects of their own choosing. May serve as basis for graduate research. Will satisfy engineering laboratory requirement. Qualified non-engineering students are encouraged to enroll. Mr. Shabaik, Mr. Stern (F,W,Sp)

105A. Introduction to Engineering Thermodynamics. Lecture, four hours; recitation, one hour. Prerequisites: Physics 8B, Mathematics 32B. Phenomenological thermodynamics. Concepts of equilibrium, temperature and reversibility. First law and concept of energy; second law and concept of entropy. Equations of state and thermodynamic properties. Engineering applications of these principles in the analysis and design of closed and open systems. Mr. Catton, Mr. Robinson, Mr. Wazzan (F,W,Sp)

105D. Transport Phenomena. Lecture, four hours; recitation, one hour. Prerequisites: Physics 8B, Mathematics 32B, 33A. Transport phenomena; heat conduction, mass species diffusion, convective heat and mass transfer, and radiation. Engineering applications in thermal and environmental control. Mr. Mills, Mr. Pomraning, Mr. Viiker (F,W,Sp)

106A. Principles of Engineering Economy. Prerequisite: upper division standing. Economic analysis of engineering projects; value systems; economic decisions on capital investment and choice of engineering alternatives; new projects, replacement and abandonment policies; risky decisions including make/buy policies and research investment; corporate financial practices and accounting. Mr. Lyman (F,W,Sp)

106B. Introduction to Design and Systems Methodology. Prerequisites: course 10C, Mathematics 32A-32B, 33A, 33B. Theory of engineering design and synthesis. Models and modeling. Analysis, test and evaluation. Methods for design optimization. Elementary decision theory. Student's design projects. Mr. Rosenstein (F,W,Sp)

106C. Experimental Design Laboratory. Laboratory, eight hours. Prerequisite: course 106B or equivalent. Creative experimental projects for student designs in any engineering domain where individual students have preparation and interest, exemplifying the professional method. Predicted idealized performance is compared to experimentally achieved realities. Student prize competition entries are encouraged. Mr. O'Brien (W)

106D. Engineering Systems Design Laboratory. Recitation, one hour; laboratory, eight hours. Prerequisite: course 106C; course 104 recommended. Advanced senior standing required. Similar to course 106C and normally a continuation thereof. Design projects generally emphasizing productivity, energy, environments, and process cost-benefit studies. Mr. O'Brien (Sp)

M107A. Principles of Biotechnology. (Same as Psychology M153.) Prerequisite: third-quarter sophomore or higher standing. The principles of biological science are developed in an engineering context. An emphasis is placed on how physiological, psychological, and sociological factors affect the integration of man into environmental, informational and managerial systems by engineering means. Mr. Lyman (F,W)

108. Introduction to Mechanics of Deformable Solids. Lecture, three hours; recitation, two hours. Prerequisite: Mathematics 33A (may be taken concurrently); Engineering 102 recommended. Review of equilibrium principles. Concepts of stress and strain. Material constitution (stress-strain relations). Energy in deformable bodies. Structural applications to trusses, beams, shafts, columns and pressure vessels. Mr. Westmann (F,W,Sp)

109. The Engineer and Society. Prerequisite: senior standing. Selected lectures, discussions, oral and written reports related to creative engineering, its sociological and ecological impacts, present, future, and past relationships. Maximum student participation in topical selection and class structuring. Creativity and original thinking is emphasized. Mr. Ingersoll, Mr. O'Brien (F,W,Sp)

110A. Basic Circuit Theory I. Lecture, four hours; recitation, one hour. Prerequisite: course 100. The zero-input, zero-state, transient, steady-state, and complete response of first-order and second-order circuits. Linear time-invariant networks; step response, impulse response, convolution integral. Sinusoidal steady-state analysis. Coupling elements and coupled circuits. The Laplace transform. Mr. Willson (F,W,Sp)

110B. Basic Circuit Theory II. Lecture, four hours; recitation, one hour. Prerequisite: course 110A. Elementary graph theory, general methods of analyzing electric circuits. Introduction to state equations, natural frequencies. Properties of network functions. Network theorems. Methods of characterizing two-port networks. Mr. Orchard (F,W,Sp)

110C. Passive Network Synthesis. Prerequisite: course 110B or equivalent. Properties of positive real functions and tests for positive realness. Synthesis of one and two-port RLC and two-element kind networks. Mr. Temes (F,Sp)

111A. Electric Power Systems. Prerequisite: course 100. Overall electric power system requirements; typical systems; one-line diagrams. Per-unit quantities; characteristics of machines, transformers, overhead lines and cables; steady-state analysis of systems. Power limits and stability; fault calculations; relays and relay systems. Mr. Schott (W)

111B. Electromechanical Energy Conversion. Prerequisite: course 100. Energy conversion and power flow in electromechanical interactions; electromechanics of actuators and rotating a.c. synchronous and induction machines and d.c. machines. Linear machines. Mr. Schott (F)

113A. Introduction to Lasers and Quantum Electronics. Prerequisite: course 100B or equivalent or consent of instructor. Physical principles and applications of lasers and other quantum electronic devices. Interferometers, crystal optics, gain and saturation phenomena, and gas discharges. Mr. Casperson, Mr. Stafsudd (F)

113B. Laser Laboratory (½ course). Recitation, one hour; laboratory, three hours. Prerequisite: course 100B or equivalent or consent of instructor. Properties of lasers including saturation, mode-locking and relaxation effects, and laser applications including optics, modulation, communication, holography, interferometry and nonlinear effects. Mr. Casperson, Mr. Stafsudd (F)

115A. Fundamentals of Solid State I. Lecture, four hours; recitation, one hour. Prerequisite: junior standing in engineering; course 130A or equivalent recommended. Introductory atomic concepts, quantum mechanical principles, energy level in complex atoms, quantum statistics, crystal structure, energy levels in solids, band theory. Mr. Viswanathan (F,Sp)

115B. Fundamentals of Solid State II. Prerequisite: course 115A. A discussion of the solid state properties, lattice vibrations, thermal properties, dielectric, magnetic, and super-conducting properties. Mr. Stafsudd (W)

115C. Semiconductor Physical Electronics. Prerequisite: course 115B. Band structure of semiconductors, homogeneous semiconductors, excess carriers in semiconductors, semiconductor surfaces, optical and thermal properties; application to design of devices. Mr. F.G. Allen, Mr. Pan (Sp)

115D. The Principles of Design of Semiconductor Devices. Lecture, four hours; recitation, one hour. Prerequisite: senior standing in engineering. Semiconductor technology, Schottky barrier, p-n junction, MOS capacitance, transistor fundamentals, drift transistor, high frequency properties, field effect transistors, integrated electronics, applications and design of devices. Mr. F.G. Allen, Mr. K.L. Wang (F,W,Sp)

115E. Solid State Electronics Laboratory (½ course). Prerequisite: course 115C. Experimental measurement of electronic, magnetic, thermal and optical properties of p- and n-type semiconductors as used in the design of devices. Mr. F.G. Allen (W)

115F. Semiconductor Devices Laboratory (½ course). Prerequisite: course 115D. Design, fabrication and characterization of junction, field effect and other semiconductor devices. In particular the student will perform various processing tasks such as wafer preparation, oxidation, impurity diffusion, metallization, sintering and photolithography.
Mr. F.G. Allen, Mr. K.L. Wang (F,Sp)

116A. Electronics I. Lecture, four hours; recitation, one hour. Prerequisite: course 100. Equivalent circuit modeling of electron devices. Device-circuit-environment interactions. Design of single-stage amplifiers. Introduction to cascaded stages, coupling problems and frequency response. Mr. Green (F,W,Sp)

116B. Electronics II. Lecture, four hours; recitation, one hour. Prerequisite: course 116A. Electron device-circuit-environment interactions with emphasis on multistage amplifiers. Tuned amplifier considerations. Nonlinear situations requiring graphical method of solution. Emphasis on design techniques including economics, reliability and realization of performance specifications.
Mr. K. Martin, Mr. Willis (W,Sp)

116C. Digital Integrated Circuits. Lecture, four hours; recitation, one hour. Prerequisites: courses 116A, 116B, Computer Science 151A. Modern logic families (TTL, I²L, ECL, NMOS, CMOS), IC layout, MSI digital circuits (flipflops, registers, counters, PLA's, etc), digital machine realization techniques, VLSI memories, A/D's, VLSI systems (time permitting). Laboratory experiments in switching circuits. Mr. K. Martin (W,Sp)

116D. Communication Circuits. Prerequisites: courses 116B, 121C. Signals and spectra. Signal distortion in transmission filters, transmission bandwidth requirements. Random signals and noise, linear modulation, exponential modulation circuits and characteristics. Commercial communication systems. Mr. Willis (F,Sp)

116E. Integrated Circuit Components and Design. Prerequisites: courses 115D, 116B. Realization of active and passive components in integrated circuit design. Passive components: resistors, capacitors, metal interconnections. Active devices: NPN and PNP BJTs, design rules; FET devices. Device interactions and layout rules. Mr. K. Martin (W)

116L. Electronics I Laboratory (½ course). Prerequisite: course 100L; course 116A recommended. Experimental determination of device characteristics, resistive diode circuits, single-stage amplifiers, compound transistor stages, effect of feedback on single-stage amplifiers. Mr. K. Martin (F,W,Sp)

116M. Electronics II Laboratory (½ course). Prerequisite: course 116L; course 116B recommended. Experimental computer studies of multistage, wideband, tuned and power amplifier, and multiloop feedback amplifiers. Introduction to Thick Film Hybrid Techniques. Construction of amplifier using hybrid thick film techniques. Mr. Willis (F,W,Sp)

116N. Pulse and Digital Methods Laboratory (½ course). Prerequisite: course 116M; course 116C to be taken concurrently. Experimental and computer studies of diode and transistor switching and timing circuits. Linear and nonlinear wave shaping techniques. Waveform generation. Mr. K. Martin (F,Sp)

116U. Design Laboratory in Microcomputer Hardware and Interfacing. Lecture, two hours; laboratory, six hours. Prerequisites: Computer Science 151B, 152B. A second-level design laboratory in microcomputer hardware and interfacing. Address, data and control busses. I/O devices including serial interfaces, parallel interfaces and timers. Assembly language programming. Advanced concepts such as interrupts, DMA, inter-processor communication and industrial control applications will be dealt with in major design projects where practical digital systems will be designed and realized. Mr. K. Martin

117A. Electromagnetic Waves I. Lecture, four hours; recitation, one hour. Prerequisite: course 100B. Review of transmission line theory; guided waves in enclosed waveguide and on surfaces; Smith Chart; excitation of guided waves; phase and group velocity; cavity resonators; concept of Q; perturbation theory; waves in complex media (ferrites, crystals, semiconductors, plasmas). Mr. Schott (F,Sp)

117B. Antenna Design I. Prerequisite: course 117A. Retarded potentials. Actual and equivalent sources. Far-field patterns of dipoles, loops, and helices. Reciprocity, directivity, beamwidth, and sidelobe level of antenna patterns. Design of linear arrays. Schelkunoff unit circle. Design of feeding networks. Array design including mutual coupling. Mr. Elliott (W)

117D. Electromagnetic Waves IV. Prerequisite: course 117A. Special relativity; relativistic kinematics; field transformations; particle trajectories in electromagnetic fields; radiation from accelerated changes; waves in active media, microwave sources.
Mr. C.W. Yeh

117E. Modern Optics. (Formerly numbered 117C.) Prerequisite: course 117A. Two dimensional transforms. Diffraction methods. Geometrical optics and applications. Gaussian beams. Coherent and incoherent imaging systems. Optical processing methods. Holography and applications.
Mr. Alexopoulos (Sp)

117L. Electromagnetics Laboratory (½ course). Prerequisite: course 117A; course 117B may be taken concurrently. Experimental investigation of microwave and millimeter wave sources; coaxial, waveguide strip line transmission systems; detectors and power measuring devices; cavity resonator studies; antenna impedance and radiation characteristics. Mr. Luhmann, Mr. Schott (W)

117X. Antenna Design II. Prerequisite: course 117B. Radiation patterns of horns, slots, and patch antennas. Equivalent source representations. Synthesis of sum and difference patterns. Dolph-Chebyshev excitation. Design of slot arrays with mutual coupling. Design of travelling wave antennas, reflectors and lenses. Mr. Elliott (Sp)

M118. Plasma Physics. (Same as Physics M122.) Prerequisite: course 100B or Physics 110A. Senior-level introductory course to physics of plasmas and ionized gases and fundamentals of controlled fusion. Particle motion in magnetic fields; fluid behavior, plasma waves; resistivity and transport; equilibrium and stability; kinetic effects. Illustrative laboratory experiments will be discussed.
Mr. Chen, Mr. Luhmann (F,Sp)

120A. Probability. Prerequisites: Mathematics 32B, 33B. An introduction to the theory and application of probability, including random variables and vectors, distributions and densities, characteristic functions, limit theorems, preliminary concepts of stochastic processes.
Mr. Mortensen, Mr. Omura, Mr. Subelman (F,W)

120B. Introduction to Stochastic Processes. Prerequisites: courses 120A, 121C or equivalent. Introduction to the theory and application of stochastic processes, emphasizing stationary processes—properties and operations and mean-square estimation. Random and pseudorandom generation of processes with application to simulation. Elements of spectral analysis and F.F.T.
Mr. Miller, Mr. Mortensen, Mr. Yao (W,Sp)

121A. Elements of System Analysis. Prerequisites: Mathematics 33A, 33B (or former courses 31C, 32C). Not open for credit to students with credit for course 121C. Intended for students whose undergraduate majors are not in engineering. Basic concepts of systems, dynamics, input-output behavior, analysis of signals; illustrations drawn from such fields as control and communication, economics and management sciences, life sciences, computer sciences.
Mr. Jacobsen, Mr. Levan (W)

121C. Systems and Signals. Lecture, three hours; recitation, two hours. Prerequisites: Mathematics 32A-32B, 33A, 33B (or former courses 31C, 32C), Physics 8A, 8B, 8C. Recommended: Engineering 100 or 102 or Physics 8D. Introductory course with illustrations from physical and life sciences. Input-output descriptions of systems, linearity; impulse and frequency responses, Fourier methods; transforms, analysis of signals. Introduction to digital filtering and Fast Fourier Transform. Computational aspects of system modeling and identification.
Mr. Levan (F,W,Sp)

122A. Principles and Feedback Control. Prerequisite: course 121C or consent of instructor. Classical methods of analysis and design of feedback control systems, as applied to problems selected from engineering, biology and related areas.
Mr. Jacobsen, Mr. Wang, Mr. Yao (W)

124A. Applied Numerical Computing. (Formerly numbered M124A.) Lecture, three hours; recitation, two hours. Prerequisites: course 10C, Mathematics 33A, 33B or equivalents. An introduction to numerical computing techniques: matrix computations, root finding, solutions of initial and boundary value problems of ordinary differential equations, interpolation and approximation. Mr. P.K.C. Wang (F,W,Sp)

127B. Elements of Probability and Information. Prerequisite: Mathematics 33A or consent of instructor. An introduction to finite systems for coding and transmission of messages as character strings. Basic laws of probability and decision in finite systems. Information sources, entropy, noisy channels, capacity, discussion of the meaning and application of Shannon's theorems. Mr. Balakrishnan (F,Sp)

128A. Linear Systems: The State Space Approach. Prerequisite: course 121C. State-space methods of linear system analysis and design, with application to problems in networks, control, and system modeling.
Mr. Jacobsen, Mr. Levan, Mr. Omura (W)

128L. System Science Laboratory. Laboratory, eight hours. Prerequisites: courses 122A, 120B, and consent of instructor. Students will make actual measurements with real hardware in experimental investigations of such topics as: frequency and transient response of a mechanical system; design, construction, and test of operational amplifiers, simple analog computers, and demodulations for AM and FM signals. Mr. Subelman, Mr. P.K.C. Wang, Mr. Yao (Sp)

129A. Introduction to Linear and Quadratic Programming. Prerequisites: Mathematics 32A, 33A or consent of instructor. An introduction to the formulation and solution of linear and quadratic programming problems with applications from engineering and economic systems. Linear programming: the simplex algorithm; duality theory. Optimization of quadratic functions subject to linear and quadratic constraints.
Mr. Jacobsen, Mr. Omura, Mr. P.K.C. Wang

130A. Introduction to Statistical Thermodynamics. Prerequisite: course 105A. Calculations of expected values and variances of thermodynamic functions for perfect monatomic gas, Einstein monatomic crystal; photon gas, electron gas in a metal, perfect absorbed gas, perfect diatomic gas, and Debye monatomic crystal. Calculations of gross emission rates from surfaces. (F)

131A. Intermediate Heat Transfer. Prerequisite: course 105D. Steady conduction: two-sided, two-ended, tapered, and circular fins; buried cylinders, thick fins. Transient conduction: slabs, cylinders, products. Convection: transpiration, laminar pipe flow, film condensation, dimensional analysis, working correlations. Surface radiation. Two-stream heat exchangers. Elements of thermal design.
Mr. Catton (F,W,Sp)

132A. Mass Transfer. Prerequisite: course 105D or 131A. The principles of mass transfer by diffusion. Mass transfer by convection in laminar and turbulent flows. Simultaneous heat and mass transfer. Applications including combustion of solids and volatile fuels, evaporation and condensation, ablation and transpiration cooling, gas absorption and catalysis.
Mr. Mills (F)

133A. Engineering Thermodynamics. Prerequisites: courses 103A, 105A, 105D. Applications of thermodynamic principles to engineering processes. Energy conversion systems. Rankine cycle and other power cycles, refrigeration, psychrometry, reactive and nonreactive fluid flow systems. (W)

134A. New Energy Technology: Resources, Conversion, Constraints. Prerequisite: course 105A or equivalent in physics or chemistry or consent of instructor. Energy resources: fossil fuels (fuel to fuel conversions), nuclear fuels, geothermal sources, solar power, etc. Conversion methods for power production and other energy uses. Consideration of thermodynamic, economic and environmental constraints.

134B. Solar Energy Use and Control. Prerequisite: course 105D or equivalent or consent of instructor. Nature and availability of solar radiation; review of selected heat transfer topics pertinent to solar energy collection and use; design analysis of nonfocusing solar energy collector-converters and methods of energy storage; selected applications.
Mr. Buchberg (W)

134C. Chemical, Nuclear and Thermal Pollution of the Environment. Prerequisite: upper division standing. Description of the environment and the nature of environmental problems. Emphasis on the atmosphere and water as receptors of man-made and natural pollution; a description of sources of pollution, alternatives for control, and transport in the environment.

135A. Nuclear Reactor Theory I. Prerequisite: junior standing. Introduction to nuclear reactor theory, basic physics, neutron cross sections, nuclear fission, elementary analysis of homogeneous reactor cores. Multi-region reactors, and one and two group diffusion theory. Mr. Pomraning (F)

135AL. Nuclear Analysis Laboratory (½ course). Laboratory, four hours. Prerequisite: course 135A should be taken concurrently. A laboratory course in nuclear engineering comprised of various experiments in reactor core physics and related fields. The experiments will consist of measuring and calculating reactor core physics parameters, and pertinent heat transfer/fluid flow parameters. Mr. Pomraning (F)

135B. Nuclear Reactor Theory II. Prerequisite: course 135A. Introduction to slowing down, thermalization, multi-group theory, heterogeneous effects, reactor kinetics, and perturbation theory.
Mr. Pomraning (W)

135BL. Nuclear Analysis Laboratory II (½ course). Laboratory, four hours. Prerequisite: course 135B should be taken concurrently. A laboratory course in nuclear engineering comprised of various experiments in reactor core physics and related fields. The experiments will consist of measuring and calculating reactor core physics parameters, and pertinent heat transfer/fluid flow parameters. Mr. Pomraning (W)

135C. Introductory Nuclear Reactor Design. (Formerly numbered 135D.) (Not the same as Engineering 135C prior to Spring Quarter 1980.) Prerequisites: courses 135A, 135B. Reactor physics, engineering, fuel element design for nuclear reactor cores; criticality, reactivity considerations, and effects; power distributions; differences among various power reactor systems. Introduction to the use of physics design computer codes. Mr. Pomraning (Sp)

135D. Introduction to Fusion Engineering and Reactor Design. Prerequisite: course 135A should be taken concurrently or consent of instructor. Fusion reactions, fuel cycle and operating conditions. Magnetic and inertial confinement including tokamaks, magnetic mirrors, laser fusion and selected others. Concepts for and subsystems of fusion reactors. Design of reactors and key subsystems. Application of fusion reactors for electricity, fissionable fuel and/or chemical fuel production.
Mr. Conn, Mr. Pomraning (F)

135E. Neutron Activation Analysis Laboratory. Prerequisites: upper division standing in engineering, Chemistry 11A, 11B, Mathematics 31A, 31B, Physics 6A, 6B or 8A, 8B. Application of neutron activation as a tool for research in the physical sciences. Emphasis will be on the nuclear reactor as a neutron source. Topics include nuclear chemistry, radiation detectors and analyzers with computer handling of the spectral data. Mr. Pomraning

135F. Experimental Reactor Operations, Control and Safety (½ course). Laboratory, four hours. Prerequisite: course 135A. Operation of the UCLA R-1 Argonaut reactor, measurements of various core parameters and control system responses and evaluation of various safety systems through experimentation. Experiments not included in courses 139A, 135B, 135C will be conducted. Mr. Pomraning (Sp)

136A. Introduction to Probabilistic Risk Analysis. (Formerly numbered M136A.) Prerequisite: consent of instructor. Probabilistic models for the failure of components and systems. Redundant systems. Maintenance models. Fault and event tree analysis. Applications to nuclear reactor systems.
Mr. Pomraning (F)

136B. Nuclear Reactor Thermal Hydraulic Design. (Formerly numbered 135E.) Prerequisites: courses 105A, 105D, 131A (135A recommended). Thermohydraulic design of various nuclear power reactor concepts; power generation and heat removal; power cycle, thermal and hydraulic component design; overall plant design; steady state and transient nuclear system operation. Mr. Pomraning (W)

136C. Fundamentals of Nuclear Reactor Materials. Prerequisites: Physics 8D, Mathematics 33A, Engineering 14. Function and choice of materials in reactors. Point defects. Diffusion in solids. Fuel element thermal performance. Behavior of fission products. Fuel swelling radiation effects in metals; hardening, embrittlement and fracture; nuclear fuel equation of state; fuel element design.
Mr. Pomraning (Sp)

137. Introduction to Chemical Engineering. Prerequisites: Mathematics 32B (may be taken concurrently), Chemistry 11C/11CL, Physics 8B. Introduction to the analysis and design of industrial chemical processes. Material and energy balances. (F)

137A. Chemical Engineering Thermodynamics. Prerequisite: course 137. Thermodynamic properties of pure substances and solutions. Phase equilibrium. Chemical reaction equilibrium. (W)

137B. Chemical Engineering Diffusional Processes. (Formerly numbered 137E.) (Not the same as Engineering 137B prior to Fall Quarter 1981.) Prerequisites: courses 105D, 137, 137A. Brownian motion, fluxes according to irreversible thermodynamics; one-dimensional theory: membrane transport, facilitated transport; convective diffusion, concentration boundary layers, turbulent diffusion. The fundamentals will be illustrated by applications to separation processes, gas cleaning and blood oxygenation. (Sp)

137C. Chemical Engineering Separation Operations. (Formerly numbered 137B.) (Not the same as Engineering 137C prior to Fall Quarter 1981.) Prerequisites: courses 105D, 137, 137A. Application of the principles of heat, mass and momentum transport to the design and operation of separation processes such as distillation, gas absorption, filtration and reverse osmosis. (W,Sp)

137D. Chemical Engineering Kinetics. (Formerly numbered 137C.) (Not the same as Engineering 137D prior to Winter Quarter 1982.) Prerequisites: courses 105D, 137, 137A, 137B. Fundamentals of chemical kinetics and catalysis. Introduction to the analysis and design of homogeneous and heterogeneous chemical reactors. (F)

137E. Chemical Engineering Design. (Formerly numbered 137D.) (Not the same as Engineering 137E prior to Spring Quarter 1982.) Prerequisites: courses 137C, 137D. Integration of chemical engineering fundamentals such as chemical reactor design and separation operations/and simple economic principles for the purpose of designing complete chemical processes. (Sp)

138. Chemical Engineering Process Dynamics and Control. Prerequisites: courses 137B (formerly numbered 137E), 137C (formerly numbered 137B), 137D (formerly numbered 137C). Principles of dynamics modeling and start-up behavior of chemical engineering processes. Chemical process control elements. Design and applications of chemical process computer control. (W)

138A. Introduction to Cryogenics and Low Temperature Processing. Prerequisite: course 105A. Liquefaction of gases, cooling to cryotemperatures, LNG processes, liquid hydrogen, and liquid He cryosystems for superfluids and applied superconductivity. Mr. Frederking

138B. Chemical Engineering Polymer Processes. Prerequisites: course 103, Chemistry 21 or senior standing in engineering or physical science. Formation of polymers, criteria for selecting a reaction scheme, polymerization techniques. Polymer characterization. Mechanical properties, Rheology of macromolecules, modeling and experimental methods to characterize non-Newtonian fluids. Polymer process engineering. (F)

139A. Introductory Chemical, Nuclear, and Thermal Engineering Laboratory. (Not the same as Engineering 139A prior to Winter Quarter 1977.) Laboratory, eight hours. Prerequisites: courses 103A, 105A, 105D. Basic introductory laboratory experiments illustrating the equilibrium state properties and transport response to applied driving forces in energy transformation and rate processes. Experiments include examples from thermodynamics, chemical engineering, heat and mass transfer, nuclear engineering, and environmental problems. (W)

139AC. Introductory Chemical, Nuclear and Thermal Engineering Laboratory. Laboratory, eight hours. Prerequisites: courses 103, 105A, 105D, 137, 137A or consent of instructor. Basic introductory laboratory experiments illustrating the equilibrium state properties and transport response to applied driving forces in energy transformation and rate processes. Experiments include examples from thermodynamics, chemical engineering, heat and mass transfer, nuclear engineering and environmental problems. For students in the Chemical Engineering Program. (F,Sp)

139B. Chemical and Thermal Engineering Laboratory. (Formerly numbered 139A.) (Not open to students with credit for course 139A prior to Winter Quarter 1977.) Laboratory, eight hours. Prerequisites: courses 131A or 137A and 139A. Basic laboratory practice for the study of energy transformation and rate processes. Selected experiments include examples from thermodynamics, heat and mass transfer, chemical and electrochemical processes, cryogenics, chemical kinetics, molecular dynamics, saline water conversion and environmental problems. (Sp)

139BC. Chemical and Thermal Engineering Laboratory. Laboratory, eight hours. Prerequisites: courses 137B, 137C (may be taken concurrently), 139AC or consent of instructor. Basic laboratory practice for the study of energy transformation and rate processes. Selected experiments include examples from thermodynamics, heat and mass transfer, chemical and electrochemical processes, cryogenics, chemical kinetics, molecular dynamics, saline water conversion and environmental problems. For students in the Chemical Engineering Program. (F,W)

140D. Solid State Electronic Materials. Prerequisite: course 14. Principles of nucleation and crystal growth from the melt and vapor. Solute redistribution in the melt; preparation of semiconductor single crystals and thin films. Phase diagrams. Preparation of p-n junctions by the liquid-phase-epiaxy and diffusion techniques. Electrical properties of solar cells. Field trips. Mr. Yue (Sp)

140E. Materials Selection and Engineering Design. Prerequisite: course 14 or consent of instructor. Explicit guidance among the myriad materials available for design in engineering. Properties and applications of steels, nonferrous alloys, polymeric, ceramic and composite materials, coatings. Materials selection, treatment and serviceability emphasized as part of successful design. Design projects.
Mr. Yue (W)

140X. Experimental Methods of Materials Research (¼ to 1 course). Laboratory, two to eight hours; recitation, one to four hours. Prerequisites: course 14 or equivalent and consent of instructor. Variable topics intended for students wishing to learn individually laboratory techniques for preparation, processing, and characterization of materials. Students will operate various modern instruments, including electron microscopes, X-ray diffraction apparatus, mechanical testing machines and high temperature furnaces. Mr. Ono (F,W,Sp)

141. Phase Relations in Solids. Prerequisites: courses 14, 105A. Summary of thermodynamic laws, equilibrium criteria, solution thermodynamics, mass-action law, binary and ternary phase diagrams, glass transitions. Mr. Knapp (Sp)

142A. Diffusion and Diffusion-Controlled Reactions. (Formerly numbered 142.) Prerequisite: course 141. Diffusion in metals and ionic solids, nucleation and growth theory; precipitation from solid solution, eutectoid decomposition, design of heat treatment processes of alloys, growth of intermediate phases, gas-solid reactions, design of oxidation-resistant alloys, recrystallization and grain growth.
Mr. Douglass (F)

142L. Diffusion and Diffusion-Controlled Reactions Laboratory (½ course). Prerequisite: course 142A to be taken concurrently. Not open for credit to students with credit for former course 142. Design of heat-treating cycles and performing experiments to study interdiffusion, growth of intermediate phases, recrystallization, and grain growth in metals. Analysis of data. Comparison of results with theory.
Mr. Douglass (F)

143A. Mechanical Behavior of Materials. Prerequisites: courses 14, 108 or equivalent. Plastic flow of metals under simple and combined loading, strain rate and temperature effects, dislocations, fracture, microstructural effects, mechanical and thermal treatment of steel for engineering applications.
Mr. Ono, Mr. Shabaik (W)

143L. Mechanical Testing Laboratory (½ course). Prerequisites: courses 14, 108; one or more of courses 143A, 158A, 166A recommended. Experimental techniques for the measurements of mechanical properties of engineering materials. Elastic constants, tensile, compression and bend testing, fracture toughness, fatigue and creep testing.
Mr. Ono, Mr. Shabaik (W)

144A. Polymer Science. (Formerly numbered 149A.) Prerequisite: consent of instructor. Polymerization mechanisms, molecular weight and distribution, chemical structure and bonding, structure crystallinity, and morphology and their effects on physical properties. Glassy polymers, spring polymers, elastomers, adhesives. Fiber forming polymers, polymer processing technology, plasticiation.
Mr. Mackenzie (Sp)

144L. Design of Specific Polymeric Systems (½ course). (Formerly numbered 149L.) Prerequisite: course 144A or consent of instructor. Encapsulation of circuit boards, corrosive fluid containers; compatibility problems, polymeric chair bases, motor vehicle tires; compatibility and bonding problems, design of fiber reinforced polymeric systems, polymer-metal articulating surfaces, passenger restraint systems.
Mr. Mackenzie (Sp)

145A. Introduction to Materials Characterization A (Crystal Structure and X-Ray Diffraction of Material). Lecture, three hours; laboratory, two hours. Prerequisite: course 14. Modern methods of materials characterization; fundamentals of crystallography, properties of X-rays, X-ray diffraction; powder method, Laue method; determination of crystal orientation and crystal structure; phase diagram determination; X-ray stress measurements; X-ray spectroscopy; design of materials characterization procedures.
Mr. Wagner (F)

145B. Introduction to Materials Characterization B (Electron Microscopy). Lecture, three hours; laboratory, two hours. Prerequisites: courses 14, 145A. Characterization of microstructure and microchemistry of materials; transmission electron microscopy; reciprocal lattice, electron diffraction, stereographic projection, direct observation of defects in crystals, replicas; scanning electron microscopy: emissive and reflective modes; chemical analysis; electron optics of both instruments. Mr. Ardell (W)

146A. Introduction to Ceramics and Glasses. Prerequisite: course 14 or equivalent. An introduction to ceramics and glasses being used as important materials of engineering, processing techniques and unique properties. Examples of design and control of properties for certain specific applications in engineering. Mr. Mackenzie (W)

146B. Processing of Ceramics and Glasses. Prerequisite: course 146A or equivalent. A study of the processes used in fabrication of ceramics and glasses, relationship to structure and properties. Processing operations including materials preparation, forming, sintering and melting. Design of processing to achieve desired characteristics of structure, properties and cost. Mr. Knapp (Sp)

146F. Electronic Ceramics. Prerequisites: courses 14, 100 or equivalent. The utilization of ceramics in microelectronics; thick film and thin film resistors, capacitors and substrates; design and processing of electronic ceramics and packaging; magnetic ceramics; ferroelectric ceramics and electro-optic devices; optical wave guide applications and designs.
Mr. Mackenzie

146L. Laboratory in Ceramics (½ course). Laboratory, four hours. Prerequisite: course 146A or equivalent; 146B recommended to be taken concurrently. Processing of common ceramics and glasses. Attainment of specific properties through process control for engineering applications. Quantitative characterization and selection of raw materials. Slip casting and extrusion of clay bodies. Sintering of powders. Glass melting and fabrication. Determination of chemical and physical properties. Mr. Knapp (Sp)

147A. Introduction to Metallurgy. Prerequisites: course 14 and a course in thermodynamics. Introduction to metallic alloys used in engineering design. Metallurgical thermodynamics, phases in metal systems, phase diagrams, metal forming, steels and cast iron, nonferrous alloys, design of metallic alloys for specific applications. Mr. Bunshah, Mr. Wagner (F)

147B. Manufacturing Processes. Prerequisite: course 14. Theoretical basis for cold forming and hot forming processes; rolling, extrusion and forging. Conventional metal removal. Solidification processes and casting. Powder metallurgy. Mr. Shabaik (Sp)

147E. Modern Process Metallurgy. Prerequisites: courses 105A and/or 147A. Modern process metallurgy used in extraction and refining of metals and alloys. The role of vacuum processing in modernizing and enlarging the scope of extractive metallurgy. Design of extractive and refining processes. Properties of vacuum processed materials. Mr. Bunshah (W)

147L. Manufacturing Processes Laboratory. Laboratory, eight hours. Prerequisite: course 147B. Experimental investigation, analysis and design of metal forming processes (forging, extrusion, drawing and rolling). Force measurements and energy calculations in metal cutting. Experimental investigation of hot and isostatic pressing of powder.
Mr. Shabaik (Sp)

149C. Properties of Art Ceramic Materials. (Formerly numbered 146C.) Lecture, three hours; laboratory, three hours. Composition and properties of art ceramics and glazes. Ceramic raw materials and their functions in bodies and glazes. Design of glazes and methods of expressing composition. Laboratory projects will be included (not intended for Engineering majors). Mr. Knapp (F)

149E. Ceramic Materials in History and Archaeology. (Formerly numbered 146E.) Lecture, two hours; laboratory, four hours. Prerequisite: consent of instructor. A technical introduction to the origins and evolution of ceramics and related materials, with emphasis on fabrication processes and raw materials. Laboratory exercises are aimed at the development of skills necessary for analytical studies (for students in the humanities and sciences). Mr. Knapp (W)

150A. Applied Fluid Mechanics I. Prerequisite: course 103A or consent of instructor. The course will provide students with a working knowledge of incompressible fluid mechanics. Equations of motion will be derived and applied to a variety of engineering fields. These will include flow over bodies, turbulent flow in pipes, open channel flow, ocean waves, and porous media. Mr. Kelly (F,W)

150B. Applied Fluid Mechanics II. Prerequisite: course 103A or equivalent or consent of instructor. Gas dynamics: isentropic flow in nozzles, normal and oblique shocks, Prandtl-Meyer expansion fan, effects of friction and heat transfer in channel flows; thin airfoils in supersonic flow, Viscous flow; exact solutions of Navier-Stokes equations, boundary layer theory, instability, turbulence, separation.
Mr. Charwat (Sp)

151. Performance of Vehicles. Prerequisites: courses 103A, 105A. Preliminary design analysis of the performance of a variety of vehicles, including automobiles, trains, aircraft, rocket-powered vehicles, ground effect machines, ships and sailboats; performance parameters will include speed, range, payload, efficiency, dynamics and stability, noise, and air or water pollution. Mr. Charwat (F)

153A. Engineering Acoustics. Prerequisite: upper division standing in engineering or consent of instructor. Fundamental course in acoustics. Includes: the ear and hearing; basic acoustical instrumentation; propagation of sound; sources of sound; architectural reverberation; selected subjects. Mr. Stern (F)

153B. Acoustics Laboratory. Laboratory, eight hours. Prerequisite: course 153A (may be taken concurrently) or consent of instructor. Experimental studies in the field of acoustics, including audiometry, noise and noise control, acoustical filters, impedance measurements, transducer characteristics and interferometry. Occasional field trips may be necessary to obtain data. Mr. Stern (W, odd years)

153C. Noise and Noise Control Design. Prerequisite: course 153A or consent of instructor. Practical concepts in design, construction, measurement and analysis of noise suppression techniques. Includes equipment, transducers, environmental factors in sound propagation, enclosures, properties of materials, sound interaction in structures, mufflers, isolators, damping of panels, ducts, aerodynamic noise, noise criteria and standards.
Mr. Stern (W, even years)

154A. Aerodynamic Design. (Formerly numbered 150C.) Prerequisites: courses 103A, 150A. This course presents the classical ideas of aircraft aerodynamics. Lift, drag, thrust, and power are discussed, then aircraft performance and stability. The quarter assignment is the preliminary design of an aircraft satisfying specifications set by the instructor.
Mr. Friedmann (W)

154B. Design of Aerospace Structures. (Formerly numbered 168.) Prerequisites: courses 154A, 166. Design of aircraft, helicopter, spacecraft and related structures. External loads, internal stresses. Applied theory of thin-walled structures. Material selection, design using composite materials. Design for fatigue prevention and structural optimization. Field trips to aerospace companies. Mr. Friedmann (Sp)

155. Intermediate Dynamics. Prerequisite: course 102 or equivalent. Not open for full credit to students with credit for former course 102B. The axioms of Newtonian mechanics, generalized coordinates, Lagrange's equations, variational principles; central force motion; kinematics and dynamics of a rigid body, Euler's equations, motion of rotating bodies, oscillatory motion, normal coordinates, orthogonality relations, the vibrating string. Mr. Forster (Sp)

156A. Advanced Strength of Materials. Prerequisite: course 108. Columns and beam columns. Torsion; Airy's stress functions, stress concentrations. Loads on balls, rollers. Rotating disks, thick hollow spheres, thick hollow circular cylinders, curved beams, coiled springs. Mr. Lin (Sp)

157. Experimental Techniques in Mechanics. Laboratory, eight hours. Methods of measurement in mechanics and fluid mechanics. Primary sensors, transducers (motion, force, fluid flow, temperature). Signal processing, analogue and digital recording. Theory of data analysis. Course consists of lectures and laboratory sessions. Mr. Fourney (F,W,Sp)

157A. Fluid Mechanics Laboratory. Laboratory, eight hours. Prerequisites: courses 103A, 157. Course provides a background in experimental techniques in fluid mechanics. Most work will be in the laboratory. Students will take part in three experiments, each of which will study a practical problem while giving hands-on experience with various measurement techniques. Mr. Charwat (Sp)

157B. Experimental Fracture Mechanics. Lecture, two hours; laboratory, four hours. Prerequisite: course 157 or equivalent. Elementary introduction to fracture mechanics and experimental techniques used in fracture, crack tip stress fields, strain energy release rate, fracture characterization, compliance calibration, surface flaws, fatigue crack growth and fatigue life of structural components, mixed mode fracture and individual projects. Mr. Fourney, Mr. Westmann (W)

158A. Elasticity and Plasticity. Prerequisite: Mathematics 32B. Three-dimensional stress and strain. Criteria for prediction of mechanical failure. Differential equations in three dimensions; analytical, numerical, and experimental solutions of plane state and torsion problems. (Stress function, iteration, strain gages, photoelasticity.) Homogeneous plastic flow, plastic tensile instability. Mr. Westmann (F,W)

160. Introduction to Biostructural Mechanics. Prerequisite: course 108 or equivalent. An introduction to Biostructural Mechanics of the human musculo-skeletal system. Structural characteristics and behavior of skeletal members. Response to mechanical trauma. Elastic and viscoelastic properties of hard and soft tissues. Mathematical modeling. Design characteristics of hip prostheses and anthropometric dummies. Mr. Roberts (Sp)

***161A. Introduction to Astronautics.** Prerequisite: course 102. The space-environment of earth, near-earth orbits and trajectories, step rockets and staging, the two-body problem, orbital transfer and rendezvous, elementary perturbation theory, influence of earth's oblateness. Mr. Forster

162A. Introduction to Mechanism and Mechanical Systems. (Formerly numbered 178A.) Prerequisite: course 102. The analysis and synthesis of mechanisms and mechanical systems are studied including both kinematics and dynamics aspects. Mechanisms from a wide range of applications including automatic machinery, transportation systems and computer peripheral equipment are introduced. Mr. Dubowsky (F)

162B. Fundamentals of Mechanical System Design. (Formerly numbered 178B.) Lecture, three hours; laboratory, three hours. Prerequisite: course 102. Techniques of modern design and development of mechanical systems. Application and analysis of basic components and sub-systems such as gear trains, bearings, hydraulic and pneumatic sub-systems. The dynamics of high-speed machines. Students will create a design of their choice. Mr. Dubowsky (F)

162C. Electromechanical Systems Laboratory. Lecture, one hour; laboratory, five hours. Prerequisite: course 162B or consent of instructor. Laboratory course for students interested in research, design or development of complex mechanical and electromechanical systems. Student, with consent of instructor, will select a system which he will develop, build and instrument. Behavior of this system is studied in detail. Mr. Dubowsky (Sp)

163. Dynamics and Control of Physical Systems. Prerequisites: courses 171A and either 155 or 169A (concurrent enrollments satisfactory). Application of the principles of dynamics and classical control theory to a wide range of physical systems, including simplified models of machines and electromechanical devices, space and ground transportation vehicles, and biomechanical systems. Mathematical modeling and computer simulation are emphasized. Mr. Dubowsky (W, even years)

164. Engineering System Dynamics. Prerequisites: courses 171A, 169A (either of which may be taken concurrently). Computable models of dynamic systems with interacting mechanical, electrical, hydraulic, and thermodynamic elements: component models; subsystem interactions; system equations in state-variable form; computer simulation. Rigid and flexible body dynamics; transducers; control systems; nonlinear electromechanical devices; machine, vehicle and biological systems. Mr. Dubowsky (W, odd years)

165A. Elementary Structural Analysis. Prerequisite: course 108. Equilibrium of structures; deformation analysis of structures by differential equation method, moment-area method and the principle of virtual work; influence lines; analysis of statically determinate and indeterminate structures such as beams, frames, arches and trusses; introduction to slope-deflection equations. Mr. Dong (F,Sp)

165B. Intermediate Structural Analysis. Prerequisite: course 165A. Classical force, displacement methods of structural analysis; three moment equation, slope deflection equations, moment distribution; virtual work, minimum potential, complementary potential theorems; Castigliano's theorems, generalized displacements, forces; Rayleigh-Ritz method; introduction to matrix methods; stiffness, flexibility matrices for bars, beams. Mr. Dong (F,W)

165C. Computer Analysis of Structures. (Formerly numbered 165N.) Prerequisite: course 165A. Development of algorithms and FORTRAN coding for matrix manipulation, inversion; solution of the linear algebraic equations, eigenvalue problems; structural applications; matrix displacement method for planar trusses, frames, direct assembly of system stiffness; matrix force method for planar frames. Mr. Dong (Sp)

165L. Structural Design and Testing Laboratory (½ course). Lecture, one hour; laboratory, four hours. Prerequisites: courses 157, 165A. Design, construction, instrumentation, and test of a small scale model of a structure for comparison with theoretically predicted behavior. Mr. Felton (Sp)

166. Elementary Structural Mechanics. Prerequisite: course 108. Analysis of stress, strain; phenomenological material behavior, fatigue, cumulative damage; bending, extension of beams, unsymmetrical sections, stiffened shell structures; torsion of beams, stress function, warping, thin-walled cross-sections; shear stresses; plate analysis; instability, failure of columns, plates, approximate methods, empirical formulas. Mr. Schmit (F,W)

167A. Design of Steel Structures. Lecture, three hours; recitation, three hours. Prerequisite: course 165A. Allowable stress design of tension members, compression members, beams, beam-columns, and tension splices according to AISC specifications for buildings. Mr. Rea (F)

167B. Design of Reinforced Concrete Structures. Lecture, three hours; recitation, three hours. Prerequisite: course 165A. Design of reinforced concrete buildings. Reinforced concrete beams, columns, and slabs. Working stress and ultimate strength methods of analysis. Determination of loads and design constraints. Introduction to reinforced concrete structural systems. Mr. Selna (W)

167C. Design of Prestressed Concrete Structures. Prerequisite: course 165A. Prestressing and post-tensioning techniques. Properties of concrete and prestressing steels. Loss of prestress. Analysis of sections for flexural stresses and ultimate strength. Design of beams by allowable stress and strength methods. Load balancing design of continuous beams and slabs. Mr. Selna (Sp)

167L. Reinforced Concrete Structural Laboratory. Laboratory, eight hours. Prerequisites: course 167B and consent of instructor. Experimental verification of strength design methods used for reinforced concrete elements. Full or near-full scale slab, beam, column, and joint specimens tested to failure. Mr. Selna (Sp)

167X. Reinforced Concrete Construction Laboratory (½ course). Laboratory, four hours. Prerequisite: junior standing. Design and fabrication methods used for construction of reinforced concrete structural elements. Full or near-full scale slab, beam, column and joint elements formed, fabricated and cast in the laboratory. Mr. Selna (F)

169A. Introduction to Mechanical Vibrations. Prerequisites: courses 102, 108; recommended but not required: course 121C. Fundamentals of vibration theory and applications. Free, forced and transient vibration of one and two degrees of freedom systems including damping and nonlinear behavior. Normal modes, coupling and normal coordinates. Elements of vibration and wave propagation in continuous systems. Mr. Gibson (F,W)

169L. Mechanical Vibrations Laboratory (½ course). Prerequisite: course 169A, which should be taken concurrently. Calibration of instrumentation for dynamic measurements. Determination of natural frequencies and damping factors from free vibrations. Determination of natural frequencies, mode shapes and damping factors from forced vibrations. Dynamic similitude. Mr. Rea (F)

171A. Introduction to Feedback and Control Systems: Dynamic Systems Control I. Lecture, three hours; lecture/laboratory, one hour. Prerequisite: consent of instructor. Introduction to feedback principles, control systems and stability. Unified introductory treatment of continuous and discrete-time (digital or sample-data) systems. Control systems modeling applications in engineering and other fields. Emphasis on concepts. Computer-aided problem solving techniques for systems analysis and design. Mr. DiStefano, Mr. Leondes (F,W)

171C. Dynamic Systems Control II. Prerequisite: either course 171A or 122A is recommended. State-space models of continuous and discrete-time dynamic systems. Linear algebra of systems; vector spaces; geometric concepts; transformations and matrices; canonical forms. Stability. Controllability and observability. State representation of nonlinear systems; linearization. Emphasis on modeling concepts, applications, and computer-aided problem solving. Mr. DiStefano (W)

***173. Engineering Project Management.** Prerequisites: background in design and statistics, such as courses 106B, 193A or equivalent with consent of instructor. Scientific principles and application arts for computer-compatible management in project definition, design, implementation, and evaluation. Quantitative interdisciplinary formulations exemplifying environmental, industrial, business, and administrative challenges with people influences and operational value-goal strategies. Organizational models. Project Manager as a leader. Mr. O'Brien

174A. Introduction to Elements of Decision Making. Prerequisite: course 193A or equivalent mathematics course. Elements of decision making and the decision process. Decision and utility theory. Formulation of utility functions and objective functions. Subjective probabilities. Bayesian approach to value of information. Risk sharing and group decisions. Methods of eliciting judgements; bias and scoring rules. Mr. Rubinstein

174B. Reliability and Quality Assurance. Prerequisite: course 193A or consent of instructor. An introduction to the manufacturing-oriented and related fields of Reliability and Quality in terms of organizational relationships, major functional tasks, statistical and other techniques and elements of engineering analysis. Mr. Lyman (F,W,Sp)

176A. Introduction to Optimization Methods for Engineering Design. Prerequisites: course 10C, Mathematics 32A-32B, 33A, 33B. Introduction to applied optimization as an engineering design tool. Computational algorithms and chemical, civil, electrical, mechanical and structural applications. Methods for solving the general unconstrained and constrained minimization problem. Methods for converting the general inequality constrained problem to a sequence of unconstrained problems.
Mr. Rosenstein (F)

***180A. Environmental Biotechnology.** Prerequisite: course 107A or consent of instructor. Physical, physiological, and psychological aspects of the interaction between man and thermal, atmospheric, radiant, and mechanical agents and energies in the environment. Biological and physical requirements for engineering control of the environment; applications to complex systems. Mr. O'Brien

180B. Machine and Systems Biotechnology. Prerequisite: course 107A or consent of instructor. Quantitative and qualitative methods for assessing man as a component in engineering design applications. Limits and optima of human psycho-physiological capabilities applied to display-control design, decision-making problems, and task definition; problems of man-machine interactions in large-scale systems.
Mr. Lyman (W)

181A. Air Pollution Control. Prerequisite: senior standing or consent of instructor. Quantitative consideration of the air resource and its management. Air quality measurements and standards. Systems for pollution removal. Industrial, commercial and community air pollution problems. Data analyses and interpretations. Lectures, occasional laboratory and field trips. Mr. Perrine (Sp)

184A. Engineering Hydrology. Prerequisite: senior standing or consent of instructor; elementary probability recommended. Precipitation, climatology, stream flow analysis, flood frequency analysis, groundwater, snow hydrology, hydrologic simulation. Possible field trips. Mr. Dracup, Mr. W.G. Yeh (F,Sp)

184B. Introduction to Water Resources Engineering. Prerequisite: course 103A or consent of instructor. Principles of hydraulics, the flow of water in open channels and pressure conduits, reservoirs and dams, hydraulic machinery, hydroelectric power, introduction to system analysis applied to Water Resources Engineering. Mr. Dracup, Mr. W.G. Yeh (W)

184D. Water Quality Control Systems. Prerequisite: upper division standing in engineering or consent of instructor. Water as a resource; the physical, chemical, and biological bases of pollution and treatment. Potability and chemical aspects of quality control and reclamation; analytical, economic, and performance aspects of process design for prevention and treatment. Field trips. Mr. Stenstrom (F,Sp)

184E. Water Quality Control Laboratory. Laboratory, eight hours. Prerequisites: course 184D (may be taken concurrently), Chemistry 11A, 11B. Basic laboratory techniques and practice for the characterization and analysis of waters and wastewaters. Selected experiments include measurement of biochemical oxygen demand, suspended solids, dissolved oxygen hardness, and other parameters used in water quality control. Mr. Stenstrom (F,Sp)

185A. Principles of Soil Mechanics. Prerequisite: course 106; Earth and Space Sciences 1 recommended. Soil as a foundation for structures and as a material of construction. Soil formation, classification, physical and mechanical properties, compaction, bearing capacity, earth pressures, consolidation and shear strength. Mr. Lade (F,W)

185B. Design of Foundations and Earth Structures. (Not the same as Engineering 185B prior to Winter Quarter 1983.) Prerequisite: course 185A. Design methods for foundations and earth structures. Site investigation including determination of soil properties for design. Design of footings and piles including stability and settlements calculations. Design of slopes and earth retaining structures.
Mr. Lade

185L. Soil Mechanics Laboratory (½ course). (Formerly numbered 185B.) Laboratory, four hours. Prerequisites: courses 185A, 185B or consent of instructor. Laboratory experiments to be performed by the students to get basic data required for assigned design problems. Soil classification, Atterberg limits, permeability, compaction, shear strength and specific gravity determination. Design problems, report writing. Mr. Lade (Sp)

191A. Laplace Transforms and Applied Complex Variables. Prerequisites: courses 100, 102. Introduction to the Laplace Transformation: application to electrical and mechanical problems, convolution-type integral equations, difference equations and simple boundary value problems in partial differential equations. Complex variable theory, contour integrals, residues; application to transform inversion and partial differential equations. Mr. Forster (W,Sp)

192A. Mathematics of Engineering. Prerequisites: Mathematics 33A, 33B. Application of mathematical methods to problems of interest in engineering. The main topic covered is systems of linear ordinary differential equations. Fourier series, transforms, and nonlinear effects are also discussed as related to the solutions of differential equations.
Mr. Forster, Mr. Kastenberg, Mr. Levan (F,W,Sp)

192B. Mathematics of Engineering. Prerequisite: course 192A or equivalent. Applications of mathematical methods to engineering problems are considered. Eigenvalue problems for continuous systems and the related special functions are studied.
Mr. Forster, Mr. Kastenberg, Mr. Levan (W,Sp)

192C. Mathematics of Engineering. Prerequisite: course 192A or equivalent. Application of mathematics to engineering problems. A survey of the classical partial differential equations, wave, heat, and potential. The formulation of boundary value problems and analytical and numerical methods are studied.
Mr. Forster, Mr. Kastenberg, Mr. Levan (Sp)

193A. Engineering Probabilistics and Stochastics. Prerequisite: junior standing in engineering. Sets and set algebra; sample spaces; combinatorics; absolute and conditional probability; discrete and continuous random variables; probability distribution, increment, and density functions; Chebychev's inequality; Laplace-Fourier transforms; law of large numbers; central limit theorems; discrete and continuous stochastic processes.
Mr. Apostolakis, Mr. Meecham, Mr. Pearl (F,Sp)

193B. Engineering Statistics. Prerequisite: course 193A or equivalent or consent of instructor. Introductory concepts of statistical decision and estimation. Population parameters, samples, data, statistics. Classical tests of significance and hypotheses, OC-functions and sample sizes. Statistical estimation for one- and two-parameter populations. Bayesian inference, stopping rules. Decision theory, payoffs, losses. Applications. Mr. Pearl (W)

194A. Fundamentals of Computer-Aided Design and Manufacturing. Prerequisites: junior standing in engineering or mathematics; course 194B must be taken concurrently. Basic course in computer-aided and manufacturing area. Covers foundation of computerized drafting, including primitives, operators, and major functions. Discusses descriptions and representations of solid objects; hardware, software and available commercial systems. Discusses the data processing and numerical control aspects of computer-aided manufacturing. Mr. Melkanoff (F)

194B. Computer-Aided Design Laboratory (½ course). Laboratory, four hours. Prerequisites: junior standing in engineering or mathematics; course 194A must be taken concurrently. Students will be taught how to utilize an on-line computer-aided system, to draw and to design various parts and systems.
Mr. Melkanoff (F)

195A. Computer-Aided Circuit Design. Prerequisite: course 110B; also, use of a computer will be required but not taught. Piecewise analysis of large networks. Device modeling. AC, DC and transient analysis of linear and nonlinear networks. Sensitivity and tolerance analysis. Computer-aided circuit optimization. Mr. McNamee, Mr. Temes (Sp)

196A. Introduction to Topics in Bioengineering (½ course). Prerequisite: calculus. History, motivation and current directions in bioengineering. Bioinstrumentation and measurement. Biomaterials. Biomechanics. Biosystems. Health services and patient protection. Human factors engineering. Orthotic/prosthetic systems and sensory aids. This course is graded on a Passed/Not Passed basis.
Mr. DiStefano, Mr. Roberts, Mr. Stenstrom (F,Sp)

M196B. Modeling and Simulation of Biological Systems. (Same as Medicine M196B.) Lecture, four hours; laboratory, to be arranged. Prerequisite: calculus. Introduction to classical and modern systems and modeling and simulation methods for studying biological systems. Includes multicompartmental modeling, multi-exponential curve fitting and simulation laboratory projects. Applications in physiology and medicine. Life science and medical students are encouraged to enroll. Mr. DiStefano (F,Sp)

199B-199G. Special Studies (½ to 2 courses). Prerequisites: senior standing and consent of instructor. Individual investigation of a selected topic, to be arranged with a faculty member. Enrollment request forms are available in department offices. Occasional field trips may be arranged. May be repeated for bachelor's degree credit:

199B. Electrical Engineering Department. (F,W,Sp)

199C. Chemical, Nuclear and Thermal Engineering Department. (F,W,Sp)

199D. Engineering Systems Department. (F,W,Sp)

199E. Materials Science and Engineering Department. (F,W,Sp)

199F. Mechanics and Structures Department. (F,W,Sp)

199G. System Science Department. (F,W,Sp)

Computer Science

Lower Division Courses

5. Computer Literacy and Appreciation. (Formerly numbered Engineering 5.) An introduction to computers and computing for nonscience majors. The course covers computer technology and how machines process information. Students will write simple programs, learn algorithmic thinking and gain insight into the power and limitations of computer systems. Mr. Bussell, Ms. Estrin (F,W,Sp)

20. Programming and Problem Solving. (Formerly numbered Engineering 20.) Prerequisite: Engineering 10C or consent of instructor. Open to graduate students on S/U grade basis only. Solution of numerical and nonnumerical problems of intermediate complexity, using assembly languages and several programming languages. Students will analyze, program, and run half a dozen problems. Emphasis is placed on individual ability to carry out assignments under minimum supervision.
Mr. Melkanoff, Mr. Popek (F,W,Sp)

30. Introduction to Computer Operating Systems. (Formerly numbered Engineering 30.) Prerequisite: Computer Science 20; open to graduate students on S/U grade basis only. Introductory course on functions and use of modern computer systems. Overview of batch and time-sharing systems. Functional description of assemblers, compilers, linkage editors, loaders. Job control language, overlays, file structures, buffering, protection. Assignments will include problems on the computer.
Mr. McNamee, Mr. Muntz (F,W,Sp)

99. Individual Programming Projects (½ to 1 course). Prerequisite: Engineering 10C or consent of instructor. Course intended for students wishing to learn individually new programming languages and students wishing to make up deficiencies so as to bring them to the level of Computer Science 20. Students will design, check-out and run programs in various programming languages. Mr. Melkanoff

Upper Division Courses

111. Systems Programming. (Formerly numbered Engineering 126C.) Prerequisites: Computer Science 30, 141. Introduction to modern operating systems. Mapping and binding of addresses. The organization of multiprogramming and multiprocessing systems; interrupts, process model, and interlocks. Resource allocation models and the problem of deadlocks. Job control and system management.
Mr. Gerla, Mr. Muntz (F,Sp)

112. Computer System Modeling Fundamentals. Prerequisite: upper division standing. Basic tools for performance evaluation and design of distributed computer systems including: probability; transforms; Markov chains; queueing theory; counting; graphs; network flows; computational graph models. Examples will be drawn from the computer systems field.
Mr. Kleinrock (F,Sp)

130. Software Engineering. (Formerly numbered Computer Science 234B.) Lecture, three hours; laboratory, one hour. Prerequisite: Computer Science 20. Structured programming, program proving, modularity, abstract data types, composite design, program testing, team programming. Mr. Berry (Sp)

131. Programming Languages. (Formerly numbered Engineering 125L.) Prerequisite: Computer Science 20. The main objective is to study, compare and evaluate programming languages, in particular commercially available languages: FORTRAN, ALGOL 60, COBOL, PL/1, and ALGOL 68. Additional topics as instructor sees fit.
Mr. Berry, Mr. Cardenas (F,W,Sp)

132. Compiler Construction. (Formerly numbered Engineering 125N.) Prerequisite: Computer Science 131 or consent of instructor. Modern compiler structure. Syntax analysis. Lexical analysis. Semantic analysis and run-time environment. Program and data structure. Code optimization.
Mr. Martin, Mr. Popek (W,Sp)

141. Basic Methods of Data Organization. (Formerly numbered Engineering 123A.) Prerequisite: Computer Science 20. Fundamental techniques for organizing and manipulating data, stressing relationships to performance, time/storage tradeoffs. Sequential and linked storage allocation for linear lists, multi-linked structures. Trees: implementation, traversals, mathematical properties. Dynamic storage allocation. Topics from: sorting-searching, algorithmic analysis, graph theory, concepts underlying file management.
Mr. Gerla, Mr. Klinger (F,W,Sp)

151A. Computer System Architecture: I (Introductory). (Formerly numbered Engineering 125A.) Lecture, four hours; recitation, two hours. Prerequisites: college-level physics (electricity and magnetism), Engineering 10C; Computer Science 152A to be taken concurrently by Mathematics/Computer Science majors and engineering undergraduates specializing in computer engineering. Introduction to computer architecture. Description of machine organization and operation. Information: its representation and manipulation. Combinational logic design with IC's and MSI devices. Sequential circuits, storage elements and MSI packages. Arithmetic and the arithmetic-logic unit.
Mr. Avizienis, Mr. Bussell, Mr. Ercegovac (F,W,Sp)

151B. Computer System Architecture: II (Intermediate). (Formerly numbered Engineering 125B.) Lecture, four hours; recitation, two hours. Prerequisite: Computer Science 151A; Computer Science 152B to be taken concurrently by Mathematics/Computer Science majors and engineering undergraduates specializing in computer engineering. Formal description of machine organization. Effects on machine organization of: instruction sets and formats; addressing structures. Memory organization and management; control sequence generator; I/O processing and interrupts; reliability aspects.
Mr. Bussell, Mr. Ercegovac (F,W,Sp)

152A. Introductory Digital Circuits Laboratory (½ course). (Formerly numbered Engineering 125Z.) Prerequisite: Engineering 10C; to be taken concurrently with Computer Science 151A. Familiarization with design and interconnection of logic circuits and networks through implementation and debugging procedures, including experience with printed circuit design. Mr. Bussell, Mr. Rennels (F,W,Sp)

152B. Digital Systems Laboratory (½ course). (Formerly numbered Engineering 125Y.) Prerequisite: Computer Science 151B to be taken concurrently. A computer based laboratory which probes computer architecture through construction simulation and measurement of digital subsystems.
Mr. Bussell, Mr. Rennels (F,W,Sp)

171. On-Line Computer Systems. (Formerly numbered Engineering 124D.) Prerequisite: senior standing or consent of instructor. A survey of fundamentals with emphasis on hardware and systems concepts. Adapting digital computers to interfaces, including multi-programming, interrupt and time-sharing considerations. Digital communication, remote consoles, sampling, quantizing, multiplexing, analog-digital conversion, and data reconstruction.
Mr. Karplus, Mr. Levine (F,W,Sp)

171L. Real-Time Systems Laboratory (½ to 1 course). Laboratory, four to eight hours. Prerequisites: senior standing and consent of instructor. Computer Science 171 (may be taken concurrently) and Computer Science 152A are recommended. Tests and measurements of digital and analog signals and systems as encountered in data acquisition, on-line computing, telecommunication facilities, terminals, modems, interfaces and standards (e.g., RS 232, IEEE488). May be repeated for credit with consent of instructor. Mr. Carlyle, Mr. Karplus

172. Simulation and Models. (Formerly numbered Engineering 126A.) Prerequisite: Computer Science 20. Model formulation and programming for discrete event systems in simulation languages (e.g., GPSS, SIMSCRIPT). The simulation data base and considerations for language development. Statistical considerations: design of experiments, random number generation, analysis of model results. Computer exercises. Mr. Karplus, Mr. McNamee (W)

173. Random Data Analysis and Measurement Procedures. Prerequisite: Engineering 121C. Provides practical aspects of random data analysis and measurement procedures. Includes statistical properties of random data, correlation, spectral density, input/output relationships, statistical errors, coherence functions, data acquisition and processing techniques. Mr. McNamee (F)

174. Elements of Computer Graphics. (Formerly numbered Engineering 124E.) Prerequisite: Computer Science 171, 131, 141 or consent of instructor. Hardware and software elements of computer graphics systems, including problems of intelligent terminals, communications and graphics languages. Application areas and cost effective uses of interactive graphics. Mr. Vidal (W)

181. Theoretical Models in Computer Science. (Formerly numbered Computer Science 123B.) Prerequisite: senior standing or consent of instructor. Sets, strings, and languages. Phrase-structure languages. Finite-state languages and finite-state automata. Context-free languages and pushdown store automata. Unrestricted phrase-structure languages and Turing machines. Context-sensitive languages and linear-bounded automata. Elementary decision problems of automata and languages.
Ms. Greibach, Mr. Parker (F,W,Sp)

183. Discrete Systems and Automata. (Formerly numbered Engineering 128D.) Prerequisite: two quarters of lower division mathematics or comparable experience with mathematical ideas, such as in linguistics or basic courses in logic or computer programming. An introductory course, emphasizing finite-state systems: graphs, machines, languages, regular expressions, coding, computing; memory, system identification, diagnosis; design considerations. Mr. Carlyle (Sp)

199. Special Studies. (Formerly numbered Engineering 199A.) Prerequisites: senior standing and consent of instructor. Individual investigation of a selected topic, to be arranged with a faculty member in the Computer Science Department. Enrollment request forms available in the department office. Occasional field trips may be arranged. May be repeated for bachelor's degree credit. (F,W,Sp)

Graduate Courses

For complete descriptions of graduate-level courses offered by this School, please consult the *UCLA Graduate Catalog.*

English

(Office: 2225 Rolfe Hall)

Michael J.B. Allen, Ph.D., *Professor of English.*
Calvin Bernard Bedient, Ph.D., *Professor of English.*
Charles Ashton Berst, Ph.D., *Professor of English.*
Daniel G. Calder, Ph.D., *Professor of English (Vice-Chair).*
Richard Keith Cross, Ph.D., *Professor of English.*
Vinton A. Dearing, Ph.D., *Professor of English.*
Robert William Dent, Ph.D., *Professor of English (Vice-Chair).*
Patrick K. Ford, Ph.D., *Professor of English and Celtic Studies.*
Robert A. Georges, Ph.D., *Professor of English.*
Gerald Jay Goldberg, Ph.D., *Professor of English.*
George Robert Guffey, Ph.D., *Professor of English.*
Charles Bennett Gullans, Ph.D., *Professor of English.*
Henry Anagar Kelly, Ph.D., *Professor of English and Medieval-Renaissance Studies.*
Jascha Kessler, Ph.D., *Professor of English.*
Robert Starr Kinsman, Ph.D., *Professor of English.*
Murray Krieger, Ph.D., *University Professor of English.*
Richard Alan Lanham, Ph.D., *Professor of English.*
Richard D. Lehan, Ph.D., *Professor of English.*
Blake Reynolds Nevius, Ph.D., *Professor of English.*
Maximillian Erwin Novak, D.Phil., Ph.D., *Professor of English.*
Joseph N. Riddel, Ph.D., *Professor of English.*

Florence Ridley, Ph.D., *Professor of English.*
Alan Henry Roper, Ph.D., *Professor of English.*
George S. Rousseau, Ph.D., *Professor of English and Eighteenth-Century Studies.*
William David Schaefer, Ph.D., *Professor of English.*
Paul Roland Sellin, Ph.D., *Professor of English.*
Paul Douglas Sheats, Ph.D., *Professor of English (Chair).*
Georg Bernhard Tennyson, Ph.D., *Professor of English.*
Peter Larsen Thorslev, Jr., Ph.D., *Professor of English.*
Alexander Welsh, Ph.D., *Professor of English.*
D. K. Wilgus, Ph.D., *Professor of English and Anglo-American Folksong.*
Ruth B. Yeazell, Ph.D., *Professor of English.*
Stephen Irwin Yenser, Ph.D., *Professor of English.*
Robert Martin Adams, Ph.D., *Emeritus Professor of English.*
Robert Paul Falk, Ph.D., *Emeritus Professor of English.*
John Jenkins Espey, B.Litt., M.A., (Oxon.), *Emeritus Professor of English.*
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 Longuell, 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. Braunmuller, Ph.D., *Associate Professor of English.*
Frederick Lorrain Burwick, Ph.D., *Associate Professor of English.*
Edward Ignatius Condren, Ph.D., *Associate Professor of English and Medieval Studies.*
Ronald E. Freeman, Ph.D., *Associate Professor of English.*
James Edward Goodwin, Ph.D., *Associate Professor of English.*
Christopher Waldo 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.*
Jack Kolb, Ph.D., *Associate Professor of English.*
Kenneth Robert Lincoln, Ph.D., *Associate Professor of English.*
Robert M. Maniquis, Ph.D., *Associate Professor of English.*
Raymund Arthur Paredes, Ph.D., *Associate Professor of English.*
Karen 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 Brienza, Ph.D., *Assistant Professor of English.*
Romey 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. Fisher Solomon, Ph.D., *Assistant Professor of English.*
Seth Joshua Weiner, Ph.D., *Assistant Professor of English.*
Richard Alan Yarborough, Ph.D., *Assistant Professor of English.*

Jerome Cushman, A.B., B.S.L.S., *Senior Lecturer, Literature for Children and Adolescents.*
Everett L. Jones, M.A., *Emeritus Senior Lecturer in English.*
David Stuart Rodes, Ph.D., *Senior Lecturer in English.*
Peter Ladefoged, Ph.D., *Professor of Phonetics.*
Robert Paul Stockwell, Ph.D., *Professor of Linguistics.*

ENGLISH COMPOSITION

(Office: 371 Kinsey Hall)
(Subject A Office: 302 Royce Hall)

Richard Lanham, Ph.D., *Professor of English (Director, UCLA Writing Programs; Vice-Chair, Composition).*
Carol Hartzog, Ph.D., *Academic Administrator (Assistant Director, UCLA Writing Programs).*
Mike Rose, Ph.D., *Academic Administrator (Director, Freshman Writing Program).*
Charles Berezin, Ph.D., *Visiting Lecturer.*
Robert Bjork, Ph.D., *Visiting Lecturer.*
Jennifer Bradley, Ph.D., *Visiting Lecturer.*
Patricia Chittenden, M.A., *Visiting Lecturer.*
Gary Colombo, C.Phil., *Visiting Lecturer.*
Robert Cullen, Ph.D., *Visiting Lecturer.*
Patricia Donahue, Ph.D., *Visiting Lecturer.*
Diane Durkin, Ph.D., *Visiting Lecturer.*
Carol Edwards, Ph.D., *Visiting Lecturer.*
Sandy Feinstein, M.A., *Visiting Lecturer.*
George Gadda, C.Phil., *Visiting Lecturer.*
Mary Georges, M.A., *Visiting Lecturer.*
Lisa Gerrard, Ph.D., *Visiting Lecturer.*
Cheryl Giuliano, M.A., *Visiting Lecturer.*
Alan Golding, Ph.D., *Visiting Lecturer.*
Donna Gregory, Ph.D., *Visiting Lecturer.*
Michael Gustin, M.A., *Visiting Lecturer.*
Michael Havens, Ph.D., *Visiting Lecturer.*
Virginia Hornak, M.A., *Visiting Lecturer.*
Patricia Hunt, Ph.D., *Visiting Lecturer.*
Robin Jeffers, M.A., *Visiting Lecturer.*
Jeff Jeske, Ph.D., *Visiting Lecturer.*
Erna Kelly, Ph.D., *Visiting Lecturer.*
Malcolm Kiniry, Ph.D., *Visiting Lecturer.*
Janette Lewis, Ph.D., *Visiting Lecturer.*
Kathryn Lynch, M.A., *Visiting Lecturer.*
Sonia Maasik, M.A., *Visiting Lecturer.*
Stephen Miles, Ph.D., *Visiting Lecturer.*
Mary Morgan, Ph.D., *Visiting Lecturer.*
Faye Peltzman, Ph.D., *Visiting Lecturer.*
Susan Popkin, M.A., *Visiting Lecturer.*
Ellen Quandahl, M.A., *Visiting Lecturer.*
Paul Schiffer, Ph.D., *Visiting Lecturer.*
Jeffrey Skoblow, M.A., *Visiting Lecturer.*
Ellen Strenski, Ph.D., *Visiting Lecturer.*
Patricia Taylor, Ph.D., *Visiting Lecturer.*
Cynthia Tuell, M.A., *Visiting Lecturer.*
Judith Wagner, Ph.D., *Visiting Lecturer.*
Jennifer Wilson, Ph.D., *Visiting Lecturer.*
John Yockey, Ph.D., *Visiting Lecturer.*

The Composition Section of the English Department administers the department's offerings in expository prose. It is directed by a Vice-Chair of the English Department but is supported by a separate administrative staff. Courses are taught by visiting lecturers and teaching assistants.

Subject A

Every student who does not satisfy the Subject A requirement by presenting transfer credit or acceptable test scores is required to take, in the quarter immediately following admission to the University, either English A or English 1. Placement in these courses is determined by performance on the Subject A Placement Test.

Composition Requirement

Completion of English 3 or 4 normally satisfies the College of Letters and Science requirement in English composition. Completion of English 3 and 4 satisfies the College of Fine Arts English composition requirement (see the sections on "College of Letters and Science" and "College of Fine Arts" for details).

Upper Division Courses

See departmental listings for English 100W, 120A, 120B, 120C, 130, 131, 136A-136B-136C.

Admission to Courses in English

Students must have completed the Subject A requirement before taking any courses in English (other than English A or English 1).

Preparation for the Major

Requirements: English 3, 4, 10A, 10B, 10C taken *in the stated sequence* (each course is a prerequisite for the next course).

Extra-Departmental Requirement in Foreign Literature or Foreign Language: All English majors must have completed either (1) the fifth course or its equivalent in any one foreign language or (2) any combination of five courses in foreign language and foreign literature, including foreign literature in translation and humanities courses (see course listings later in this section of the catalog). For students choosing option 2, the department especially recommends Classics 144, 161, Humanities C107 and 116. These courses may be taken P/NP.

The Major

Requirements: English 141A or 141B (Chaucer), 142A and 142B (Shakespeare), 143 (Milton), at least one "Specialized Study" course from the 180 series and a minimum of seven additional upper division English courses. At least five of the seven courses must be chosen from the series numbered 150-190. At least one of the seven courses must be in literature before 1800 (the 150 series).

All majors are encouraged to choose additional electives from courses numbered 140A through 190. English 140A (Literary Criticism) is especially recommended for students intending graduate work in literature. Students may wish to select several courses in the relevant classical and post-classical foreign literatures and thought; the department especially recommends Classics 144, 161, Humanities C107 and 116.

Special Programs

The department offers special programs in American Studies and General Literature, for both of which the regular "Preparation for the Major" sequence as well as the departmental foreign language requirement apply. Because of the specialized nature of these programs, students planning to do graduate work in English should consult with the departmental advisor before selecting either of these.

American Studies: This program consists of nine upper division courses in English and six related upper division courses taken in other departments. The nine English courses must include 109 (Interdisciplinary Approaches to Literature); two courses chosen from 142A and 142B (Shakespeare) and 143 (Milton); three courses chosen from 170, 171, 172, 173, 174 (the historical sequence in American literature); 175 (Perspectives in the Study of American Culture); and one course pertaining to American Studies chosen from the 180 series (Specialized Studies) or the 190 offerings (Literature and Society), taken preferably in the senior year. Of the six upper division courses in other departments, four must be in a selected discipline (history, political science, art, etc.). One of these four courses must deal with the methodology of the discipline, while the other three must explicitly treat American culture. With history as the secondary discipline, for example, students could select from such courses as History 100 (History and Historians)—which would fulfill the methodology requirement, History 158B-158C (Afro-American History), History 150A-150B (Intellectual History of the United States), History 150C (History of Religion in the United States), History 154C-154D (History of American Architecture and Urban Planning) and History 160 (The Immigrant in America). These courses must be chosen in consultation with the English departmental advisor.

General Literature: This program consists of nine upper division courses in English or American literature and six upper division courses in foreign literatures (at least one of which must be taught in the original language, not a study of works in translation). The nine English courses must include 142A and 142B (Shakespeare); 141A, 141B (Chaucer) or 143 (Milton); at least one course from the 150 series; and four electives chosen from courses numbered 140A through 190 (students intending graduate work in literature are especially encouraged to take English 140A). A listing of acceptable courses arranged into possible emphases under this program may be obtained from the Department of English (2225 Rolfe Hall).

Creative Writing Major

Students in this major must satisfy all requirements listed under "Preparation for the Major" including the foreign language requirement. This major consists of courses 142A and 142B (Shakespeare) and a minimum of ten additional upper division English courses: three creative writing courses from the 133-135 series, taken in a single genre (poetry, short story or drama), three literature courses paralleling the creative writing specialization (the following pairings are recommended: 100A and 101B with 133; 100C and 101C with 134; 100B and 101D with 135) and four electives chosen from courses 140A through 190. Students will be admitted to this program only upon recommendation of their instructor after completing course 133A, 134A or 135A. Students planning on choosing this major are encouraged to take English 20; for further details see the Department of English (2225 Rolfe Hall).

Major for Foreign Students

The department offers a special major in English open optionally to bona fide foreign students whose first language is other than English. Students in this major must satisfy all requirements listed under "Preparation for the Major"; they may fulfill the departmental foreign language requirement with their own native language. The following 12 courses are required for the major itself: English 103J, 106J, 109J; two courses from those numbered 100-199; 122; 142A, 142B; and four additional courses from those numbered 140A-199. Students who complete this major and wish to pursue graduate study should consult with the departmental advisor about programs of study and requirements for admission.

Teaching Credential Candidates

Teaching of English: Students wishing to obtain a teaching credential should declare their intention at the beginning of their junior year and seek the advice of the departmental advisor in planning a coherent program. The department requires either courses 120A, 120B or 120C and 130 as part of, or in addition to, the major. Candidates must also complete English 300 before they can be certified to begin student teaching. Candidates are encouraged to choose additional courses in language and in children's literature, literature for adolescents, American literature and literature for minorities as some of their electives. *Note: students who enter the Graduate School of Education seeking a credential to teach English must, before beginning their required practice teaching assignment, be certified by the Department of English as prepared to teach this subject; the department will not certify any student who has not completed courses 130, 300 and either 120A, 120B or 120C.* For additional information on courses leading to the teaching credential, consult the Graduate School of Education (201 Moore Hall) and the Department of English (2225 Rolfe Hall).

The Honors Course in English

Majors with a 3.25 overall grade-point average and a 3.5 grade-point average in English courses are encouraged to enter the Honors Program in English. Application should be made during the second quarter of the junior year. In addition to maintaining the above grade-point averages, students who expect to graduate with departmental honors are required to take two courses in the 180 series and one Special Study tutorial (English 199H).

Lower Division Courses

A. Basic Review of English Usage (No credit). Prerequisite: unsatisfactory performance on the Subject A Placement Test. English A displaces 4 units on the student's Study List but yields no credit toward a degree. Enrollment in English A is offered only on a P/NP basis and is required of students with low scores on the Subject A Placement Test. Instruction in standard English usage, including practice in sentence and paragraph construction, diction, punctuation, and spelling. Workshop exercises in writing and revision. Completion of this course or demonstration of minimum competence in composition on the Subject A Placement Test is a prerequisite for English 1.

1. Fundamentals of Exposition (½ course). Prerequisite: English A or qualifying score on Subject A Placement Test. English 1 displaces 4 units on the student's Study List but yields 2 units toward a degree. A course designed to develop the proficiency in expository writing required for successful University work. Lectures, readings, class discussions, and assignments in writing and revision. Completion of this course with a grade of "P" or better meets the Subject A requirement. P/NP only.

3. English Composition, Rhetoric and Language. (Formerly numbered 1A-1B.) Prerequisite: satisfaction of Subject A requirement by examination or by completion of course 1 with a grade of "P" or better. Principles and methods of exposition and argumentation, with readings and analysis of passages of prose. Topics vary: special interest sections are set aside in the class schedule for social science, life science, and fine arts students. Other sections concentrate on literature or on rhetoric and stylistics. Minimum of six 3-5 page papers.

4. Critical Reading and Writing. (Formerly numbered 2). Prerequisites: satisfaction of Subject A requirement and course 3 (or its equivalent; see departmental advisor for details). An introduction to literary analysis, with close reading and carefully written exposition of selections from one or more of the principal modes of literature: poetry, prose fiction, and drama. Minimum of six 3-5 page papers.

10A. English Literature to 1660. Prerequisites: satisfaction of Subject A requirement, courses 3, 4. A study of selected works of the period, beginning with selections from Old English poetry and including writings by Chaucer, Spenser, Shakespeare, Donne, and Milton. Minimum of three 3-5 page papers or equivalent.

10B. English Literature, 1660-1832. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A. A study of selected works of the period, including writings by Dryden, Pope, Swift, Wordsworth, and Keats. Minimum of three 3-5 page papers or equivalent.

10C. English Literature, 1832 to the Present. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B. A study of selected works of the period, including writings by Tennyson, Arnold, Browning, Yeats, Joyce, and Eliot. Minimum of three 3-5 page papers or equivalent.

20. Introduction to Creative Writing. Prerequisites: satisfaction of Subject A requirement, course 3 (or its equivalent) and submission of samples of creative or expository writing to a screening committee (hence departmental consent). A course designed to introduce the fundamentals of creative writing. Each class will focus either on poetry, fiction, or drama, depending upon the wishes of the instructor(s) during any given quarter. Readings from assigned texts and weekly writing assignments will be required.

70. Major British Authors Before 1800. Prerequisite: satisfaction of Subject A requirement. Not open for credit to English majors or students with credit for course 10A or 10B. A study of selected masterpieces of English literature before 1800, including the works of such writers as Chaucer, Shakespeare, Donne, Milton, Swift, Pope, Johnson, and Fielding.
Mr. Rousseau

75. Major British Authors, 1800 to the Present. Prerequisite: satisfaction of Subject A requirement. Not open for credit to English majors or students with credit for course 10B or 10C. A study of selected masterpieces of English literature, 1800 to the present, including the works of such writers as Wordsworth, Coleridge, Keats, Tennyson, Dickens, Browning, Yeats, Joyce, and Eliot.
Mr. Berst, Mr. Hutter, Mr. Kolb

80. Major American Authors. Prerequisite: satisfaction of Subject A requirement. Not open for credit to English majors or students with credit for any courses in the 170 series. An introduction to the chief American men of letters, with emphasis upon the poetry, nonnarrative prose, and short fiction of such writers as Poe, Emerson, Whitman, Twain, Frost, and Hemingway. Mr. Wortham

85. The American Novel. Prerequisite: satisfaction of Subject A requirement. Not open for credit to English majors or students with credit for course 171, 172 or 174. The development, with emphasis on form, of the American novel from its beginning to the present day. Included are works of such novelists as Hawthorne, James, Fitzgerald, and Faulkner.
Mr. Paredes, Mr. Rubin-Dorsky

90. Shakespeare. Prerequisite: satisfaction of Subject A requirement. Not open for credit to English majors or students with credit for course 142A or 142B. A survey of Shakespeare's plays, including comedies, tragedies, and histories, selected to represent Shakespeare's breadth, artistic progress, and total dramatic achievement.
Mr. Guffey, Mr. Rodes, Ms. Rowe

Upper Division Courses

Requirements: See "Admission to Courses in English" for prerequisites for courses 100-123. In addition, English 3 and 4 are prerequisites for courses 130-135; consent of instructor following submission of samples of creative work is required for enrollment in courses 133-135. English 3, 4, 10A, 10B, 10C, *taken in the stated sequence,* are prerequisites for courses 140A-190.

100A. Introduction to Poetry. Prerequisite: satisfaction of Subject A requirement. A study of critical issues (metrics, diction, figurative language, symbolism, irony and ambiguity, form and structure) and aesthetic issues, including evaluative criteria, followed by the close critical analysis of a selection of representative poems. This course is particularly recommended for teaching credential candidates.
Mr. Grose, Ms. Packer, Mr. Thorslev

100B. Introduction to Drama. Prerequisite: satisfaction of Subject A requirement. Examination of representative plays: readings may range from Greek to modern drama. Emphasis on critical approaches to the dramatic text; study of issues such as plot construction, characterization, special uses of language in drama, methods of evaluation.

100C. Introduction to Fiction. Prerequisite: satisfaction of Subject A requirement. An introduction to prose narrative, its techniques and forms. Analysis of short and long narratives, and of critical issues such as plot, characterization, setting, narrative voice, realistic and nonrealistic forms.
Mr. Anderson, Mr. Keys

100D. Introduction of Special Topics and Genres. Prerequisite: satisfaction of Subject A requirement. A study of a particular topic, genre, or sub-genre in literature, such as satire, biography, parody, or a specialized classification of literature. May be repeated for credit. Mr. Tennyson, Mr. Thorslev

100W. Intensive Writing (½ course). Lecture, two hours. Prerequisite: fulfillment of English 1 requirement. Student must be concurrently enrolled in a course offered in conjunction with English 100W. Refer to *Schedule of Classes* for courses so designated. A two-unit course designed to teach analytic paper writing, with emphasis on revision techniques. Material for writing assignments comes from adjunct course, and assignments reflect and develop writing skills needed in that course. May be repeated for credit by consent of instructor.

101A. Recent British Literature. Prerequisite: satisfaction of Subject A requirement. Recent trends and developments in British fiction and poetry since World War II. Mr. Keys

101B. Recent American Poetry. Prerequisite: satisfaction of Subject A requirement. Recent trends and developments in American poetry since World War II.
Mr. Gullans

101C. Recent American Fiction. Prerequisite: satisfaction of Subject A requirement. Recent trends and developments in American fiction since World War II.
Mr. Goldberg, Mr. Wortham

101D. Recent British and American Drama. Prerequisite: satisfaction of Subject A requirement. Recent trends and developments in British and American drama since World War II.
Mr. Berst, Mr. Goodwin

102. The Short Story in England and America. Prerequisite: satisfaction of Subject A requirement. A historical survey of the short story as a genre from the nineteenth century to the present. Mr. Anderson

103. Jewish American Fiction. Prerequisite: satisfaction of Subject A requirement. The study of the fiction of Jewish writers in America such as Bellow, Malamud, and Roth, focusing on the encounter of Jewish ethical ideals and social values with the contemporary environment. Mr. Novak

104. Afro-American Literature. Prerequisite: satisfaction of Subject A requirement. An introductory survey of the Afro-American literary tradition from the 18th century to the present—including oral and written forms (folktales, songs, sermons; prose, poetry, drama). A study of major trends in Afro-American thought as revealed in the literature.
Mr. Yarborough

105. The Chicano Experience in Literature. Prerequisite: satisfaction of Subject A requirement. The study of literature in English by and about Chicanos. The course surveys the depiction of the Chicano experience in American literature generally and focuses on the development of Chicano literature itself, its cultural backgrounds, and distinctive uses of language. Mr. Paredes

106. Native American Literary Studies. Prerequisite: satisfaction of Subject A requirement. The study of Native American oral cultures through translated documents (song-poems, life-stories, myths, tales, dream visions, speeches) and/or the images in writing about Native Americans (poetry, fiction, history, anthropology, sociology). Mr. Lincoln

M107. Women in Literature. (Same as Women's Studies M107.) Prerequisite: satisfaction of Subject A requirement. A survey of literary works by and about women, the course examines the delineation of women in English and American literature, studies in historical and contemporary themes, and the evolution of forms and techniques in poetry, fiction, and biography. Ms. Rowe, Ms. Yeazell

108A-108B. The English Bible as Literature. Prerequisite: satisfaction of Subject A requirement. The principal literary monuments of the Old and New Testaments in the King James Version. **108A** deals with the Old Testament; **108B** with the New Testament.
Mr. Dearing

108C. The English Bible as Literature: Special Topics. Prerequisite: satisfaction of Subject A requirement. A study of the English Bible, with attention to particular literary themes, motifs, and genres; the course may also attempt to trace the influence of the Bible upon discreet periods or individual authors in English literature. May be repeated for credit.
Mr. Dearing, Mr. Kinsman

109. Interdisciplinary Approaches to Literature. Prerequisite: satisfaction of Subject A requirement. The study of British or American literature in relation to other disciplines, such as history, politics, philosophy, psychology. May be repeated for credit.
Mr. Condren

110. Studies in Individual Authors. Prerequisite: satisfaction of Subject A requirement. The specialized study of the work of a single poet, dramatist, prose writer, or novelist. May be repeated for credit.

M111A. The Literature of Myth and Oral Tradition. (Same as Folklore M111.) Prerequisite: satisfaction of Subject A requirement. A study of myth, dramatic origins, oral epic, folktale, and ballad, emphasizing Indo-European and Semitic examples. Mr. Nagy

M111B. Anglo-American Folk Song. (Same as Folklore M108.) Prerequisites: satisfaction of Subject A requirement, junior standing. A survey of Anglo-American balladry and folk song, with attention to historical development, ethnic background, and poetic and musical values. Mr. Wilgus

M111C. British Folklore and Mythology. (Same as Folklore M121.) Prerequisites: satisfaction of Subject A requirement, junior standing. A survey of the folklore of the peoples of Britain, with attention to their history, function, and regional differences.
Mr. Georges, Mr. Nagy

M111D. Celtic Mythology. (Same as Folklore M122.) Prerequisite: Folklore 101 or consent of instructor. A survey of the early materials, chiefly literary, for the study of the mythic traditions of the Celtic peoples, ranging from ancient Gaul to medieval Ireland and Wales. Mr. Ford

M111E. Survey of Medieval Celtic Literature. (Same as Folklore M112.) Prerequisite: satisfaction of Subject A requirement. A general course dealing with Celtic literature from the earliest times to the fourteenth century. No knowledge of Irish or Welsh is required. Mr. Ford

M111F. Celtic Folklore. (Same as Folklore M127.) Prerequisite: Folklore 101 or consent of instructor. The folkloric traditions of modern Ireland, Scotland, and other Celtic countries, with attention to current techniques of folkloristic research. Mr. Nagy

112. Children's Literature. Prerequisite: satisfaction of Subject A requirement. A study of the historical backgrounds and development of types of children's literature, folklore and oral tradition, levels of interest, criticism and evaluation, illustration and bibliography.
Mr. Cushman

113. Literature for Adolescents and Young Adults. Prerequisite: satisfaction of Subject A requirement. This course will analyze and evaluate the literature intended mainly for students in junior and senior high schools. It will also review mature books that are popularly suggested for this age group, and study the interests and reading habits of young adults. Mr. Cushman

114. World Literatures in English. Prerequisites: satisfaction of Subject A requirement, consent of instructor. A survey of contemporary literature from English-speaking regions of the world, reviewing the major genres from several countries and making cross-comparisons with the literatures. Generalizations concerning the nature of the English used by such writers will be examined. May be repeated for credit. Mr. Kinsman, Mr. Povey

115. American Popular Literature. Prerequisite: satisfaction of Subject A requirement. A study of the main currents of popular and cultural taste as reflected in such genres as dime novels, detective fiction, and Western stories. Mr. Nagy, Mr. Paredes

116. Science Fiction. Prerequisite: satisfaction of Subject A requirement. A study of science fiction and speculative literatures. Mr. Guffey

117. Detective Fiction. Prerequisite: satisfaction of Subject A requirement. A study of British and American detective fiction and the literature of detection.
Mr. Hutter

118. Film and Literature. Prerequisite: satisfaction of Subject A requirement. A study of the interdisciplinary relationships between film and literature, including theme and structure, and focusing on cinematic adaptations of literary works. Mr. Goodwin

120A. Language Study for Teachers: Elementary School. Prerequisite: satisfaction of Subject A requirement. A survey of topics in English linguistics of special interest to elementary school teachers. Subjects include: approaches to English grammar; language acquisition and development; language attitudes; regional and social dialects of American English; bilingual schooling; contribution of English language study to the teaching of reading, writing, spelling, and literature. Ms. Hinofotis

120B. Language Study for Teachers of English: Secondary and Post-Secondary. Prerequisite: satisfaction of Subject A requirement. A rapid review of English grammar and an introduction to basic concepts in sociolinguistics, dialectology, and stylistics, applied to the analysis and evaluation of writing samples from students in junior and senior high school and junior college.

120C. Language Study for Teachers of Subjects Other Than English: Secondary and Post-Secondary. Prerequisite: satisfaction of Subject A requirement. A course designed to introduce teachers of subjects other than English to basic concepts in language acquisition, dialectology, sociolinguistics, and composition.

121. The History of the English Language. Prerequisite: satisfaction of Subject A requirement. A study directed toward English majors of the main features in the grammatical, lexical, and phonetic condition of the English language from Indo-European up to the present time.

Ms. Armentrout, Mr. Calder, Mr. Condren

122. Introduction to the Structure of Present-Day English. Prerequisite: satisfaction of Subject A requirement. An introduction to the techniques of linguistic description as applied to the pronunciation, grammar, and vocabulary of modern English.

Ms. Armentrout

123. Afro-American English. Prerequisites: satisfaction of Subject A requirement, course 120A, 120B, 120C or Linguistics 100; pre- or co-requisite: English 122 or equivalent. A detailed study, involving the analysis of tapes and documents, of the characteristics of urban Afro-American speech and writing.

130. Composition for Teachers. Prerequisites: satisfaction of Subject A requirement, courses 3, 4. Preparation for future teachers of English composition in the writing and criticism of the kinds of prose discourse usually taught in primary and secondary schools and in junior college.

131. Exposition. Prerequisites: satisfaction of Subject A requirement, courses 3, 4. Further work in expository composition, designed especially to meet the needs of upper division students, including transfer students, who desire training beyond that offered in freshman composition courses. May be taken P/NP by English majors, though English majors who wish to use the course to satisfy departmental prerequisites must take it for a letter grade.

131H. Advanced Exposition. Prerequisites: satisfaction of Subject A requirement, course 3 and consent of instructor, following submission of samples of expository prose. An advanced version of English 131 for students who wish to refine and polish their expository skills. Writing assignments will focus upon the expository essays required in upper division literature courses. May be taken P/NP by English majors, though English majors who wish to use the course to satisfy departmental prerequisites must take it for a letter grade.

133A-133B-133C. Creative Writing: Poetry. Prerequisites: satisfaction of Subject A requirement, courses 3, 4 and consent of instructor, following submission of samples of writing. Weekly exercises in the writing of poetry, with practice in the standard forms and metres and the study of techniques. Classroom discussion based upon student use. No more than one course in the sequence may be repeated for credit. Mr. Gullans, Mr. Kessler, Mr. Yenser

134A-134B-134C. Creative Writing: Short Story. Prerequisites: satisfaction of Subject A requirement, courses 3, 4 and consent of instructor, following submission of samples of writing. The completion of three stories of average length during each quarter. Some of these may, with the instructor's consent and the student's wish, be substantial revisions of the other stories presented. Classroom discussion based upon stories presented. No more than one course in the sequence may be repeated for credit.

Mr. Cross, Mr. Goldberg, Mr. Kessler

135A-135B-135C. Creative Writing: Drama. Prerequisites: satisfaction of Subject A requirement, courses 3, 4 and consent of instructor, following submission of samples of writing. An exploration of the capacity of each student to write for the theater. Class discussion of student writing, individual conferences, rehearsed readings and laboratory productions. No more than one course in the sequence may be repeated for credit. Mr. Kessler, Mr. Rodes

136A-136B-136C. Practical Writing and Editing. Prerequisites: satisfaction of Subject A requirement, consent of instructor. A sequence in practical writing and editing ability specifically designed to prepare students for a career. Analysis of prose and literary styles necessary to the variety of writing in professional, nonacademic fields will be combined whenever possible with practical experience in a variety of writing internships, and training in a wide range of editorial skills.

140A. Criticism: History and Theory. (Formerly numbered 140.) Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A study of some of the major historical documents and theoretical statements in the history of literary criticism, including works by such writers as Plato, Aristotle, Horace, Sidney, Dryden, Johnson, Kant, Coleridge, Wordsworth, Shelley, Arnold, James, Croce and T. S. Eliot. The course will focus upon the major critical positions posed and developed by these writers, the basis of their theoretical positions and the practical consequences of those positions. Some portion of the course may be devoted to recent trends in criticism. Mr. Kolb, Mr. Solomon

140B. Criticism: Special Topics. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A study of limited periods and specialized issues and approaches in the history of literary criticism, including moral, biographical, sociological, psychological, formal, structural, and deconstructionist. The area of concentration will be determined by the instructor and listed in the *Schedule of Classes*. Some study of literary texts, to illuminate the value and practical application of the approach, may be required. Mr. Riddel, Mr. Solomon

141A. Chaucer: The Canterbury Tales. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. Introductory study of Chaucer's language, versification, and historical and literary background, including analysis and discussion of his long major poem, *The Canterbury Tales*. Satisfies the department's Chaucer requirement.

Mr. Calder, Mr. Condren, Ms. Ridley

141B. Chaucer: Troilus and Criseyde and Selected Minor Works. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. Intensive study of *Troilus and Criseyde* and selected minor works of Chaucer, such as *The Book of the Duchess*, *The House of Fame*, *The Parliament of Fowls*, etc. Satisfies the department's Chaucer requirement. Mr. Condren, Mr. Kelly, Ms. Ridley

142A. Shakespeare: The Poems and Early Plays. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. An intensive study of selected poems and representative comedies, histories, and tragedies through *Hamlet*.

Mr. Allen, Mr. Dent, Mr. Post

142B. Shakespeare: The Later Plays. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C, 142A. An intensive study of representative problem plays, major tragedies, Roman plays, and romances.

Mr. Braunmuller, Mr. Hutter, Mr. Kipling

142C. Shakespeare: Selected Topics. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. This course is designed for students interested in further study of Shakespeare. Limits of investigation will be set by the individual instructors. Mr. Allen, Mr. Braunmuller, Mr. Rodes

143. Milton. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A study of the major works of Milton with emphasis on *Paradise Lost*. Mr. Grose, Mr. Guffey, Ms. Rowe

150. Later Medieval Literature. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. Reading and historical explication of the major writers of the fourteenth and fifteenth centuries; e.g., the Gawain-poet, Langland, Gower, Malory, miracle and morality plays, prose, lyrics, and the minor poems of Chaucer. The more difficult texts will be read in modernized form.

Mr. Condren, Mr. Kinsman, Mr. Kipling

151. Elizabethan Literature. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A study of English literature of the sixteenth century, with special emphasis on the development and interrelationships of poetry, prose, fiction, and literary theory and criticism during the reign of Elizabeth I. Mr. Kipling, Mr. Weiner

152. The Drama to 1642. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A study of the English drama, excluding Shakespeare, from its beginning to the closing of the theaters, with special emphasis on plays of the Elizabethan and Jacobean periods.

Mr. Braunmuller, Mr. Dent

153. Literature of the Early Seventeenth Century (1600-1660). Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A study of the major works as literary documents and as products of seventeenth-century thought. The work of Milton is excluded. Mr. Grose, Mr. Gullans, Mr. Post

154. Literature of the Restoration and Earlier Eighteenth Century (1660-1730). Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A study of major works as literary documents and as products of Restoration and earlier eighteenth-century thought.

Mr. Novak, Mr. Roper, Mr. Rousseau

155. Literature of the Later Eighteenth Century (1730-1798). Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A study of major works as literary documents and as products of later eighteenth-century thought.

Mr. Novak, Mr. Roper, Mr. Rousseau

156. The Drama, 1660-1842. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A survey of the English drama from the Restoration to the Licensing Act. Mr. Novak, Mr. Rodes

157. The Novel to 1832. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A survey of the works of the major English novelists from Defoe through Scott.

Mr. Lehan, Mr. Rousseau, Ms. Yeazell

160. Earlier Romantic Poetry and Prose. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. An intensive study of the poetry and prose of Blake, Wordsworth, and Coleridge, with collateral readings from such authors as Godwin, Burke, Paine, Burns, Southey, Lamb, DeQuincey, and Scott. Mr. Maniquis, Ms. Packer, Mr. Sheats

161. Later Romantic Poetry and Prose. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. An intensive study of the poetry and prose of Keats, Shelley, and Byron, with collateral readings from such authors as Hazlitt, Hunt, Landor, Clare, Moore, and Peacock.

Mr. Burwick, Mr. Maniquis, Mr. Thorslev

162. Earlier Victorian Poetry and Prose. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A study of the poetry and prose of the Victorian age from the passage of the first Reform Bill through the high Victorian period, including such authors as Tennyson, Browning, Arnold, Carlyle, Mill, and Newman. Mr. Freeman, Mr. Kolb, Mr. Tennyson

163. Later Victorian Poetry and Prose. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A study of the poetry and prose of the later Victorian age from Pre-Raphaelitism through the Aesthetic and Decadent Movements, along with other intellectual trends, including such authors as Ruskin, Swinburne, Pater, Hopkins, Hardy, Wilde and Yeats. Mr. Freeman, Mr. Kolb, Mr. Tennyson

164. The Novel, 1832-1900. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A survey of the major English novelists from Dickens through Hardy.
Mr. Anderson, Mr. Keys, Ms. Yeazell

165. Twentieth-Century British Poetry and Prose. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A study of the dominant trends of twentieth-century poetry and prose, with emphasis on experimental work in short fiction, poetry, and the contemporary critical sensibility.
Mr. Bedient, Mr. Cross, Mr. Lincoln

166. The Novel, 1900 to the Present. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A survey of the major English novelists from Conrad to the present.
Mr. Keys, Mr. Lehan, Mr. Lincoln

167. The Drama, 1842 to the Present. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C (for Theater Arts majors the prerequisite of courses 10A, 10B, 10C is waived). A survey of British and American drama with its principal continental influences.
Mr. Berst, Mr. Braunmuller, Mr. Goodwin

170. American Literature to 1800. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A historical survey of American literature through the Colonial and Early National periods.

171. American Literature, 1801-1865. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A historical survey of American literature, including fiction, from the beginning of the nineteenth century to the end of the Civil War.
Ms. Packer, Mr. Rubin-Dorsky, Mr. Wortham

172. American Literature, 1865-1912. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A historical survey of American literature from the end of the Civil War to the founding of *Poetry* magazine.
Mr. Nevius, Mr. Rubin-Dorsky, Mr. Wortham

173. Twentieth-Century American Poetry. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. The development of American poetry since 1912, including the works of Frost, Eliot, Pound, and Stevens.
Mr. Bedient, Mr. Riddel, Mr. Yenser

174. Twentieth-Century American Fiction. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. The development of the American novel and short story since 1912, including the works of Hemingway, Fitzgerald, and Faulkner.
Mr. Goodwin, Mr. Paredes, Mr. Yarborough

175. Perspectives in the Study of American Culture. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. An interdisciplinary study of American literature in its relationships to other disciplines, including art, architecture, film, history, music, politics, and various social sciences. It will concentrate upon the application of literary methodology to a historical survey of American culture.
Mr. Goodwin, Mr. Paredes, Mr. Weber

Specialized Studies

These courses (180 through 189) are designed to permit a small number of students (normal limit: 15) to engage in concentrated study in an area in which they have a particular interest, and in which they have taken adequate upper division background courses. **Prerequisites:** satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. For the author, period, genre, or subject to be studied, see the *Schedule of Classes* for any given quarter. Enrollment for specialized studies courses is handled through the Department of English (2225 Rolfe Hall) at the time of preenrollment in the quarter *preceding* that in which the course is offered. For further details, see the departmental advisor. Specialized studies courses may be repeated for credit.

180. Specialized Studies in Medieval Literature.

180X. Variable Topics.

181. Specialized Studies in Renaissance Literature.

182. Specialized Studies in Seventeenth-Century Literature.

183. Specialized Studies in Eighteenth-Century Literature.

184. Specialized Studies in Romantic Literature.

185. Specialized Studies in Victorian Literature.

186. Specialized Studies in Twentieth-Century British Literature.

187. Specalized Studies in Colonial American Literature.

188. Specialized Studies in Nineteenth-Century American Literature.

189. Specialized Studies in Twentieth-Century American Literature.

190. Literature and Society. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. The intensive study of some aspect of the relationship between literature and social, economic or political history. May be repeated for credit.

M197. Topics in Afro-American Literature. (Same as Afro-American Studies M197.) A variable specialized studies course in Afro-American literature. Topics include the Harlem Renaissance; Afro-American Literature in the Nadir: 1890-1914; Contemporary Afro-American Fiction. Mr. Yarborough

199. Special Studies in English (½ to 1 course). Prerequisite: consent of instructor. An intensive directed research project. To enroll or obtain information, see departmental advisor.

199H. Honors Tutorial. Prerequisite: consent of instructor. A tutorial course for students enrolled in the Honors Program in English. Each student will be expected to complete a substantial critical or research paper for credit in the course.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

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.*
Evelyn R. Hatch, Ph.D., *Professor of English.*
John Frederick Povey, Ph.D., *Professor of English (Vice-Chair).*
Clifford Holmes Prator, Ph.D., *Emeritus Professor of English.*
Roger W. Andersen, Ph.D., *Associate Professor of English.*
Marianne Celce-Murcia, Ph.D., *Associate Professor of English.*
Frances B. Hinofotis, Ph.D., *Associate Professor of English.*
Earl James Rand, Ph.D., *Associate Professor of English.*
John H. Schumann, Ph.D., *Associate Professor of English.*

•

Peter Ladefoged, Ph.D., *Professor of Phonetics.*

Undergraduate Courses

Courses 33A, 33B, 33C, 34, 36, 103J, 106J, 109J are only for students whose first language is other than English. Permission to enroll in these courses is given on the basis of the English as a Second Language Placement Examination (ESLPE) which students whose mother tongue is not English must take instead of the Subject A Placement Test (see Subject A in the index). Depending on the results of this examination, entering students are (1) exempted from any special ESL requirement; (2) required to take course 33C; (3) required to take course 33B followed by course 33C; (4) required to take course 33A followed by courses 33B and 33C; or (5) required to spend a quarter studying elementary English exclusively, followed by courses 33A, 33B, 33C.

Lower Division Courses

A grade of "C" or better or proficiency demonstrated on the English as a Second Language Placement Examination is required to pass into the next course in the series.

33A. Low Intermediate English as a Second Language. Meets ten hours weekly. Prerequisite: grade of "C" or better in X832 or proficiency demonstrated on the English as a Second Language Placement Examination. Intensive instruction in the structure of English, with a focus on vocabulary building, reading and listening skills and basic composition techniques.

33B. Intermediate English as a Second Language. Meets five hours weekly. Prerequisite: grade of "C" or better in course 33A or proficiency demonstrated on the English as a Second Language Placement Examination. Emphasizes writing and reading comprehension skills. Additional work on grammar review, vocabulary development, listening and speaking.

33C. High Intermediate English as a Second Language. Meets five hours weekly. Prerequisite: grade of "C" or better in course 33B or proficiency demonstrated on the English as a Second Language Placement Examination. Emphasizes composition research skills and reading of unsimplified academic materials.

34. Oral Communication Skills for Foreign Students. Prerequisite: grade of "C" or better in course 33C or proficiency demonstrated on the English as a Second Language Placement Examination. English 34 develops oral language skills that prepare nonnative speakers of English to participate in class discussion, make oral presentations (lectures, debates, thesis defense, etc.) before an audience, respond to questions, and improve through self-evaluation of speech.

36. Intermediate Composition for Foreign Students. Prerequisite: grade of "C" or better in course 33C or proficiency demonstrated on the English as a Second Language Placement Examination. A course designed to improve English language writing skills for nonnative speakers of English. Special attention 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 course 33C or proficiency demonstrated on the English as a Second Language Placement Examination. A detailed and systematic study of the sounds of American English and the way in which they are put together in connected speech, applied to the improvement of the student's own accent. Language laboratory.

103K. Phonetics for Teachers of English as a Second Language. Prerequisite: consent of instructor. Analysis of the phonological structure of contemporary English, with attention to the differences between British and American speech. Drill directed toward individual needs.

108J. Advanced Composition for Foreign Students. Prerequisite: grade of "C" or better in course 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.

106K. Writing in the ESL Context. Limited to TESL Certificate or M.A. candidates. Provides opportunities for practice and improvement in writing skills and thus fulfills the composition requirement for the TESL Certificate. Surveys important theoretical and methodological issues related to the teaching of writing/composition to ESL students and examines appropriate classroom materials.

107K. Reading 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.

109J. Introduction to Literature for Foreign Students. Prerequisite: grade of "C" or better in course 33C or proficiency demonstrated on the English as a Second Language Placement Examination. Selections from English and American literature presented so as to make full allowance for the students' linguistic and cultural problems and to contribute to an increasing mastery of the English language. Mr. Povey

109K. 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. Surveys important theoretical and methodological issues related to the teaching of literature to ESL students and examines appropriate classroom materials. Strongly emphasizes the cultural basis for literature. Mr. Povey

111K. Background Language for Teachers of English as a Second Language. Prerequisite: consent of instructor. Fulfills the foreign language requirement for the Certificate in the Teaching of English as a Second Language. Beginning course in a non-Indo-European language taught as a demonstration of recommended pedagogical techniques and designed to acquaint prospective language teachers with a wide variety of linguistic structures. Mr. Anderson

122K. Introduction to the Structure of Present-Day English (for Teachers of English as a Second Language). Prerequisite: Linguistics 100 or consent of instructor. Introductory study of those grammatical structures of English most important in the ESL classroom. Aims to provide insights from traditional, structural and particularly transformational grammar. Ms. Celce-Murcia

Graduate Courses

For complete descriptions of graduate-level courses offered by this section, please consult the *UCLA Graduate Catalog.*

Environmental Science and Engineering (Interdepartmental)

(Office: 3677 Geology)

Undergraduate Program

Although no undergraduate major is offered encompassing the broad area of environmental science and engineering, studies which readily lead to advanced work or employment in these fields can be arranged along several routes. Students with majors in the natural sciences, ecosystems/geography, public health or engineering, who have environmental or energy problem-solving as a professional goal, may wish to supplement their course preparation in consultation with the faculty of the Environmental Science and Engineering Program. In preparation for graduate study, attention should be given to requirements for the doctoral program in Environmental Science and Engineering.

For detailed information on graduate degrees offered by this program, please refer to the *UCLA Graduate Catalog.*

Ethnic Arts (Interdepartmental)

(Office: 205 Women's Gym)

Committee in Charge: Allegra Fuller Snyder, Dance (Coordinator); Philip Newman, Anthropology; Arnold Rubin, Art; Elsie Dunin, Dance; Judy Susilo, Dance; Joseph Nagy, Folklore and Mythology; James Porter, Folklore and Mythology; William Hutchinson, Music; J.H.K. Nketia, Music; David Draper, Music; Patricia Harter, Theater Arts; Mel Helstien, Theater Arts; Beverly Robinson, Theater Arts; Carol Sorgenfrei, Theater Arts.

The major provides a program of interdisciplinary studies designed to facilitate the cultural and cross-cultural investigation of man's artistic expression. The flexibility of the program allows the student to focus on a particular medium of expressive behavior after having been exposed to general problems and perspectives in the study of art forms of peoples throughout the world.

The major includes: a core of 28 units from anthropology, art, dance, folklore and mythology, music and theater arts; a concentration consisting of 36 units in one of the disciplines; a senior colloquium; and three upper division elective courses (12 units).

Foreign Language Requirement: At least three quarters (one year) in one foreign language at the college level are required of all students. All courses in foreign language, except foreign literature in English translation, may be applied to this requirement.

Students who plan to take the "concentration" in music are advised to select French, German or Italian.

General College Requirements: The student will satisfy the general College requirements (other than foreign language) of his College (Fine Arts or Letters and Science) regardless of the department in which his concentration is located.

Students who wish to confer with a counselor regarding program planning and major requirements should see Wendy Urfrig, 205 Women's Gym (825-3951, 825-8537).

Requirements for the Bachelor of Arts Degree

(1) A core of seven interdepartmental courses: Dance 70, 46A-46B, Folklore 101, Music 5A-5B-5C, Theater Arts 102E, Anthropology 5 and either Art 55 or 56.

(2) A concentration of nine courses in one of the following areas (the student will declare a "concentration" by the beginning of the junior year):

Anthropology: 6, 133R, 135Q, 185 and any five upper division anthropology courses from 110 through 186 and including one area course from 170-179.

Art: One course from 50, 51, 54, 55, 56, 57; eight courses from 102, 103A, 103B, 103C, 103D, 103E, 114A, 114B, 114C, 114D, 115A, 115B, 115C, 117A, 117B, 117C, 118A, 118B, 118C, 118D, 119A, 119B.

Dance: 38B, 141A-141B, 151A, 151B; two courses from 140A, 140B, 140C; one course from 142, 143, 144, 145, 146; three half-courses from 171A-171P (including one course each from western and non-western cultures; please note that 71A-71P are prerequisites for 171A-171P).

Folklore and Mythology: One course from M111, 118, M180; two courses from M106, M123B, 124, M181, Classics 161, 168; six courses from M112, M121, M122, M123A, M125, M126, M127, M128, M129, 130, 131, M149, M150, 190, German 134.

Music: 17A-17B-17C, 26A-26B-26C, 140A-140B-140C (non-sequential).

Theater Arts: Five courses from 20, 118A, 118B, 140A, 140B, 141A, 141B, 142A, 142B, 160, 170; four courses from 5A, 5B, 5C, 102A, 103A, 103B, 104D, 104E, 104F, 106C, 110A,

110B, 117 (must be taken twice), 119, Classics 142, English 90, 104, 167, Scandinavian C144, C145, Humanities C111.

(3) **Ethnic Arts 190A-190B.** Senior Colloquium. Prerequisites: restricted to senior standing, Ethnic Arts major. Studies of a comparative and integrative nature in the ethnic arts. Ms. Snyder and Concentration Faculty

(4) Three elective courses which may be chosen from the list below. Other courses might also be appropriate. In order to meet degree requirements the electives must be related to the major and approved by the concentration advisor. The three courses chosen to meet this requirement must be upper division courses and from three different areas outside the area of concentration.

Upper Division Electives

Anthropology 118A, 118B. Museum Studies.
133R. Aesthetic Anthropology.
135Q. The Individual in Culture.
137. Enthnography on Film.
154. Principles of Social Structure.
185. History of Social Anthropology.
Art 101A, 101B, 101C. Egyptian Art and Archaeology.
102. Art of the Ancient Near East.
103A. Greek Art.
103B. Hellenistic Art.
103C. Roman Art.
103D. Etruscan Art.
103E. Late Roman Art.
104B-104C-104D. Architecture and the Minor Arts of Islam in the Middle Ages.
114A. The Early Art of India.
114B. Chinese Art.
114C. Japanese Art.
114D. The Later Art of India.
115A. Advanced Indian Art.
115B. Advanced Chinese Art.
115C. Advanced Japanese Art.
117A, 117B, 117C. Advanced Studies in Pre-Columbian Art.
118A. The Arts of Oceania.
118B. The Arts of Pre-Columbian America.
118C. The Arts of Sub-Saharan Africa.
118D. The Arts of Native North America.
119A. Advanced Studies in African Art: Western Africa.
119B. Advanced Studies in African Art: Central Africa.
Classics 161. Introduction to Classical Mythology.
168. Introduction to Comparative Mythology.
Dance 111A-111B, 111C. Analysis of Human Movement.
128. Dance as Culture in Education.
140A-140B-140C. Dance Cultures of the World.
141A-141B. Dance Forms.
142. Dance in the Balkans.
143. Dance in India.
144. Dance in Indonesia.
145. Dance in Japan.
146. Dance in Latin America.
151A. History of Dance in Western Culture, Origins to 1600.
151B. History of Dance in Western Culture, Early Baroque to the Present.
158A-158B. Philosophical Bases and Trends in Dance.
159. Advanced Dance Notation.
171A-171P. Performance Courses in Ethnic Dance: A-Bali; B-Ghana; E-India; F-Israel; G-Japan; H-Java; J-Mexico; L-Scotland; M-Spain; P-Yugoslavia (courses 71A-71P are prerequisites for 171A-171P).
English 104. Afro-American Literature.
Folklore and Mythology M106. Anglo-American Folk Song (English M111B).
108. Afro-American Folklore and Culture.
M111. Literature of Myth and Oral Tradition (English M111A).
M112. Survey of Medieval Celtic Literature (English M111E).
118. Folk Art and Technology.
M121. British Folklore and Mythology (English M111C).
M122. Celtic Mythology (English M111D).
M123A. Finnish Folklore and Mythology (Scandinavian Languages M123A).
M123B. Finnish Folksong and Ballad (Scandinavian Languages M123B).
124. Finnish Folk Art and Technology.
M125. Folklore and Mythology of the Lapps (Scandinavian Languages M125).
M126. Baltic and Slavic Folklore and Mythology (Slavic Languages M179).
M127. Celtic Folklore (English M111F).
M128. Hungarian Folklore and Mythology (Hungarian M135).
M129. Folklore and Mythology of the Ugric Peoples (Hungarian M136).
130. North American Indian Folklore and Mythology Studies.
131. Folklore of India.
M149. Folk Literature of the Hispanic World (Spanish M149).
M150. Russian Folk Literature (Russian M150).
M154A-M154B. The Afro-American Musical Heritage (Music M154A-M154B).
M180. Analytical Approaches to Folk Music (Music M180).
M181. Folk Music of Western Europe (Music M181).
190. Selected Topics in Folklore and Mythology Studies.
199. Special Studies in Folklore.
German (Germanic Languages) 134. German Folklore.
Music 108. Acoustics.
130. Music of the United States.
131A-131B. Music of Hispanic America.
132A-132B. Development of Jazz.
133. Bach.
134. Beethoven.
135A-135B-135C. History of the Opera.
137A-137B. Psychology of Music.
138. Aesthetics of Music.
139. History and Literature of Church Music.
140A-140B-140C. Musical Cultures of the World.
141. Survey of Music in Japan.
142A-142B. Folk Music of Eastern Europe and the Mediterranean.
143A-143B. Music of Africa.
144. American Popular Music.
145. History of Chinese Opera.
146A-146B-146C. Studies in Chinese Instrumental Music.
147A-147B. Music of China.
148. Folk Music of South Asia.
149. The Anthropology of Music.
152. Survey of Music in India.
153A-153B-153C. Music of the American Indians.
M154A-M154B. The Afro-American Musical Heritage (Folklore M154A-M154B).
157. Music of Brazil.
158. New Orleans Jazz.
M180. Analytical Approaches to Folk Music (Folklore M180).
M181. Folk Music of Western Europe (Folklore M181).
187. Problems in Musical Aesthetics.
Oriental Languages 135. Buddhist Themes in Asian Literature.
140A-140B-140C. Chinese Literature in Translation.
141A-141B. Japanese Literature in Translation.
170A-170B. Archaeology in Early and Modern China.
172. Introduction to Buddhism.
173. Chinese Buddhism.
174. Japanese Buddhism.
183. Introduction to Chinese Thought.
184. Introduction to Japanese Thought.
189. Chinese Brush Painting.
Theater Arts 102A, 102B. Selected Topics on the History of the European Theater.
103A, 103B. Black Peoples' Theater in America.
104D, 104E, 104F. History of the American Theater.
106C. History of African, Asian and Latin American Film.
110A. History of Broadcasting.
117. The Puppet Theater (½ course).
118A. Creative Dramatics.
119. Theater for the Child Audience.
121. Acting Workshop.
122. Makeup for the Stage (½ course).
140A. Scenic Techniques for the Stage.
140B. Advanced Scenery for the Stage.
141A. Lighting Techniques for the Stage.
141B. Advanced Lighting for the Stage.
142A. Theater Costuming Techniques.
142B. Advanced Costuming for the Stage.
143. Scenic Design for the Theater.
144A. Theater Sound Techniques.
144B. Advanced Theater Sound.
146. Scene Painting Techniques (½ course).
149A. Basic Drafting Techniques for the Stage (½ course).
160. Fundamentals of Play Direction.
190B. The Role of Management in the Educational and Community Theater (½ course).

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., *Professor of English and Celtic Studies (Director of Center for the Study of Comparative Folklore and Mythology).*
Robert A. Georges, Ph.D., *Professor of English and Folklore.*
Marija Gimbutas, Ph.D., *Professor of European Archaeology.*
Melvyn Helstien, Ph.D., *Professor of Theater Arts.*
Nazir A. Jairazbhoy, 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.*
Jaan Puhvel, Ph.D., *Professor of Classics and Indo-European Studies.*
Stanley L. Robe, 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 Folksong (Chair, Folklore and Mythology Committee).*
Johannes Wilbert, Ph.D., *Professor of Anthropology.*
Wayland D. Hand, Ph.D., *Emeritus Professor of German and Folklore.*
Charles Speroni, Ph.D., *Emeritus Professor of Italian.*
Edward F. Tuttle, Ph.D., *Associate Professor of Italian.*
Jacqueline C. Dje Dje, Ph.D., *Assistant Professor of Music.*
David E. Draper, Ph.D., *Assistant Professor of Music.*
Joseph Nagy, *Assistant Professor of English and Folklore.*
A. Jihad Racy, Ph.D., *Assistant Professor of Music.*

•

Marianna D. Birnbaum, Ph.D., *Adjunct Associate Professor of Hungarian.*
Inkeri Rank, M.A., M.Ed., *Lecturer in Finnish Studies.*
Beverly J. Robinson, M.A., *Lecturer in Theater Arts.*

•

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.*
Elsie Dunin, M.A., *Associate Professor of Dance.*
Richard Hawkins, M.A., *Professor of Theater Arts.*
Charlotte Heth, Ph.D., *Assistant Professor of Music.*
Madeleine Koral-Ward, Ph.D., *Lecturer in French.*
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 Moerman, Ph.D., *Professor of Anthropology.*
Philip Newman, Ph.D., *Associate Professor of Anthropology.*
J.H.K. Nketia, B.A., *Professor of Music.*
Wendell H. Oswalt, Ph.D., *Professor of Anthropology.*
Pier-Maria Pasinetti, 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.*
Arnold Rubin, Ph.D., *Associate Professor of Art.*
Georges Sabagh, Ph.D., *Professor of Sociology.*
Allegra Snyder, M.A., *Professor of Dance.*
Eli Sobel, Ph.D., *Professor of German.*
Erik Wahlgren, Ph.D., *Emeritus Professor of Scandinavian and Germanic Languages.*
Dean S. Worth, Ph.D., *Professor of Slavic Languages.*

Although no undergraduate degree program is offered in folklore and mythology, those majoring in the Ethnic Arts Interdisciplinary Studies program may select folklore and mythology as their area of concentration. A variety of undergraduate courses offered by departments or by faculty participating in the interdepartmental program is also available to all University students. Those with undergraduate preparation in folklore and mythology studies may continue their work on the graduate level. For planning course work, students should consult departmental advisors and the Chair of the Committee which administers the interdepartmental program.

Lower Division Course

15. Introduction to American Folklore Studies. Lecture and discussion. A cultural-historical survey of the role of folklore in the development of American civilization and of the influence of the American experience in shaping folklore in American society; attention will also be given to representative areas of inquiry and analytical procedures.
Mr. Georges, Mr. Jones, Mr. Wilgus

Upper Division Courses

101. Introduction to Folklore. Prerequisite: junior standing. A survey of the various forms of folklore and an examination of their historical and social significance.

M106. Anglo-American Folk Song. (Same as English M111B.) Prerequisites: satisfaction of Subject A requirement, junior standing. A survey of Anglo-American balladry and folk song, with attention to historical development, ethnic background, and poetic and musical values. Mr. Wilgus

108. Afro-American Folklore and Culture. Prerequisite: course 101 or consent of instructor. A study of the traditional genres or forms of Afro-American folklore and their cultural functions. Ms. Robinson

M111. The Literature of Myth and Oral Tradition. (Same as English M111A.) Prerequisite: satisfaction of Subject A requirement. A study of myth, dramatic origins, oral epic, folktale, and ballad, emphasizing Indo-European and Semitic examples. Mr. Nagy

M112. Survey of Medieval Celtic Literature. (Same as English M111E.) Prerequisite: satisfaction of Subject A requirement. A general course dealing with Celtic literature from the earliest times to the fourteenth century. No knowledge of Irish or Welsh is required. Mr. Ford

118. Folk Art and Technology. Prerequisite: junior standing. A general course concerned with the material manifestations of folk culture and the theoretical concepts and methodologies utilized in their analysis.
Mr. Jones

M121. British Folklore and Mythology. (Same as English M111C.) Prerequisites: satisfaction of Subject A requirement, junior standing. A survey of the folklore of the peoples of Britain, with attention to their history, function, and regional differences.
Mr. Georges, Mr. Nagy

M122. Celtic Mythology. (Same as English M111D.) Prerequisite: course 101 or consent of instructor. A survey of the early materials, chiefly literary, for the study of the mythic traditions of the Celtic peoples, ranging from ancient Gaul to medieval Ireland and Wales. Mr. Ford

M123A. Finnish Folklore and Mythology. (Same as Scandinavian Languages M123A.) The methods and results of Finnish folklore studies and the mythic traditions of the Finns. Special attention is paid to the oral epic, beliefs and legends. Ms. Rank

M123B. Finnish Folksong and Ballad. (Same as Scandinavian Languages M123B.) Course M123A is not prerequisite to M123B. A survey of Finnish balladry and folksong, with attention to historical development, ethnic background, and poetic and musical values. Ms. Rank

124. Finnish Folk Art and Technology. Material manifestations of Finnish folk culture: village layout and architecture, folk technology, arts and crafts, textiles, costumes and design. Ms. Rank

M125. Folklore and Mythology of the Lappe. (Same as Scandinavian Languages M125.) Survey of Lappish beliefs, customs, and various genres of oral tradition including tales, legends, songs and music. Attention is also paid to the material manifestations of Lappish culture: arts and crafts, textiles, costume, folk technology. Ms. Rank

M126. Baltic and Slavic Folklore and Mythology. (Same as Slavic M179.) Three hours weekly. A general course for students interested in folklore and mythology and for those interested in Indo-European mythic antiquities. Mrs. Gimbutas

M127. Celtic Folklore. (Same as English M111F.) Prerequisite: course 101 or consent of instructor. The folkloric traditions of modern Ireland, Scotland, and other Celtic countries, with attention to current techniques of folkloristic research. Mr. Nagy

M128. Hungarian Folklore and Mythology. (Same as Hungarian M135.) A general course for the student in folklore and mythology, with emphasis on types of folklore and varieties of folklore research.
Ms. Birnbaum

M129. Folklore and Mythology of the Ugric Peoples. (Same as Hungarian M136.) Survey of the traditions of the smaller Ugric nationalities (Voguls, Ostyaks, etc.). Ms. Birnbaum

130. North American Indian Folklore and Mythology Studies. Prerequisite: course 101 or consent of instructor. An examination of folkloristic and mythological data recorded from various North American Indian peoples within the contexts of the principal ideological frameworks which have been evolved historically for the analysis of such data.
Mr. Georges

131. Folklore of India. Prerequisite: course 101 or consent of instructor. A survey of the folklore of India, with special reference to the content and dissemination of oral epics, ballads, legends, and beliefs.
Mr. Jairazbhoy

M140. From Boccaccio to Basile (in English). (Same as Italian M140.) Class meets three hours weekly. A study of the origins and the development of the Italian novella in its themes, in its structure, in its historical context, and in its European ramifications. The course is designed for students in other departments who wish to become acquainted with either the premises or the growth of similar literary genres. It is also intended for students majoring in Folklore and Mythology, who will be given an insight into Italian popular tales when these (as in the case of Boccaccio) were translated into highly sophisticated literary forms, as well as when (as in the case of Basile) they become embedded into the folk tradition of the Western world. Mrs. Cottino-Jones

M142. Introduction to Jewish Folklore. (Same as Jewish Studies M143.) The nature of Jewish folklore; narrative, folksong, folk art, folk religion and the methods and perspectives used in their analysis.
Mr. Stern

M149. Folk Literature of the Hispanic World. (Same as Spanish M149.) A study of the history and present dissemination of the principal forms of folk literature throughout the Hispanic countries.
Mrs. Arora, Mr. Robe

M150. Russian Folk Literature. (Same as Russian M150.) Three hours weekly. Lectures and readings in Russian.

M154A-M154B. The Afro-American Musical Heritage. (Same as Music M154A-M154B.) Prerequisite: Music 1 or consent of instructor. Course M154A is prerequisite to M154B. A study of Afro-American rhythm, dance, music, field hollers, work songs, spirituals, blues, and jazz; the contrast between West African, Afro-American and Afro-Brazilian musical traditions. Ms. Dje Dje

163. Folklore and Oral History. Prerequisite: junior standing. An examination of the relationships between folk tradition and oral history; how history may be derived from tradition; how traditions are imbedded in historical sources; how the folk tradition-alize history to reflect their point of view. Mr. Stern

M170. Russian Folklore. (Same as Russian M170.) Three hours weekly. A general introduction to Russian folklore including a survey of genres and related folkloric phenomena. Lectures and readings in English.

M171. Slavic Folklore in North America. (Same as Slavic M171.) Three hours weekly. The nature and specifics of Slavic folklore in North America including a survey of verbal genres and other folkloric phenomena. Lectures and readings in English.

172. Folklore in Ethnic Context. Prerequisite: course 15 or 101 or consent of instructor. The role of folklore in ethnic relations; the processes by which ethnic folklore is generated, transmitted and maintained by immigrant groups and subsequent generations. Mr. Stern

M178. Southeast European Folklore and Ethnography. (Same as Slavic M178.) Three hours weekly. An exploration of the folklore and ethnography of Southeastern Europe with emphasis on Romania and Yugoslavia. Folklore genres will be examined in the context of traditional social organization and in the context of industrializing communist states.

M180. Analytical Approaches to Folk Music. (Same as Music M180.) Prerequisites: Music 5A-5B-5C or consent of instructor. An intensive study of the methods and techniques necessary to the understanding of Western folk music. Mr. Porter

M181. Folk Music of Western Europe. (Same as Music M181.) Prerequisite: consent of instructor. This course introduces the student to the forms and styles of traditional music in Western Europe. Historical and ethnological perspectives on this music are combined with numerous recorded examples from the major cultural subdivisions of the region. Mr. Porter

190. Selected Topics in Folklore and Mythology Studies. Prerequisites: course 15 or 101 and consent of instructor. A proseminar focusing upon selected problems, data, or themes in folklore and mythology studies.

199. Special Studies in Folklore (½ to 1 course). Prerequisites: senior standing and consent of instructor.

Graduate Courses

For complete descriptions of graduate-level courses offered by this program, please consult the *UCLA Graduate Catalog*.

Related Courses in Other Departments

African Languages (Linguistics) 150A-150B-150C. African Literature in English Translation.

Anthropology 133P. Social and Psychological Aspects of Myth and Ritual.

133R. Aesthetic Anthropology.

156. Comparative Religion.

Art 102. Art of the Ancient Near East.

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.

118A. The Arts of Oceania.

118B. The Arts of Pre-Columbian America.

118C. The Arts of Sub-Saharan Africa.

118D. The Arts of Native North America.

119A. Advanced Studies in African Art: Western Africa.

119B. Advanced Studies in African Art: Central Africa.

Bulgarian (Slavic Languages) 99. Introduction to Bulgarian Civilization.

Classics 181. Introduction to Classical Mythology.

162. Classical Myth in Literature.

166A. Greek Religion.

166B. Roman Religion.

168. Introduction to Comparative Mythology.

Dance 140A-140B-140C. Dance Cultures of the World.

141A-141B. Dance Forms.

142. Dance in the Balkans.

143. Dance in India.

144. Dance in Indonesia.

145. Dance in Japan.

146. Dance in Latin America.

151A. History of Dance in Western Culture, Origins to 1600.

English 112. Children's Literature.

French 115A-115B-115C. Medieval French Literature.

German (Germanic Languages) 134. German Folklore.

History 193A. History of Religions: Myth.

Music 132A-132B. Development of Jazz.

140A-140B-140C. Musical Cultures of the World.

141. Survey of Music in Japan.

142A-142B. Folk Music of Eastern Europe and the Mediterranean.

143A-143B. Music of Africa.

147A-147B. Music of China.

148. Folk Music of South Asia.

149. The Anthropology of Music.

152. Survey of Music in India.

153A-153B-153C. Music of the American Indians.

158. New Orleans Jazz.

190A-190B. Proseminar in Ethnomusicology.

Old Norse and Medieval Scandinavian (Germanic Languages) 40. The Heroic Journey in Northern Myth, Legend and Epic.

140. Viking Civilization and Literature.

Romanian (Slavic Languages) 99. Introduction to Romanian Civilization.

Slavic (Slavic Languages) 99. Introduction to Slavic Civilization.

Sociology 124. Ethnic and Status Groups.

130. Social Processes in Africa.

131. Latin American Societies.

132. Population and Society in the Middle East.

133. Comparative Sociology of the Middle East.

Theater Arts 117. The Puppet Theater.

Foreign Literature in Translation

The following courses offered in the departments of language and literature do not require a reading knowledge of any foreign language:

African Languages (Linguistics) 150A-150B-150C. African Literature in English Translation.

Ancient Near East (Near Eastern Languages) 150A-150B-150C. Survey of Ancient Near Eastern Literatures in English.

Arabic (Near Eastern Languages) 150A-150B. Survey of Arabic Literature in English.

Armenian (Near Eastern Languages) 150A-150B. Survey of Armenian Literature in English.

Bulgarian (Slavic Languages) 154. Survey of Bulgarian Literature.

Classics 141. A Survey of Greek Literature in English.

142. Ancient Drama.

143. A Survey of Latin Literature in English.

144. A Survey of Greek and Roman Epic in Translation.

Czech (Slavic Languages) 155A-155B. Czech Literature.

Dutch-Flemish and Afrikaans (Germanic Languages) 112. Dutch, Flemish, Afrikaans Literature in Translation.

English 108A-108B. The English Bible as Literature.

French 142. Contemporary French Theater in Translation.

143. Modern French Thought.

144A-144C. The French Novel in Translation.

145. Topics in French Literature.

German (Germanic Languages) 119A. Older German Literature in Translation.

119B. Classical German Literature in Translation.

119C. 19th-Century German Literature in Translation.

119D. Modern German Literature in Translation—Narrative Prose I.

119E. Modern German Literature in Translation—Narrative Prose II.

119F. Modern German Literature in Translation—Drama and Lyrics.

119G. Modern German Jewish Literature in Translation.

119J. The Faust Tradition from the Renaissance to the Modern Age.

Humanities All courses.

Hungarian (Germanic Languages) 121A-121B. Survey of Hungarian Literature in Translation.

Iranian (Near Eastern Languages) 150A-150B. Survey of Persian Literature in English.

Italian 50A-50B. Main Trends in Italian Literature.

110A-110B. The Divine Comedy in English.

M140. From Boccaccio to Basile (in English).

150. Modern Italian Fiction in Translation.

Jewish Studies (Near Eastern Languages) 151A-151B. Modern Jewish Literature in English.

Old Norse and Medieval Scandinavian (Germanic Languages) 40. The Heroic Journey in Northern Myth, Legend and Epic.

140. Viking Civilization and Literature.

Oriental Languages 140A-140B-140C. Chinese Literature in Translation.

141A-141B. Japanese Literature in Translation.

Polish (Slavic Languages) 152A-152B. Survey of Polish Literature.

160. Polish Romanticism.

Romanian (Slavic Languages) 152. Introduction to Romanian Literature.

Portuguese (Spanish and Portuguese) 140A-140B. Luso-Brazilian Literature in Translation.

Russian (Slavic Languages) 100. The Russian Novel in Translation.

118. Survey of Russian Literature to Pushkin.

119. Survey of 19th-Century Russian Literature.

120. Survey of 20th-Century Russian Literature.

124A-124F. Studies in Russian Literature.

125. The Russian Novel in Its European Setting.

126. Survey of Russian Drama.

Scandinavian Languages 138. Survey of Finnish Literature.

141. Backgrounds of Scandinavian Literature.

142. Scandinavian Literature of the 19th Century.

143. Modern Scandinavian Literature.

C144. Ibsen.

C145. Strindberg.

C146. Kierkegaard.

C147. Hamsun.

Serbo-Croatian (Slavic Languages) 154-154B. Yugoslav Literature.

Spanish (Spanish and Portuguese) 160A-160B-160C. Hispanic Literature in Translation.

Ukrainian (Slavic Languages) 152. Ukrainian Literature.

Yiddish (Germanic Languages) 121A. 20th-Century Yiddish Poetry in English Translation.

121B. 20th Century Yiddish Prose and Drama in English Translation.

121C. Special Topics in Yiddish Literature in English Translation.

French

(Office: 160 Haines Hall)

Marc Bensimon, Ph.D., *Professor of French.*
Eric Gans, Ph.D., *Professor of French (Chair).*
Hassan el Nouty, Docteur ès Lettres, *Professor of French.*
Francis J. Crowley, Ph.D., *Emeritus Professor of French.*
Milan S. La Du, Ph.D., *Emeritus Professor of French.*
Oreste F. Pucciani, Ph.D., *Emeritus Professor of French.*
Stephen D. Werner, Ph.D., *Associate Professor of French.*
Mary-Ann Burke, Ph.D., *Assistant Professor of French.*
Patrick Coleman, Ph.D., *Assistant Professor of French.*
Shuhsi Kao, Ph.D., *Assistant Professor of French.*
Sara Melzer, Ph.D., *Assistant Professor of French.*
James Reid, Ph.D., *Assistant Professor of French.*

•

Colette Brichant, Docteur de l'Université de Paris, *Lecturer in French.*
Jacqueline Hamel-Baccash, Licenciée-ès-Lettres, *Lecturer in French.*
Madeleine Korol-Ward, Ph.D., *Lecturer in French.*
Padoue de Martini, B.A., *Lecturer in French.*

Preparation for the Majors

Required: French 1, 2, 3, 4, 5, 6, 12, 15.

Before undertaking upper division work in *grammar, composition, advanced phonetics or civilization,* the student will be required to take French 1, 2, 3, 4, 5, 6 and 15 or their equivalents.

Before undertaking upper division work in *literature,* the student will, in addition to the above courses, be required to take French 12, "Introduction to the Study of French Literature." The student will normally take French 6 before undertaking French 12 or 15; highly qualified students who have obtained the grade of "A" in French 5 may enroll in French 12 concurrently with French 6 *with consent of instructor.*

The Majors

Four majors are offered by the department:

Plan A: Leads to the Bachelor of Arts in French and subsequently to the Master's Degree, Plan A or to the standard elementary or secondary credential. *Required:* 15 full courses of upper division work, including French 100A, 100B, 100C, 103, 114A-114B-114C; two quarters from courses 132-135*; three courses in French literature chosen from courses 115-120**; three elective courses normally to be chosen from upper division courses in the Department of French in language, civilization or literature. A maximum of one upper division course outside the department may be included in the major program with the approval of the major advisor.

*A course in French history may be substituted for one of these with the consent of the major advisor.

Plan B: Emphasis on literature, leading to the Bachelor of Arts in French and subsequently to the Master's Degree, Plan B or C. *Required:* 15 full courses of upper division work including French 100A, 100B, 100C, 103, 114A-114B-114C; six courses in French literature chosen from the 115-120 offerings**; two elective upper division courses to be chosen upon consultation with the major advisor, either from offerings of the Department of French, from the humanities or social sciences division of the College of Letters and Science or from the College of Fine Arts.

Plan C (French Studies): A core program in French allowing, in addition, for individual selection of relevant courses in related fields in the humanities, the social sciences, linguistics, etc. *Required:* 15 full courses of upper division work, including French 100A, 100B, 100C, 103, 114A-114B-114C; three courses of French literature chosen from courses 115-120**; five upper division elective courses in the fields relevant to French Studies to be chosen in or out of the Department of French upon consultation with the major advisor. This program does not normally prepare for admission to the master's program in French at UCLA (see Plans A and B).

**In all Major Plans one course from the 121 series and/or one undergraduate seminar (French 150-160, not including 157) may be substituted for courses in the 115-120 offerings.

Plan D (French and Linguistics): In addition to the normal preparation for the major, students are required to complete the sixth quarter of work in one other foreign language or the third quarter in each of two other foreign languages. *Required:* French 100A, 100B, 100C, 103, 114A-114B-114C; two courses from French 105, 106, 107, 108A; Linguistics 100, 103, 110, 120A, 120B, 164 or C165A or C165B.

It is strongly advised that students who intend to pursue advanced degrees begin preparation for the language requirements at the undergraduate level.

Students whose knowledge of French exceeds the preparation usually received in courses preparing for the major and who demonstrate the requisite attainment in French 100A, 100B or 100C will substitute for those courses in grammar and composition an equivalent number of upper division courses in the Department of French upon consultation with the major advisor. All prospective French majors who are native or quasi-native speakers of French must see the major advisor before beginning upper division work in the major.

All major students must complete a minimum of nine courses of appropriate upper division work in the UCLA Department of French.

Course work taken on a Passed/Not Passed basis is *not acceptable* in any area of the major program.

Students who fail to maintain a 2.0 average or better in all upper division work undertaken in fulfillment of the French major will, upon approval of the Dean of the College of Letters and Science, be excluded from the major in French.

Students intending to major in French must consult a major advisor before registering for upper division courses in fulfillment of the major.

The Honors Program in French

Majors with a 3.5 grade-point average in the Department of French and a 3.3 overall grade-point average will be eligible to apply for the Honors Program in French. Interested students should contact the professor in charge near the end of their junior year and should make application at that time if they wish to enter the program. Applications should include: (1) a letter in French describing the student's field of interest in French literature and culture; (2) the student's final examination in French 100B, 100C, 103 or a final examination or term paper from a literature course. Students admitted to the program will enroll in French 140A-140B. French 140A and 140B are seminars taught by a member of the professorial staff. French 140C is to be devoted to the preparation of an individual project, normally related to the topic of 140A or 140B; this work will be undertaken under the guidance of a faculty member (not necessarily the instructor of 140A).

Courses 140A-140B-140C are considered the equivalent of literature courses for the purpose of satisfying major requirements under Plan B.

Teaching Credential Requirements

Students desiring a single-subject teaching credential in French must have the approval of the French Department in order to gain admission to student teaching. For the Single-Subject Instruction Credential, this approval is contingent upon a major (or the equivalent) in French and the successful completion of French 370.

For additional information, consult the Graduate School of Education (201 Moore Hall) and the Department of French (160 Haines Hall).

Lower Division Courses

The ordinary prerequisites for each of the lower division courses are listed under the description of these courses. Students who have had special advantages in preparation may, upon examination or by recommendation of the instructor, be permitted a more advanced program. No credit will be allowed for completing a less advanced course after satisfactory completion of a more advanced course in grammar and/or composition.

1. Elementary French. Sections meet five hours weekly. Not open for credit to students who have completed more than one year of high school French or equivalent. Ms. Hamel-Baccash in charge

1R. Introduction to the Reading of French (¾ course). Classes will meet three times a week. This course is intended to enable students to acquire basic reading skills in French. Attention will be given at an early stage to the specialized vocabulary of particular scientific and humanistic disciplines. (Should not be taken concurrently with French 1. Credit cannot be received for both courses.) Ms. Brichant in charge

1G. Elementary French for Graduate Students (No credit). Sections meet three hours weekly. Ms. Brichant in charge

2. Elementary French. Sections meet five hours weekly. Prerequisite: course 1 or one year of high school French. Not normally open for credit to students who have completed two years of high school French or equivalent. Ms. Hamel-Baccash in charge

2R. Intermediate Reading of French (¾ course). Classes will meet three times a week. This course will pursue the work begun in course 1R. It will gradually introduce texts of a more specialized nature in the various disciplines. (Should not be taken concurrently with French 2. Credit cannot be received for both courses.) Ms. Brichant in charge

2G. Elementary French for Graduate Students (No credit). Sections meet three hours weekly. Prerequisite: course 1G or equivalent. Ms. Brichant in charge

3. Elementary French. Sections meet five hours weekly. Prerequisite: course 2 or two years of high school French or advanced placement standing. Ms. Hamel-Baccash in charge

3R. Advanced Reading of French (¾ course). Classes will meet three times a week. This course will pursue the work begun in courses 1R and 2R. It will be conducted in groups arranged according to field of study. (Should not be taken concurrently with French 3. Credit cannot be received for both courses.) Ms. Brichant in charge

4. Intermediate French. Sections meet five hours weekly. Prerequisite: course 3 or three years of high school French or advanced placement standing.

5. Intermediate French. Sections meet five hours weekly. Prerequisite: course 4 or four years of high school French or advanced placement standing.

6. Intermediate French. Sections meet five hours weekly. Prerequisite: course 5 or advanced placement standing.

10A-10D. French Conversation (½ course each). Sections meet three hours weekly. Prerequisite: course 3 with a grade of "A" or "B" or consent of department.

12. Introduction to the Study of French Literature. Classes meet three hours weekly. Prerequisite: course 6 or equivalent or consent of instructor. Principles of literary analysis as applied to selected texts in poetry and prose.

15. Theory and Correction of Diction. Prerequisite: course 6 or consent of instructor. French pronunciation, diction, intonation in theory and practice; phonetic transcription, phonetic evolution of the modern language; remedial exercises; recordings. Ms. Korol-Ward in charge

31A-31B-31C. France Through the Ages (in English). A survey of French civilization with emphasis on social, intellectual and artistic trends:

31A. From the origins through the Renaissance.

31B. From the Renaissance to the 20th century.

31C. Contemporary France. Ms. Brichant

Upper Division Courses

The prerequisites to all upper division courses taken in partial fulfillment of the French major are French 6, 12, 15 or their equivalents. All upper division courses except as otherwise indicated are conducted in French. Credit will ordinarily not be allowed for completing a less advanced course after satisfactory completion of a more advanced course in grammar and/or composition. French 104, 105, 106, 107 and 108A are not sequential and may be taken in any order, provided the prerequisites for each course are fulfilled.

100A. Advanced Grammar I. Prerequisites: course 6 and (normally) 15 or equivalent. A placement examination will be administered and qualified students will be advanced to course 100B or 100C.

100B. Advanced Grammar II. Prerequisite: course 100A or equivalent. A placement examination will be administered and qualified students will be advanced to course 100C or 103.

100C. Advanced Grammar III. Prerequisite: course 100B or equivalent. A placement examination will be administered and qualified students will be advanced to course 103.

103. Advanced Stylistics. Classes meet three hours weekly. Prerequisite: course 100C or equivalent. This course is required of all majors as well as of all candidates for the Standard Credential in Elementary or Secondary Teaching. Ms. Korol-Ward in charge

104. Literary Composition. Classes will meet once a week for two hours. Prerequisite: course 103 or consent of instructor.

105. French Linguistics. Classes will meet three hours weekly. Prerequisite: consent of instructor.

106. Advanced French Phonetics. Classes meet twice weekly. Prerequisite: consent of instructor. Ms. Korol-Ward

107. Contemporary Spoken French. Classes will meet three hours weekly; laboratory sessions may be added as needed. Prerequisite: course 103 or consent of instructor.

108A-108C. Advanced Practical Translation:

108A. Classes will meet three hours weekly. Prerequisite: course 103 with a grade of "B" or consent of instructor. An introduction to the translation of advanced texts of general interest, with work in the theory of translation.

108B. Classes will meet three hours weekly. Prerequisite: course 108A or consent of instructor. Practice in the translation of technical documents and texts; comparative stylistics of translation.

108C. Classes will meet three hours weekly. Prerequisite: course 108B or consent of instructor. Advanced work in areas of general and specialized interest together with exercises in consecutive and simultaneous translation.

114A-114B-114C. Survey of French Literature I, II, III. Prerequisite: course 12 or equivalent. A survey of French literature from the Medieval period through the 20th century:

114A. Medieval and Renaissance Literature.

114B. Literature of the Classical Era (17th and 18th centuries).

114C. Modern Literature (19th and 20th centuries).

115A-115D. Medieval French Literature:

115A. The Medieval Epic.

115B. The Medieval Romance.

115C. The Medieval Theater.

115D. Medieval Lyric Poetry. Ms. Burke

116A-116D. The Renaissance:

116A. Rabelais and His Time.

116B. Ronsard and His Time.

116C. Montaigne and His Time.

116D. Renaissance Theater. Mr. Bensimon

117A-117D. The Seventeenth Century:

117A. Corneille and the Baroque.

117B. The Classical Theatre: Racine and His Contemporaries.

117C. Moliere and the Comedy of the XVIIth Century.

117D. Philosophers, Moralists and Novelists of the XVIIth Century. Ms. Meizer

118A-118D. The Eighteenth Century:

118A. Comedy and Drama.

118B. Voltaire and the Encyclopedists.

118C. Diderot and Rousseau.

118D. The Novel. Mr. Coleman, Mr. Werner

119A-119D. The Nineteenth Century:

119A. Romanticism.

119B. The Generation of 1848.

119C. Naturalism and Symbolism.

119D. The Turn of the Century. Mr. el Nouty, Mr. Gans

120A-120D. The Twentieth Century:

120A. Gide, Proust and Their Time.

120B. Post World War I French Writers.

120C. Sartre, Camus and Their Time.

120D. Contemporary French Writers. Ms. Kao, Mr. Reid

121A-121D. Contemporary Literature of French Expression:

121A. Franco-African Literature.

121B. Franco-Canadian Literature.

121C. Franco-Helvetian and Franco-Belgian Literature.

121D. Franco-Caribbean Literature. Mr. el Nouty

122. French Folklore and Young People's Literature. Ms. Korol-Ward

123. French Popular Literature. "Romans policiers," "Theatre des boulevards," "chansons-poemes," etc.

124. Dramatic Interpretation. Study of the techniques of stage direction and interpretation of French drama. A survey of some of the different theories and approaches used on the French stage. Each student will act or direct a scene from a play to be performed under rehearsal conditions. Ms. Korol-Ward

132. Contemporary France. Classes meet three hours weekly. A fourth hour may be required for the viewing of films and other laboratory activities. Ms. Brichant

133. French Institutions from the Revolution to the Present. Classes meet three hours weekly. A fourth hour may be required for the viewing of films and other laboratory activities. Ms. Brichant

134. The "Ancien Regime." Classes meet three hours weekly. A fourth hour may be required for the viewing of films and other laboratory activities. Ms. Brichant

135. From Prehistoric Times to the Renaissance. Classes meet three hours weekly. A fourth hour may be required for the viewing of films and other laboratory activities. Ms. Brichant

138. Cinema and Literature in Contemporary France. Classes meet three hours weekly. Additional hours may be required for the viewing of films and other laboratory activities.

140A-140B-140C. Honors Program in French. Prerequisites: junior or senior standing in French with a 3.5 grade-point average in the major, a 3.3 overall average and consent of department:

140A. Honors Seminar in French. Seminar on different aspects of a selected literary genre, such as drama, poetry, the novel, etc.

140B. Honors Seminar in French. Seminar on a chosen theme or particular problem of French literature, civilization or ideas.

140C. Honors Tutorial in French. Individual study on a topic related to that of course 140A or 140B leading to an essay to be written under the guidance of a faculty member.

Courses in English

The following courses may not be taken for graduate credit; they may be taken as the equivalent of out-of-department electives by undergraduate majors.

142. Contemporary French Theater in Translation. Classes meet two hours weekly.
Ms. Korol-Ward

143. Modern French Thought. Classes meet two hours weekly. Contemporary works will be read and discussed in translation.

144A-144C. The French Novel in Translation. Classes meet two hours weekly. Authors to be studied will be announced quarterly.

145. Topics in French Literature. To be announced each quarter. This course may not be taken for major or graduate credit but may be considered as an out-of-department elective for the purpose of satisfying major requirements.

Undergraduate Seminars

Courses 150-157 may be repeated once for credit with consent of the major advisor.

150. Studies in Medieval Literature.

151. Studies in Sixteenth-Century Literature.

152. Studies in Seventeenth-Century Literature.

153. Studies in Eighteenth-Century Literature.

154. Studies in Nineteenth-Century Literature.

155. Studies in Twentieth-Century Literature.

156. Studies in Contemporary Literature of French Expression.

157. Studies in the French Language.

158. The Woman in French Literature. This course will explore a selected aspect of the situation of woman in French literature as author, character, symbol, etc.

160. Studies in the History of Ideas. Specific themes will be chosen and developed which will address a particular problem of French literature, civilization or ideas. The course may be repeated for credit with the approval of the major advisor.

199. Special Studies in French (½ to 2 courses). Prerequisites: junior or senior standing, consent of instructor and consultation with Chair of major advisors. Course may be taken twice.
Department Chair in charge

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Genetics

See Biology and Microbiology

Geochemistry

See Earth and Space Sciences

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. Bruman, Ph.D., *Professor of Geography.*
William A. V. Clark, Ph.D., *Professor of Geography.*
Gary S. Dunbar, Ph.D., *Professor of Geography.*
Huey L. Kostanick, Ph.D., *Professor of Geography.*
Richard F. Logan, Ph.D., *Professor of Geography.*
Tom L. McKnight, Ph.D., *Professor of Geography (Chair).*
Howard J. Nelson, Ph.D., *Professor of Geography.*
Antony R. Orme, Ph.D., *Professor of Geography.*
Jonathan D. Sauer, Ph.D., *Professor of Geography.*
Allen J. Scott, Ph.D., *Professor of Geography.*
Werner H. Terjung, Ph.D., *Professor of Geography.*
Norman J. W. Thrower, Ph.D., *Professor of Geography.*
Hartmut Walter, Ph.D., *Professor of Biogeography.*
Walter E. Westman, Ph.D., *Professor of Geography.*
Robert M. Glendinning, 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.*
J. Nicholas Entrikin, Ph.D., *Associate Professor of Geography.*
Gerry A. Hale, Ph.D., *Associate Professor of Geography.*
Christopher L. Salter, 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 W. Weirich, Ph.D., *Acting Assistant Professor of Geography.*
John D. Stephens, Ph.D., *Visiting Assistant Professor of Geography.*

Geography as a Major

The Department of Geography offers a choice between two undergraduate majors: (1) the major in Geography and (2) the major in Analysis and Conservation of Ecosystems. Prospective majors are urged to discuss the nature and opportunities of each program with the appropriate undergraduate advisor. In both programs, the department is committed to effective quality education concerning the manifold interactions of environment and society. As such, all students are encouraged to work in close and frequent association with faculty members appropriate to their interests. Students are assured of a warm response from faculty members in whose fields of instruction and research they show enthusiasm.

The Major in Geography

Geography is a vital discipline that explores the interface between environment and society. But geography is more than a discipline. It is also a method of study, a correlative science that seeks to establish relationships both within and between the many complex expressions of environment and society. In this guise, geography embraces many other disciplines of the physical, biological and social sciences, but in its use of data, its search for cause and effect, and its understanding of process and response, geography offers a unique approach to the study of the character and problems of the world we live in.

In essence, geography is concerned with three aggregate aspects of the world around us: (1) the physical and biological characteristics, processes and responses observable at or near the Earth's surface; (2) the activities by which men and women have modified this natural environment, both past and present; and (3) the order and disorder that these human activities have created in sculpturing the natural and artificial landscapes. Tools and concepts of the physical, biological and social sciences are used to analyze and explain these varied phenomena.

A geographer is concerned with the origins, development, morphology and processes of the landscapes inherited from nature and with the institutions and patterns associated with the human use of these landscapes. This information helps the geographer to predict the nature and direction of future landscape change. A geographer is a person who has eyes for the world around him or her, concern for the processes and dynamics of the changes that shape that world, and interest in helping to chart future growth along lines of rational development and careful management of both human and nonhuman resources.

One or more of four general objectives may be recognized by those persons who select the major in Geography: (1) a broad understanding of the Earth's many environments and peoples as part of a liberal education; (2) preparation for employment in areas concerned with environment and society (for example, in environmental impact studies and urban planning); (3) preparation for graduate study in the discipline leading to advanced degrees and professional occupation in both academic and nonacademic areas; and (4) preparation for the student who desires a teaching credential with a specialty in geography and the physical, biological or social sciences.

Students majoring in Geography are encouraged to consult the undergraduate advisor (Geography) for the planning of a program suitable to the student's particular and individual objective. All faculty and other appropriate resources of the Department of Geography are available to Geography majors, though it is realized that students will work more closely with some faculty members than with others. The undergraduate advisor (Geography) advises majors concerning the faculty and other resources most pertinent to student needs.

Preparation Required: Geography 1, 2, 3, 4 and Mathematics 50A or equivalent are required of all majors. A mathematics background, such as Mathematics 3A, 3B, 3C or 4A-4B or 31A, 31B, 32A, is recommended. All

prospective majors, including transfer students, are encouraged to consult the undergraduate advisor (Geography) before arranging a program in geography and its allied fields.

Foreign Language/Mathematics Requirement: Every Geography major is required to pass five quarter courses in foreign language (in not more than two languages) or mathematics, in any combination. Each year of high school language (but not mathematics) will be accepted as equivalent to one quarter course. A score of 500 on an Educational Testing Service (ETS) language examination will also satisfy this requirement. In mathematics, only Mathematics 2, 3A, 3B, 3C, 4A-4B, 31A, 31B, 32A, 50B or equivalent are acceptable. This requirement may be satisfied on a Passed/Not Passed basis or by a letter grade, but Passed or at least a "C" grade is required in all courses intended to satisfy this departmental requirement. These courses may be used to meet the breadth requirements of the College of Letters and Science. (Note: Students should be aware of the College of Letters and Science restrictions on duplication of high school foreign language.)

Major Requirements: The major requires a minimum of 10 upper division courses in geography taken for a letter grade. (Students are encouraged to consult a departmental advisor when planning a program of courses.) In meeting this minimum requirement, each major must take three courses from Group I—The Environment; three courses from Group II—Human Geography; one course from Group III—Procedures; two courses from Group IV—Regions; and one elective upper division course in geography. Majors are encouraged to take more than ten upper division courses.

Allied Fields: Every Geography major shall develop some competence in one or two allied fields. This program consists of a group of at least *four* upper division courses chosen from at least *one* but not more than *two* of the following disciplines: anthropology, atmospheric sciences, biology, chemistry, earth and space sciences, economics, folklore, history, management, mathematics, philosophy, physics, political science, psychology, public health, sociology. Other disciplines require departmental approval on an individual case basis in order to be classified as acceptable.

All courses that are required for the undergraduate major in Geography must be taken for a letter grade. This includes all lower and upper division courses in geography and all four upper division courses in the allied fields.

A "C" average in the major is required for graduation.

Honors Program: Honors in the Geography Major may be obtained through procedures described under courses 199HA-199HB.

The Major in Analysis and Conservation of Ecosystems

The major in Analysis and Conservation of Ecosystems offers a choice between two plans, each of which has its foundations within the Department of Geography but is essentially interdisciplinary in scope.

Plan 1 is designed primarily for students seeking a general education that focuses on understanding the problems and issues related to past, present and future human manipulation and utilization of the world's ecosystems. It is also suited to those students who wish to lay the foundation for educational contributions to nonacademic society via the principal communicative media. This Plan is also suitable as preparation for graduate school.

Plan 2 is designed primarily for students who wish to follow careers in the environmental area or who wish to pursue future work at the graduate level and beyond in various aspects of the analysis and conservation of ecosystems. Like Plan 1, Plan 2 is deliberately broad in scope but is more rigorous in terms of the preparation and course work required.

Both Plan 1 and Plan 2 have certain features of which students should be appraised. *First,* a high degree of emphasis is placed on student input and student-faculty interaction—particularly with respect to seminars. It is therefore essential that close liaison be developed and maintained between all persons involved. The faculty is particularly receptive to student enthusiasm. *Second,* students majoring in Analysis and Conservation of Ecosystems are encouraged to consult with the undergraduate advisor (Ecosystems) for the planning of a program suitable to the student's particular and individual objective. All faculty and other appropriate resources of the Department of Geography are available to Ecosystems majors, though it is realized that students will work more closely with some faculty members than with others. The undergraduate advisor (Ecosystems) advises majors concerning the faculty and other resources most pertinent to student needs. *Third,* all courses that are required for the major in Analysis and Conservation of Ecosystems, both within and beyond the Geography Department, must be taken for a letter grade. This includes all lower and upper division courses including electives chosen to complete the major.

A "C" average in the major is required for graduation.

Honors Program: Honors may be obtained by students majoring in either Plan 1 or Plan 2 of the Analysis and Conservation of Ecosystems major as follows: attainment and maintenance of at least a 3.4 GPA in the major from commencement of senior year to graduation and completion of Geography 196—Senior Thesis in Ecosystem Analysis. The Senior Thesis is a substantial though not necessarily lengthy contribution to ecosystem analysis that must be submitted to the principal faculty member concerned not later than early in the student's final quarter. The topic is selected by the student in consultation with one or more faculty members, and a plan of work filed with the undergraduate advisor (Ecosystems) from whom further guidelines may be obtained.

Plan 1

Preparation Required: Biology 2, Geography 1, 2, 5 and Mathematics 50A are required of all majors. Geography 3 and 4 are recommended. A mathematics background, such as Mathematics 2, 3A, 3B, 3C or 4A-4B or 31A, 31B, 32A, is recommended. All prospective majors, including transfer students, should consult the undergraduate advisor (Ecosystems) before arranging a program in the analysis and conservation of ecosystems.

Major Requirements: Economics 100; Geography 129; three courses from Group Ia; two courses from Group Ib; one course from Group III. (Students with credit for Economics 1 or 2 prior to entering the major must take an upper division economics course or an upper division geography course in lieu of Economics 100.)

Electives: Six courses should be chosen from the following list with the assistance of a faculty advisor: Anthropology 133R, 135P, 153A, 153B, 167; Art 168A, 168B; Architecture 190; Economics 110, 111, 170; Geography: not more than three courses from 100 to 199; one course only from History 195A, 195B, 195C, 195D, M195F, M195G; Journalism 182A, 192; Political Science 141, 142; Public Health 150, 152, 186; Sociology 125, 126.

Although there is no foreign language requirement for Plan 1, students are encouraged to acquire some foreign language capability in order to gain access to pertinent literature written in languages other than English.

Plan 2

Preparation Required: Biology 5, 6, 11, Chemistry 11A, Geography 1, 2, 5, Mathematics 3A, 3B, 3C or 31A, 31B, 32A and 50A, Engineering 10S are required of all majors. Geography 3 and 4, Mathematics 50B and Engineering 11 are recommended. A reading knowledge of a modern foreign language is required; this may be met by three years of language in high school or three quarters of one language at college level. (Biology 11 is not required for students with credit for 84 or more units prior to Fall Quarter 1982.)

Major Requirements: One course chosen from Biology 103, 109, 111, M118; Economics 100; Geography 129; three courses from Group Ia; two courses from Group Ib; two courses from Group III. (Students with credit for Economics 1 or 2 prior to entering the major must take an upper division economics course or an upper division geography course in lieu of Economics 100.)

Electives: Not more than three courses may be taken in any one department to satisfy the elective requirement. Six courses should be chosen from the following list with the assistance of a faculty advisor: Anthropology 153A, 153B, 167; Biology 103, 109, 111, M118, 120, 122, 125, 131, 147; Earth and Space Sciences M139, 150; Economics 111, 170; Engineering M107A, 180A, 181A, 184A, 184D; Geography: not more than three courses from 100 to 199; Political Science 141, 142; Public Health 152; Sociology 126, 141.

Biology courses taken for elective requirements may not be used to fulfill the major requirement in biology.

Lower Division Courses

Check with the departmental office to learn of additional offerings, seminar topics and specific instructors for the quarter you wish to enroll in courses in geography.

1. Physical Environment. (Formerly numbered 1A.) Lecture, three hours; laboratory, one hour. A study of the Earth's physical environment with particular reference to the nature and distribution of landforms and climate.

2. Biogeography. Lecture, three hours; laboratory, one hour. Prerequisite: course 1 or equivalent. A study of the Earth's biosphere with particular reference to the evolution and distribution of plants, animals and soils.

3. Cultural Geography. (Formerly numbered 1B.) Lecture, three hours; discussion, one hour. A broad examination of the basic cultural variables in the human occupance of the earth's surface. The approach is ecological, spatial, and historical.

4. Human Location and Behavior. (Formerly numbered 1C.) Lecture, three hours; laboratory, one hour. Introduction to the basic concepts used in modern urban and economic geography. Emphasis on giving a better understanding of the effects of location on human behavior. Discussion and practical exercises focus on the analysis of problems in the Los Angeles urban environment.

5. People and the Earth's Ecosystems. Lecture, three hours; laboratory, one hour. An examination of the historical and contemporary roles of man as a major agent of biological change in the earth's ecosystems.

10. Freshman Seminar in Geography. Staff-student discussion, three hours; reading period, one hour. Prerequisite: course 1 or 2 or 3 or 4 or 5 as befits the theme. A seminar designed to explore various themes and issues pertinent to environment and people. Seminar topics will be advertised in the department during previous quarter.

Upper Division Courses

GROUP I: THE ENVIRONMENT

(Ia) Basic Environmental Studies

M102. Geomorphology. (Same as Architecture and Urban Planning M196.) Lecture, three hours; reading period, one hour. Prerequisite: course 1 or equivalent or junior standing or consent of instructor. A study of the processes responsible for shaping the world's landforms with emphasis on the relationship between the energy and materials involved and the magnitude and organization of the surface forms produced.
Mr. Orme

103. Glacial Geomorphology. Lecture, three hours; reading period, one hour. Prerequisite: upper division standing. An introduction to both mountain and continental glaciers, glacial processes and deposits. Topics covered will include: the classification of glaciers, mass balance, glacier motion, erosion processes, glaciofluvial and glaciolacustrine deposition.
Mr. Weirich

104. Climatology. Lecture, three hours; reading period, one hour. The many relations between climate and the world of man are examined. The objective is to apply basic energy budget concepts to the microclimates of relevance to the ecosystems of agriculture, animals, man and urban places. Mr. Terjung

105. Hydrology. Lecture, three hours; reading period, one hour. Prerequisite: course 1 or equivalent. The role of water in geographic systems: hydrologic phenomena in relation to climate, landforms, soils, vegetation, and cultural processes and impacts on the landscape. Field projects required. Mr. Trimble

106. Soils. Lecture, three hours; reading period, one hour. Prerequisites: course 1 or equivalent, Chemistry 11A or consent of instructor. A study of the origins, evolution, properties and utilization of soils, with special emphasis on the world's major soil groups.

108. World Vegetation. (Formerly numbered 110.) Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 2 or equivalent or consent of instructor. Characteristics, distribution, environmental and cultural relationships of the world's principal vegetation patterns. Mr. Sauer

109. Ecology of Vegetation. Lecture, three hours; field, twelve hours total. Prerequisites: course 2, Mathematics 50A, Biology 11 or consent of instructor. Principles of plant ecology at the community and ecosystem level. Emphasis on structure, dynamics and measurement of the characteristics of terrestrial vegetation. Mr. Westman

110. Plant Migration. (Formerly numbered 112.) Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 2, Biology 2 or equivalent or consent of instructor. Mechanisms of geographic patterning of natural and artificially modified vegetation. Emphasis on range changes for which there is direct fossil or documentary evidence. Mr. Sauer

112. Animal Geography: Biophysical Aspects. (Formerly numbered 116A.) Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 2, Biology 2. A study of the factors and principles of animal distribution and dispersal on continents and islands of the earth in time and space.
Mr. Bennett, Mr. Walter

114. Physical Bases of Geography. Lecture, three hours; discussion, one hour. Prerequisites: courses 1, 2, three courses from Group Ia. Senior standing. An integrative study to the physical bases of geography, in a framework of world climatic regions.
Mr. Logan

(Ib) Applied Environmental Studies

116. Origins and Histories of Crop Plants. (Formerly numbered 114.) Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 2, Biology 2 or equivalent or consent of instructor. Geographic patterns of domestication and diffusion of useful plants from antiquity to the present, based on detailed case histories of selected species. Mr. Sauer

117. Animal Geography: Cultural Aspects. (Formerly numbered 116B.) Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 2, 5, Biology 2 or equivalent. A study of human cultural factors influencing animal distributions; the roles of animals in human societies; origins and diffusion of domesticated animals. Mr. Bennett, Mr. Walter

118. Medical Geography. Lecture, three hours; reading period, one hour. Prerequisite: course 5 or consent of instructor. An examination of patterns of population-place-disease interactions and some effects of change and development on disease etiology and problems of health care.

119. Agricultural and Pastoral Ecosystems. (Formerly numbered 107.) Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 2, 5, 116 and 112 or 117 or equivalent. Geography 120 and 121 recommended. Students who do not meet the prerequisites should not attempt this course. A geographical, ecological and historical analysis of the world's agricultural and pastoral systems. Emphasis is on energy flows, nutrient cycles and ecological and social problems associated with the various systems.
Mr. Bennett

120. Conservation of Resources: North America. Prerequisites: courses 1, 2 or equivalent or upper division standing. An analysis of the basic principles and problems associated with the conservation of natural resources in the United States and Canada. Mr. Bennett, Mr. McKnight, Mr. Trimble

121. Conservation of Resources: Underdeveloped World. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 2 or equivalent or upper division standing. An analysis of the principles and problems of the conservation of natural resources of the underdeveloped world. Mr. Bennett

122. Man and Environment in Africa. (Formerly numbered 119.) Lecture, three hours; discussion, one hour. Prerequisites: courses 1, 2, 5. An analysis of the unique ecosystems of tropical and subtropical Africa with respect to traditional and modern human impacts on vegetation, wildlife, and other natural resources. Further, a discussion of development goals in relation to socioeconomic policies and Africa's environmental heritage. Mr. Walter

124. Environmental Impact Analysis. (Formerly numbered 164.) Lecture, three hours; discussion, one hour. Prerequisites: at least two courses from among Geography 100-127 and Mathematics 50A; Geography 2, 5, 128 recommended. Introduction to the interdisciplinary analysis of local and regional impacts on environmental systems. Includes evaluation of state and federal concepts for the analysis of environmental impact. Mr. Westman

125. Marine Ecosystems. (Formerly numbered 108.) Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 2, 5, Biology 5, 7 or equivalent. Description and analysis of the principal marine ecosystems with particular emphasis upon those which are chiefly affected by human activity. Further, there will be a detailed evaluation of the ecological and conservation problems associated with human use of marine ecosystems. Mr. Bennett

M127. Soil, Plants, and Society. (Same as Biology M127.) Lecture, three hours; field trip. Prerequisites: Chemistry 11A, 11B, 11C or equivalent or consent of instructor. A general treatment of soil development and morphology and the physical and chemical properties of soils as they relate to plant growth and distribution; soil resources, management, conservation and cultural aspects. Soil profiles examined on the field trip are used to explain developmental phenomena. Mr. Lunt

128. The World's Ecosystems: Problems and Issues. (Formerly numbered 123.) Lecture, three hours; discussion, one hour. Prerequisite: course 120 or 121. Principal objectives are (1) to identify past, current, and projected problems associated with man-induced ecological disturbances and (2) to identify and evaluate the societal and biophysical factors which have contributed to the identified ecological disequilibria.

129. Problems of the Environment: Seminar. Lecture, three hours; reading period, two hours. Prerequisites: senior standing, four courses from Group I; Mathematics 152A highly recommended. Class enrollment limited. Qualitative-quantitative analysis of problems associated with rational protection and use of selected environmental systems (urban, rural, forest, desert, coastal, water, soil or others).

GROUP II: HUMAN GEOGRAPHY

(IIa) Cultural and Historical Geography

130. Geographical Discovery and Exploration. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 3 or equivalent or upper division standing. A survey of the history of exploration, from earliest times to modern, with emphasis on the period from Marco Polo to the present.
Mr. Dunbar, Mr. Thrower

132. Cultural Geography of the Pre-Modern World. Lecture, three hours; reading period, one hour. Prerequisite: course 3 or equivalent. An evolutionary and structural approach to the sociocultural geography of the earth prior to the rise of the modern-world system. Mr. Hale, Mr. Salter

133. Cultural Geography of the Modern World. Lecture, three hours; reading period, one hour. Prerequisite: course 3 or equivalent. An evolutionary and structural approach to the sociocultural geography of the modern-world system, with particular emphasis upon the structure and functioning of its core, semiperiphery, and periphery. Mr. Hale, Mr. Salter

135. Reading the Cultural Landscape: Perspectives and Processes. Lecture, three hours; reading period, one hour. Prerequisite: upper division standing or consent of instructor. Understanding personal and societal environmental preferences begins with analysis of the landscape. This course deals with attitudes toward the cultural or humanized landscape, methods of landscape analysis, problem landscapes and environments of the future through lectures, readings and field study. Mr. Salter

136. Historical Geography of the United States. (Formerly numbered 144.) Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 3 or equivalent or upper division standing. A study of the evolution of the cultural landscapes of the area that is now the United States. Examination of past geographies and of geographical change through time. Mr. Dunbar

140. Political Geography. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 3 or equivalent or upper division standing. The principles of political geography as developed through regional studies of political phenomena throughout the world. Current problems in domestic and international affairs will be considered. Mr. Kostanick

142. Population Geography. Lecture, three hours; reading period, one hour. A study of the social and behavioral perspectives influencing people in their patterns of demographic change, migration and mobility with special emphasis on spatial relationships and selected case studies.

(IIb) Economic and Urban Geography

145. Spatial Organization of Society. Lecture, three hours; reading period, one hour. Prerequisites: course 4, elementary statistics or consent of instructor. A study of the spatial structure of society as an expression of human decisions. Emphasis is on the processes affecting city size and distribution, the internal structure of cities, rural land use, and industrial location. Mr. Entrikin

146. Human Spatial Behavior. Lecture, three hours; reading period, one hour. Prerequisites: course 4, elementary statistics or consent of instructor. A study of human behavior within the spatial context. Discusses regularities in patterns of trade, consumer behavior, migration, mobility, communication and diffusion. Mr. Entrikin

148. Economic Geography. (Formerly numbered 160.) Lecture, three hours; reading period, one hour. Prerequisite: course 4 or consent of instructor. Geographical aspects of economic production and growth. The general theory of the space-economy. Land use processes. Location of industry. Regional development. Mr. Scott

149. Transportation Geography. Prerequisite: course 3 or 4 or upper division standing. A study of the geographical aspects of transportation, focusing on the characteristics and functions of the various modes and on the complexities of intra-urban transport. Mr. McKnight

150. Urban Geography. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 3 or equivalent or upper division standing. An analysis of the development, functions, spatial patterns and geographic problems of American cities.
Mr. Clark, Mr. Entrikin, Mr. Nelson

151. Historical Geography of Cities. Prerequisites: courses 3, 4 or equivalent or upper division standing. A survey of the diffusion and growth of cities in Western civilization. Two themes will be emphasized, the development of city systems and the evolution of urban internal spatial structure. Mr. Entrikin

152. World Cities. Lecture, three hours; reading period, one hour. Prerequisite: upper division standing. A discussion of the growth and structure of selected cities as illustrations of the processes of urbanization in different countries and societies. Topics will include rural to urban migration, cities as centers of power, spatial organization, and the tendency to megalopolitanization. Mr. Clark, Mr. Entrikin

156. Metropolitan Los Angeles. Lecture, three hours; reading period, one hour. Prerequisite: upper division standing. A study of the origins, growth processes, internal structure and pattern, interactions, environmental and spatial problems of the Los Angeles metropolitan area. Mr. Nelson

159. Problems in Human Geography. Staff-student discussion, three hours; reading period, one hour. Prerequisites: two courses from Group II, senior standing. Class enrollment limited to fifteen students. A seminar type course in which students carry on intensive research projects. Designed as a "capstone" to courses in this group, the subjects of research will grow out of the previous work.

GROUP III: PROCEDURES

160. Field Analysis: Physical Geography. (Formerly numbered 170.) Saturday field trips, 8-5. Prerequisites: courses 1, 2 or equivalent and consent of instructor. A student desiring to take this course must notify departmental Chair of his wish, in writing, at least two quarters in advance of enrolling in this course. The basic methods of geographic analysis of small areas, embracing a variety of physical environments in Southern California and including consideration of related human activities. Chiefly field training.
Mr. Logan, Mr. Trimble

161. Field Analysis: Cultural Geography. (Formerly numbered 179.) Prerequisites: courses 1, 3, two upper division courses in geography, consent of instructor. Enrollment priority is given to students majoring in Geography. The class meets once a week from 8-5. The observation, analysis and mapping of landscape phenomena of human origin. Techniques of data collection will be examined for such topics as settlement form and pattern, environmental change, historical and demographic change, and land use.
Mr. Salter

162. Field and Laboratory Analysis: Geomorphology, Climatology, Hydrology. Laboratory and field, eight hours per week. Prerequisites: course 1 or equivalent, two courses from 102, 104, 105. Open to Geography and Ecosystems majors only with enrollment priority accorded Ecosystems majors. Examination of field and laboratory procedures and intellectual concepts used in the observation, measurement, analysis and interpretation of phenomena pertinent to the physical environment and interrelated human influences.

163. Field and Laboratory Analysis: Biogeography. Laboratory and field, eight hours per week. Prerequisites: courses 2, 5 or equivalent, two courses from 106, 108, 109, 112. Open to Geography and Ecosystems majors only with enrollment priority accorded Ecosystems majors. Examination of field and laboratory procedures and intellectual concepts used in the observation, measurement, analysis, and interpretation of phenomena pertinent to biogeography and interrelated human influences.

166. Map Analysis. (Formerly numbered 171.) Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 3 or equivalent or upper division standing. The analysis of maps, with the aim of deducing the physical, cultural and economic aspects of the region portrayed, including such elements as geomorphic history, hydrography, settlement history, forms of economic livelihood, transportation problems and toponomy. Mr. Logan

167. Cartography (1½ courses). (Formerly numbered 172.) Lecture, two hours; laboratory, six hours; independent work, three hours. Prerequisites: courses 1, 3 or equivalent or consent of instructor. Survey of the field of cartography. Includes theory and construction of map projections, compilation procedures, principles of generalization, symbolization, terrain representation, lettering, drafting and scribing, and map reproduction methods.

168. Computer Cartography. (Formerly numbered 175.) Lecture, two hours; laboratory, two hours; independent study, two hours. Prerequisite: course 167, Engineering 10F or 10S and consent of instructor. Theory and methods of mapping quantitative information with a computer. Includes problems of acquiring and processing machine readable map data and representing them as point symbols and surfaces.
Mr. Stephens

169. The Earth from Above. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 3, 4 or consent of instructor. This course examines the interface between cartography and remote sensing. By means of a wide variety of imagery from maps and satellite photos, different landscapes are analyzed and explained. Mr. Thrower

170. Presentation and Analysis of Geographic Data. Lecture, two hours; laboratory, one hour. An introduction to the basic techniques that are used in organizing, measuring, and displaying data from field, map, interview and government sources.
Mr. Clark

171. Quantitative Analysis. (Formerly numbered 176.) Lecture, three hours; laboratory, one hour. Prerequisite: Mathematics 50B or consent of instructor. An introduction to the methods of measurement and interpretation of geographic distributions and associations. Mr. Clark

M176. Dating Techniques in Environmental Sciences and Archaeology. (Same as Anthropology M116Q.) Lecture, three hours; reading period, one hour. Prerequisite: consent of instructor. Introduction to scientific dating methods such as radiocarbon dating, radiation damage methods, biological dating techniques and magnetic dating, and applications in environmental sciences, archaeology and physical anthropology. Mr. Berger

GROUP IV: REGIONS

180. North America. Prerequisites: courses 1, 3 or equivalent or upper division standing. Delimitation and analysis of the principal geographic regions of the United States and Canada.
Mr. McKnight, Mr. Nelson

181. Middle America. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 3 or equivalent or upper division standing. A study of the geographic factors, physical and cultural, that are basic to an understanding of the historical development of Middle America and of the contemporary economic and cultural geography of Mexico and the countries of Central America and the West Indies.
Mr. Bennett, Mr. Bruman

182A. Spanish South America. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 3 or equivalent or upper division standing. A study of the geographic factors, physical and cultural, that are basic to an understanding of the historical development of Spanish South America and of the contemporary economic and cultural geography of the individual Spanish-speaking countries.
Mr. Bruman

182B. Brazil. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 3 or equivalent or upper division standing. A study of the geographic factors, physical and cultural, that are basic to an understanding of the historical development of Portuguese South America and of the contemporary economic and cultural geography of Brazil. Mr. Bruman

183. Europe. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 3 or equivalent or upper division standing. A study of geographic conditions and their relation to economic, social and political problems in Europe. Mr. Kostanick, Mr. Thrower

184. Soviet Union. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 3 or equivalent or upper division standing. A study of geographic conditions and their relation to economic, social, and political problems in the Soviet Union. Mr. Kostanick

185. South and Southeast Asia. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 3 or equivalent or upper division standing. A regional synthesis with varying emphases upon the people of South or Southeast Asia in their physical, biotic, and cultural environment and its dynamic transformation. Consult department about term emphasis.

186. Contemporary China. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 3 or equivalent or upper division standing. A systematic geographic analysis of the elements of landscape, resources, population, and socioeconomic characteristics of the People's Republic of China. The course goal is comprehension of the dynamics that have led to China's major role in the East Asian and international scene, with special attention given to China-Japan and Sino-American relations and their geographic bases. Mr. Salter

187. Middle East. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 3 or equivalent or upper division standing. An analysis of the economic, social and political geography of the area extending from Iran to Morocco and from Turkey to Sudan. Emphasis on geographical themes and problems during historical and modern times. Mr. Hale

188. Northern Africa. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 3 or equivalent or upper division standing. An analysis of the economic, social, and political geography of the area including Mediterranean Africa, the Sahara, the Sudanic belt, and the eastern Horn. Emphasis on geographical themes and problems during historical and modern times. Mr. Hale

189. Middle and Southern Africa. Prerequisites: courses 1, 3 or equivalent or upper division standing. The regions of Africa south of the Sahara (middle and south Africa) in terms of physical features, human settlement, economic production, and political patterns. Mr. Hale

190. Australasia. Prerequisites: courses 1, 3 or equivalent or upper division standing. A regional synthesis of the physical and cultural features which characterize Australia, New Zealand, and the islands of the South Pacific. Mr. McKnight

191. California. Prerequisites: courses 1, 3 or equivalent or upper division standing. A systematic and regional treatment of the geography of California including the physical, cultural, and economic aspects and detailed studies of the various regions. Mr. Logan, Mr. McKnight

UNGROUPED

196. Senior Thesis in Ecosystems Analysis. Study schedule to be arranged individually. Prerequisites: courses 129, 162 or 163 and senior standing. Preparation and data collection and analysis for a senior thesis under the guidance and assistance of a faculty sponsor.

199. Special Study (½ to 2 courses). Study schedule to be arranged individually with the instructor. Prerequisites: senior standing and consent of instructor.

199HA-199HB. Honors in Geography: I & II. Study schedule to be arranged individually with instructors. Prerequisites: to be eligible a student must have completed at least five (5) upper division courses in geography, have attained a 3.5 GPA for such work and have a 3.25 overall GPA. **199HA** will be an independent study course taught by a team of two faculty members who will assist an enrolled student with bibliographic research and/or field research into a topic of mutual interest to the student and the faculty members. Successful completion of 199HA will entail the preparation of a detailed bibliography and outline for the writing of a substantial paper during the course of 199HB. The two faculty members will evaluate the bibliographic and/or field preparation of the student in 199HA. If that work is determined to be of "A" quality, the student will be allowed to continue in the Honor's Program. If that work is "B" or below, credit will be awarded to the student, but he or she will not be permitted to continue in the Honor's Program. **199HB** will be devoted to the writing of the substantial paper researched and outlined in 199HA. The two faculty members will evaluate the paper. If the paper is determined to be an "A", the student will graduate with Honors in Geography. If the paper is determined to be a "B" or lower, credit will be given the student, but there will be no Honors.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Geology

See Earth and Space Sciences

Geophysics and Planetary Physics

(Office: 3871 Slichter Hall)

Undergraduate Study

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 studies 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.

Upper Division Courses

M130. Isotope Geochemistry. (Same as Earth and Space Sciences M130.) Lecture, three hours; discussion, one hour. Prerequisites: junior or senior standing in physical or biological science and consent of instructor. Theoretical aspects of geochronology, particularly Carbon-14 dating. Application of radioisotopes to the hydrologic cycle and to atmospheric circulation. Stable isotope distribution in nature. Exchange mechanisms and their applications to paleotemperatures, hydrology, mineral formation and origin of biological deposits. (Alternates yearly with course M131.) Mr. Kaplan (F)

***[1]M131. Geochemistry.** (Same as Earth and Space Sciences M131.) Lecture, three hours; discussion, one hour. Prerequisite: junior or senior standing in chemistry, physics or earth and space sciences. Origin and abundance of the elements and their isotopes; distribution and chemistry of the elements in the earth, oceans, and atmosphere; chemistry of the earth's interior, phase transformations at high pressure and temperature. (Alternates yearly with course M130.) Mr. DePaolo

Geophysics and Space Physics

See Earth and Space Sciences

Germanic Languages

(Office: 310 Royce Hall)

Ehrhard Bahr, Ph.D., *Professor of German (Chair).*
Franz H. Bäuml, Ph.D., *Professor of German.*
Wolfgang Nehring, Ph.D., *Professor of German.*
Eli Sobel, Ph.D., *Professor of German.*
Hans Wagener, Ph.D., *Professor of German.*
Donald J. Ward, Ph.D., *Professor of German and Folklore.*
Terence H. Wilbur, Ph.D., *Professor of Germanic Linguistics and Philology.*
Gustave Otto Arlt, Ph.D., LL.D., *Emeritus Professor of German.*
Carl William Hagge, Ph.D., *Emeritus Professor of German.*
Wayland D. Hand, Ph.D., *Emeritus Professor of German and Folklore.*
William J. Mulloy, Ph.D., *Emeritus Professor of German.*
Victor A. Oswald, Jr., Ph.D., *Emeritus Professor of German.*
Erik Wahlgren, Ph.D., *Emeritus Professor of Scandinavian and Germanic Languages.*
Alexander Stephan, Ph.D., *Associate Professor of German.*
Janet R. Hadda, Ph.D., *Associate Professor of Yiddish.*
Robert S. Kirsner, Ph.D., *Associate Professor of Dutch and Afrikaans.*
Vern W. Robinson, Ph.D., *Emeritus Associate Professor of German.*
Jesse L. Byock, Ph.D., *Assistant Professor of Old Norse and Medieval Scandinavian.*
T. Craig Christy, Ph.D., *Assistant Professor of Germanic Linguistics and Philology.*
Dieter Jedan, Ph.D., *Assistant Professor of German.*
Kathleen Komar, Ph.D., *Assistant Professor of German and Comparative Literature.*
Steven D. Martinson, Ph.D., *Assistant Professor of German.*

•

Marianna D. Birnbaum, Ph.D., *Adjunct Associate Professor of Hungarian.*

Undergraduate Program

The Department of Germanic Languages offers undergraduate majors in German and Scandinavian Languages. The faculty and courses in the Scandinavian Languages section are listed at the end of the Germanic Languages section. In addition, the department offers undergraduate courses in Dutch-Flemish and Afrikaans, Hungarian, Old Norse and Medieval Scandinavian, and Yiddish.

The undergraduate program in German is comprised of lower-division courses in German language and upper division courses in German language, linguistics, literature, civilization and folklore. While the nucleus of the undergraduate program consists of training in language and literature, students majoring in German will be prepared for a wide range of graduate studies and activities in related fields.

Preparation for the Major in German

German 1, 2, 3, 4, 5, 6 or equivalents are required. Students with one year of high school German completed should enroll in German 2; students with two years of high school German or one semester of college German completed should enroll in German 3; students with two semesters of college German completed should enroll in German 4. Placement examinations may be given in instances where the proper level is difficult to determine. Native speakers of German must consult the undergraduate advisor. For additional information, all students are encouraged to contact the undergraduate advisor.

The Major in German

Fifteen upper division German courses are required for the major: Group I—German 100A or 100B or 100C, 108A, 108B, 129; Group II—four courses chosen from German 100A or 100B or 100C (whichever has not been taken to satisfy the Group I requirement), 101A, 101B, 101C, 119A, 128, 134; Group III—three courses chosen from German 103, 105, 106, 107, 137; Group IV—four courses chosen from German 119B, 122, 123, 124, 126, 127, 130, 132. Native speakers of German should consult the undergraduate advisor before enrolling in German 108A, 108B or 128. German majors, especially those who wish to pursue graduate studies in German, are encouraged to enroll in courses in German history and philosophy in those respective departments and are strongly urged to acquire a reading knowledge of French.

Departmental Honors

To qualify for Departmental Honors, German majors must earn a grade-point average of 3.6 or better in German courses, attain a 3.3 overall GPA in their junior and senior years and have completed German 195 with a grade of "A".

Teaching Credential in German

Students desiring the general secondary credential in German should consult the Graduate School of Education (201 Moore Hall) and the Department of Germanic Languages (310 Royce Hall).

Education Abroad Program

Students who will have completed German 6 or its equivalent and have an overall GPA of 3.0 or better are encouraged to spend their junior year at the University's Study Centers in Göttingen, West Germany, or Vienna, Austria. Credit for work completed at either university will be granted by the University of California. Information and applications can be obtained from the Education Abroad Program in 2221B Bunche Hall.

Lower Division Courses

No credit will be allowed for completing a less advanced course after satisfactory completion of a more advanced course in grammar and/or composition. Prerequisites for lower division courses are listed under the course descriptions. Students with demonstrated preparation may be permitted to transfer to a more advanced course on recommendation of the instructor.

1. Elementary German. Lecture, five hours per week; laboratory, one hour. Not open for credit to students who have completed more than one year of high school German or equivalent. The student will, however, be credited with four units toward the minimum progress requirement. Mr. Jedan

1G. Elementary German for Graduate Students (No credit). To provide preparation for Graduate Division foreign language reading requirement.

2. Elementary German. Lecture, five hours per week; laboratory, one hour. Prerequisite: course 1. Not open for credit to students who have completed two years of high school German or equivalent. The student will, however, be credited with four units toward the minimum progress requirement. Mr. Jedan

2G. Elementary German for Graduate Students (No credit). Continuation of course 1G.

3. Elementary German. Lecture, five hours per week; laboratory, one hour. Prerequisite: course 2 or two years of high school German. Mr. Jedan

4. Intermediate German. Lecture, five hours per week. Prerequisite: course 3 or three years of high school German. Mr. Jedan

5. Intermediate German. Prerequisite: course 4 or four years of high school German. Mr. Jedan

6. Intermediate German. Prerequisite: course 5 or equivalent. Mr. Jedan

12. German Conversation (½ course). Lecture, two hours per week. Prerequisite: course 1 or one year of high school German. This course will utilize German language teaching films; students will have the opportunity to practice spoken German in small groups. Mr. Jedan

14. Intermediate Conversation (½ course). Lecture, two hours per week. Prerequisite: course 3 or three years of high school German. Students will have the opportunity to practice spoken German in small groups. Mr. Jedan

95. Freshman Seminar. Course of variable content limited to topics of current interest; to be offered whenever a member of the staff is available.

Upper Division Courses

The prerequisite for all upper division courses except German 100A, 100B, 100C, 119A, 119B, 119C, 119D, 119E, 119F, 119G, 119J, 121A, 121B is course 6 or equivalent or consent of instructor.

Courses in the German 119 literature series cannot be taken for credit toward completion of the major in German.

Courses Open to Majors and Nonmajors; No Credit to Graduate Students in German

100A. German Civilization and Culture Before 1700. A study of the development of German civilization and institutions from the earliest times to 1700. Study of German culture as represented in its literature, art, music and architecture before 1700. Lectures, discussions and readings in English; no knowledge of German required. Mr. Bäuml, Mr. Sobel, Mr. Wagener

100B. Modern German Civilization and Culture from 1700-1919. A study of the development of German civilization and institutions from 1700 to 1919. Study of German culture as represented in its literature, art, music and architecture from 1700-1919. Lectures, discussions and readings in English; no knowledge of German required. Mr. Sobel, Mr. Wagener

100C. German Civilization and Culture in the 20th Century. A study of the development of German culture and institutions from 1919 to the present emphasizing developments in literature, the arts, and architecture. Lectures, discussions and readings in English; no knowledge of German required. Mr. Stephan

101A. Introduction to German Poetry. Close analysis of representative examples of German lyric poetry from early as well as modern literary periods, including a systematic consideration of poetic conventions and forms, diction, tone, imagery, symbolism and metrics. Recommended to be taken at the beginning of literary studies.

101B. Introduction to German Drama. Analysis of selected examples of drama (e.g., tragedy, comedy, one-act play, lyric drama, lyric theater, etc.), including a systematic introduction to dramatic forms, techniques, and theories. Texts will be selected from modern literature as well as from other periods. Recommended to be taken at the beginning of literary studies. Mr. Behr, Mr. Martinson, Mr. Nehring

101C. Introduction to German Narrative Prose. Analysis of significant examples of narrative prose (e.g., short story, novelle, novel, fairy tale, etc.), including a systematic introduction to narrative forms, techniques, styles. Texts will be selected from modern literature as well as from older periods. Recommended to be taken at the beginning of literary studies. Ms. Komar, Mr. Nehring, Mr. Stephan

103. Introduction to German Enlightenment, Sturm und Drang, and Classicism. Reading and discussion of representative works by Lessing, Goethe, and Schiller; their historical and social background, their relationship to music (Bach, Mozart) and philosophy (Leibniz, Kant) as well as their place in the history of ideas. Mr. Behr, Mr. Martinson

105. Introduction to 19th-Century German Literature. Reading and analysis of selected works from Romanticism to Realism. Ms. Komar, Mr. Nehring

106. Introduction to Modern Literature. Analysis of selected works of the period from 1890 to 1945. Mr. Nehring, Mr. Wagener

107. Introduction to Contemporary Literature. Analysis of selected works of the period 1945 to the present time. Mr. Stephan

108A. Composition and Conversation. Composition and conversation. Mr. Christy, Mr. Jedan

108B. Composition and Conversation. Composition and conversation. Prerequisite: course 108A or consent of instructor. Mr. Christy, Mr. Jedan

Courses Not Open for Credit to Majors or Graduate Students in German

119A. Older German Literature in Translation. (Formerly numbered 121A.) Analyses in English of works of German literature from the Medieval period to Baroque. No credit toward completion of the major in German. Mr. Bäuml, Mr. Sobel, Mr. Ward

119B. Classical German Literature in Translation. (Formerly numbered 121B.) Analyses in English of works of the period of Classicism. No credit toward completion of the major in German. Mr. Bahr, Mr. Martinson

119C. 19th-Century German Literature in Translation. (Formerly numbered 121C.) Readings and lectures in English on selected 19th-century authors. No credit toward completion of the major in German. Ms. Komar, Mr. Nehring

119D. Modern German Literature in Translation — Narrative Prose I. (Formerly numbered 121D.) Readings, lectures and discussions in English on selected modern authors, including Mann, Kafka, Hesse and Rilke. No credit toward completion of the major in German. Mr. Nehring, Mr. Stephan, Mr. Wagener

119E. Modern German Literature in Translation — Narrative Prose II. (Formerly numbered 121E.) Readings, lectures and discussions in English on post-1945 narrative prose. No credit toward completion of the major in German. Mr. Stephan, Mr. Wagener

119F. Modern German Literature in Translation — Drama and Lyrics. (Formerly numbered 121F.) Readings, lectures and discussions in English on modern German drama and lyric poetry. No credit toward completion of the major in German. Mr. Stephan, Mr. Wagener

119G. Modern German Jewish Literature in Translation. (Formerly numbered 121G.) Readings, lectures in English on selected authors, including Mendelssohn, Heine, Schnitzler, Kraus, Kafka, Feuchtwanger, Anne Frank, Nelly Sachs. No credit toward completion of the major in German. Ms. Hadda

119J. The Faust Tradition from the Renaissance to the Modern Age. (Formerly numbered 121J.) Readings and discussions in English of the Faust theme and Faust tradition in European Literature and intellectual history, including the chapbook of *Doctor Faustus*, Christopher Marlowe's and Goethe's Faust dramas as well as Thomas Mann's novel *Doctor Faustus: The Life of the German Composer Adrian Leverkühn*. No credit toward completion of the major in German. Mr. Bahr, Mr. Martinson

Courses Open for Credit to Majors, Nonmajors and Graduate Students in German

121A. Special Problems in Literature. (Formerly numbered 121H.) Prerequisite: upper division standing in any department. Varying topics of current importance and immediate relevance to literary study. The course is designed to introduce the student to contemporary trends in literary study and is predominantly concerned with topics related to German literature and criticism. Lectures in English.

121B. The German Film in Cultural Context. (Formerly numbered 121I.) A survey of various aspects of the German film in relationship to literary, artistic, and political directions of the times, with emphasis on the film as a separate mode of artistic expression. Mr. Stephan

122. Studies in German Literature Before 1750. Prerequisites: three upper division courses, including course 100A or consent of instructor. Readings and analysis of major works from the Middle Ages to the Baroque.

123. Goethe. Prerequisites: courses 100A or 100B and 103 or consent of instructor. Reading and discussion of representative works (except *Faust*) from Goethe's early period to his maturity and old age. Mr. Bahr, Mr. Martinson

124. Romanticism. Prerequisites: courses 100A or 100B, 105 or consent of instructor. Reading and analysis of major works of the Romantic period. Authors included are Tieck, Novalis, E.T.A. Hoffmann, and Eichendorff. Ms. Komar, Mr. Nehring

126. Advanced Study in Modern Literature. Prerequisites: courses 100A, 100B or 100C, 106 or consent of instructor. Reading and analysis of a wide range of the literature from 1890-1945. Mr. Wagener

127. Advanced Study in Contemporary Literature. Prerequisites: courses 100A, 100B or 100C, 107 or consent of instructor. Analysis of a wide range of German literature from 1945 to the present. Mr. Stephan

128. Advanced Composition, Grammar and Conversation. Prerequisites: courses 108A, 108B or consent of instructor. Grammar, composition, conversation. Mr. Christy, Mr. Jedan

129. German Phonetics. Study of the articulatory basis of the sounds of German and practice in standard pronunciation. Mr. Christy

130. Methodology of Literary Criticism. Prerequisite: senior standing or consent of instructor. Introduction to the methodology of literary criticism, including a systematic study of motif, topos, plot, space and time, semantics, stylistics, rhetoric, metrics, imagery (emblem, metaphor, allegory, symbol), structural elements (act, stanza, book, flash-back, anticipation, interior monologue), narrator and reader's response, humor and irony, hermeneutics. Mr. Bahr, Mr. Bäuml

132. Goethe's *Faust*. Prerequisites: courses 100A or 100B, 123 or consent of instructor. Detailed interpretation of Goethe's *Faust*, Parts I and II, together with more general consideration of other treatments of the Faust theme in European literature. Mr. Bahr

134. German Folklore. A survey of the various genres of German folklore. Mr. Ward

137. Language and Linguistics. (Formerly numbered 117.) Prerequisites: courses 100A or 100B and 108A. Introduction to the historical development of the German language; theories and methods of linguistics. Mr. Christy

195. Senior Thesis Course. Extensive reading, research, and writing of senior thesis. Course may be used for writing Honors thesis.

199A-199ZZ. Special Studies (½ or 1 course). Prerequisite: consent of instructor. 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 the same two-letter code used to identify his 599 research course. A course of independent study for students who desire more intensive or specialized investigation of material covered in a regular course, and who present such a course as a prerequisite.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Dutch-Flemish and Afrikaans

Upper Division Courses

101A. Elementary Dutch-Flemish. Mr. Kirsner

101B. Elementary Afrikaans. Mr. Kirsner

101C. Intermediate Dutch-Flemish. Prerequisite: course 101A or equivalent. Mr. Kirsner

101D. Intermediate Readings in Dutch-Flemish. Prerequisite: course 101C or equivalent. Mr. Kirsner

101E. Intermediate Readings in Afrikaans. Prerequisite: course 101B. Mr. Kirsner

112. Dutch, Flemish, Afrikaans Literature in Translation. Readings and analysis of selected works in translation from Dutch, Flemish, and Afrikaans Literature. Mr. Kirsner

120. Introduction to Dutch Studies. Prerequisite: consent of instructor. Brief review of Dutch grammar. Reading and discussion of selections from contemporary Dutch literature, contemporary Dutch literary criticism, and modern Dutch linguistics. Emphasis is on developing reading skill and on acquiring familiarity with and an appreciation of the scope of twentieth-century Neerlandistiek. Mr. Kirsner

131. Introduction to Modern Dutch Literature. Prerequisite: either course 101D or 120. Analysis of selected works of the literature of the Netherlands and Flemish Belgium, from the symbolist Beweging van Tachtig of the 1880's to the present. Mr. Kirsner

135. Introduction to Afrikaans Literature. Prerequisite: course 101E or equivalent. Analysis of selected works, from the founding of the Genootskap van Regte Afrikaners in 1875 to the present time. Mr. Kirsner

199. Special Studies in Dutch-Flemish and Afrikaans (½ to 1 course). Mr. Kirsner

Hungarian

Upper Division Courses

***†101A. Elementary Hungarian.** Introduction to grammar and reading exercises, emphasis on the spoken language. Ms. Birnbaum

***†101B. Elementary Hungarian.** Prerequisite: course 101A or equivalent. Grammatical exercises, conversation, and reading of texts. Ms. Birnbaum

***†101C. Elementary Hungarian.** Prerequisite: course 101B or equivalent. Conversation and readings in literary texts. Ms. Birnbaum

***§101D. Advanced Hungarian.** Prerequisites: courses 101A, 101B, 101C completed or equivalent. Grammar, conversation, vocabulary building. Ms. Birnbaum

***§101E. Advanced Hungarian.** Prerequisites: courses 101A-101D completed or equivalent. Conversation, reading and discussion of literary texts. Ms. Birnbaum

***§101F. Advanced Hungarian.** Prerequisites: courses 101A-101E completed or equivalent. Conversation, and reviewing Hungarian grammar from a typological point of view. Ms. Birnbaum

120A-120B. Readings in Hungarian. (Formerly numbered Finno-Ugric 153A-153B.) Prerequisite: course 101C or equivalent. Large selections of Hungarian prose and poetry read in the original. Ms. Birnbaum

120C. Readings in Hungarian Literature. Prerequisite: reading knowledge in Hungarian. Course 101C or equivalent completed. Large selections of Hungarian prose and poetry read in the original. Discussion will be conducted in Hungarian. Ms. Birnbaum

121A-121B. Survey of Hungarian Literature in Translation. (Formerly numbered 158A-158B.) Intended for students in general and comparative literature as well as students interested in Finno-Ugric studies. Main trends and contacts with other literatures are surveyed. Ms. Birnbaum

130. Hungarian Civilization and Culture. A study of Hungarian civilization and institutions from the earliest times to the present. Study of Hungarian culture as represented in its arts (literature, fine arts, music). Ms. Birnbaum

M135. Hungarian Folklore and Mythology. (Same as Folklore M128.) A general course for the student in folklore and mythology, with emphasis on types of folklore and varieties of folklore research. Ms. Birnbaum

M136. Folklore and Mythology of the Ugric Peoples. (Same as Folklore M129.) Survey of the traditions of the smaller Ugric nationalities (Voguls, Ostyaks, etc.). Ms. Birnbaum

199. Special Studies in Hungarian (½ to 1 course). Prerequisite: consent of instructor is required. A course of independent study for students who desire more intensive or specialized investigation of material covered in a regular course, and who present such a course as a prerequisite. Ms. Birnbaum

Old Norse and Medieval Scandinavian

Lower Division Course

40. The Heroic Journey in Northern Myth, Legend and Epic. (Formerly numbered Scandinavian Languages 40.) The focus is on a comparison of the journeys of heroes. Readings in mythology, legend, folktale and epic, including the *Nibelungenlied*, the *Volsunga saga*, the *Eddas* and *Beowulf*. Cultural and historic backgrounds to the texts are considered. All readings are in English. Mr. Byock

Upper Division Courses

140. Viking Civilization and Literature. (Formerly numbered Scandinavian Languages 141.) Readings in the history, society and culture of the early Scandinavians. All texts are in English translation and include Old Norse sagas, *Eddas* and early ballad literature. Mr. Byock

151. Elementary Old Norse. (Formerly numbered Scandinavian Languages 151.) Introduction to the grammar and pronunciation of Old Norse. Selected readings from the sagas and the *Prose Edda*. Mr. Byock

152. Intermediate Old Norse. (Formerly numbered Scandinavian Languages 152.) Prerequisite: course 151 or equivalent. Continued grammar, pronunciation and readings from the *Eddas* and the sagas of the Icelanders, the Norwegian kings and the legendary heroes. Mr. Byock

153. Modern Icelandic. (Formerly numbered Scandinavian Languages 153.) Prerequisite: course 152 or equivalent. Grammar, readings and conversation. Mr. Byock

Yiddish

Lower Division Courses

***21. Elementary Yiddish.** Lecture, five hours per week. Introduction to grammar; instruction in listening, speaking, reading and writing skills. Ms. Hadda

***22. Elementary Yiddish.** Lecture, five hours per week. Prerequisite: course 1 or equivalent. Ms. Hadda

***23. Elementary Yiddish.** Lecture, five hours per week. Prerequisite: course 2 or equivalent. Ms. Hadda

Upper Division Courses

***104. Intermediate Yiddish.** Lecture, five hours per week. Prerequisite: course 3 or equivalent. Grammatical exercises, reading and linguistic analysis of texts, conversation. Ms. Hadda

121A. 20th-Century Yiddish Poetry in English Translation. Prerequisite: upper division standing or consent of instructor. Readings in 20th-Century Yiddish Poetry and Drama. Lectures, discussions. Ms. Hadda

121B. 20th-Century Yiddish Prose and Drama in English Translation. Prerequisite: upper division standing or consent of instructor. Readings in 20th-Century Yiddish Prose. Lectures, discussions. Ms. Hadda

121C. Special Topics in Yiddish Literature in English Translation. Varying topics of importance and relevance to Yiddish literary study. Reading and analysis of a wide range of 19th-century literature. Ms. Hadda

131A. Modern Yiddish Poetry. Prerequisite: course 104 or consent of instructor. Readings in modern Yiddish poetry. Lectures, discussions. Ms. Hadda

131B. Modern Yiddish Prose and Drama. Prerequisite: course 104 or consent of instructor. Readings in modern Yiddish prose and drama. Lectures, discussion. Ms. Hadda

131C. Special Topics in Yiddish Literature. Prerequisite: course 131A or 131B. Varying topics of importance and relevance to Yiddish literary study. Reading and analysis of a wide range of 19th- and 20-century literature. Ms. Hadda

199. Special Studies in Yiddish (½ to 1 course). Prerequisite: consent of instructor. A course of independent study for students who desire more intensive or specialized investigation of material covered in a regular course, and who present such a course as a prerequisite. Ms. Hadda

SCANDINAVIAN LANGUAGES

(Office: 332 Royce Hall)

Ross P. Shideler, Ph.D., *Professor of Scandinavian Languages and Comparative Literature.*
Kenneth G. Chapman, Ph.D., *Emeritus Professor of Scandinavian Languages.*
Erik Wahlgren, Ph.D., *Emeritus Professor of Scandinavian and Germanic Languages.*
James R. Massengale, Ph.D., *Associate Professor of Scandinavian Languages.*
Mary Kay Norseng, Ph.D., *Associate Professor of Scandinavian Languages (Vice-Chair).*

•

Inkeri A. Rank, M.A., M.Ed., *Visiting Lecturer in Finnish Studies.*
Jules L. Zentner, Ph.D., *Adjunct Lecturer in Scandinavian Languages.*

Preparation for the Major

Scandinavian Languages 1, 2, 3, 4, 5 or 11, 12, 13, 14, 15 or 21, 22, 23, 24, 25, 30 or equivalents are required.

The Undergraduate Major in Scandinavian Languages

Twelve upper division courses in Scandinavian, including courses 105 and 106 or 110 for two quarters, and 141, 142, 143. As an option, three upper division courses in a related field may be taken. These three courses must be approved in advance by the undergraduate advisor. It is recommended that students who plan to do graduate work in Scandinavian take German 1 through 6.

Lower Division Courses

No credit will be allowed for completing a less advanced course after satisfactory completion of a more advanced course in grammar and/or composition. Prerequisites for lower division courses are listed under the course descriptions. Students with demonstrated preparation may be permitted a more advanced program by the department, or such students may be transferred to a more advanced course on recommendation of the instructor.

Admission to Language Courses in the Scandinavian Section

Native speakers of Norwegian, Swedish or Danish may not enroll in any language course (including courses 105, 106, 110) in the Scandinavian Languages Section, except by petition in writing to the section. Non-Scandinavian students with a knowledge of one of these Scandinavian languages may not take courses in the others except by petition in writing. These petitions must include a description of the student's linguistic background and his or her reason for wanting to take the language course in question.

1. Elementary Swedish. Mr. Shideler in charge

2. Elementary Swedish. Prerequisite: course 1 or equivalent. Mr. Shideler in charge

3. Elementary Swedish. Prerequisite: course 2 or equivalent. Mr. Shideler in charge

4. Intermediate Swedish. Prerequisite: course 3 or equivalent. Mr. Shideler in charge

5. Intermediate Swedish. Prerequisite: course 4 or equivalent. Mr. Shideler in charge

11. Elementary Norwegian. Ms. Norseng

12. Elementary Norwegian. Prerequisite: course 11 or equivalent. Ms. Norseng

13. Elementary Norwegian. Prerequisite: course 12 or equivalent. Ms. Norseng

14. Intermediate Norwegian. Prerequisite: course 13 or equivalent. Ms. Norseng

15. Intermediate Norwegian. Prerequisite: course 14 or equivalent. Ms. Norseng

21. Elementary Danish. Mr. Massengale

22. Elementary Danish. Prerequisite: course 21 or equivalent. Mr. Massengale

23. Elementary Danish. Prerequisite: course 22 or equivalent. Mr. Massengale

24. Intermediate Danish. Prerequisite: course 23 or equivalent. Mr. Massengale

25. Intermediate Danish. Prerequisite: course 24 or equivalent. Mr. Massengale

30. Intermediate Danish, Norwegian and Swedish. Prerequisite: either course 5, 15 or 25 or equivalent. Readings in Danish, Norwegian and Swedish. Written and oral exercises. Majors as well as nonmajors may take this course on P/NP or S/U basis.

*Upper Division Courses

105. Advanced Swedish. Prerequisite: course 30 or equivalent. Readings, composition, and conversation. Conducted in Swedish.

106. Advanced Swedish. Prerequisite: course 105 or equivalent. Readings, composition, and conversation. Conducted in Swedish.

110. Advanced Danish and Norwegian. Prerequisite: course 30 or equivalent. Advanced reading, composition, and conversation in Danish and Norwegian. May be taken twice for credit.

M123A. Finnish Folklore and Mythology. (Same as Folklore M123A.) The methods and results of Finnish folklore studies and the mythic traditions of the Finns. Special attention is paid to the oral epic, beliefs and legends. Ms. Rank

M123B. Finnish Folksong and Ballad. (Same as Folklore M123B.) Course M123A is not prerequisite to M123B. A survey of Finnish balladry and folksong, with attention to historical development, ethnic background, and poetic and musical values. Ms. Rank

M125. Folklore and Mythology of the Lappe. (Same as Folklore M125.) Survey of Lappish beliefs, customs, and various genres of oral tradition including tales, legends, songs and music. Attention is also paid to the material manifestations of Lappish culture: arts and crafts, textiles, costume, folk technology. Ms. Rank

130. Elementary Finnish. Introduction to pronunciation and grammar. Ms. Rank

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

131. Intermediate Finnish. Prerequisite: course 130 or equivalent. Grammatical exercises and readings.
Ms. Rank

132. Advanced Finnish. Prerequisite: course 131 or equivalent. Readings, composition and conversation.
Ms. Rank

138. Survey of Finnish Literature. Intended for students in general and comparative literature as well as students interested in Finnish studies. Readings and discussions of selected works from the literature of Finland in the 19th and 20th centuries. Conducted in English; no knowledge of Finnish is required.
Ms. Rank

141. Backgrounds of Scandinavian Literature. Prerequisite for Scandinavian majors: course 30 or equivalent. For nonmajors: no knowledge of a Scandinavian language is required. Readings and discussion of representative texts selected from the literature of the Medieval, Renaissance, Baroque and Enlightenment periods.

142. Scandinavian Literature of the 19th Century. Prerequisite for Scandinavian majors: course 30 or equivalent. For nonmajors: no knowledge of a Scandinavian language is required. Readings and discussions of selected works from the literature of Scandinavia in the 19th century.

143. Modern Scandinavian Literature. Prerequisite for Scandinavian majors: course 30 or equivalent. For nonmajors: no knowledge of a Scandinavian language is required. Readings and discussions of selected works of modern Scandinavian literature.

C144. Ibsen. Prerequisite for Scandinavian majors: course 30 or equivalent. For nonmajors: no knowledge of a Scandinavian language is required. Readings and discussions of selected plays by Henrik Ibsen. May be concurrently scheduled with course C251.
Ms. Norseng

C145. Strindberg. Prerequisite for Scandinavian majors: course 30 or equivalent. For nonmajors: no knowledge of a Scandinavian language is required. Readings and discussions of selected plays by August Strindberg. May be concurrently scheduled with course C252.
Mr. Massengale, Mr. Shideler

C146. Kierkegaard. Prerequisite for Scandinavian majors: course 30 or equivalent. For nonmajors: no knowledge of a Scandinavian language is required. Readings and discussions of selected works by Søren Kierkegaard. May be concurrently scheduled with course C253.
Mr. Massengale

C147. Hamsun. Prerequisite for Scandinavian majors: course 30 or equivalent. For nonmajors: no knowledge of a Scandinavian language is required. Readings and discussions of selected works by Knut Hamsun. May be concurrently scheduled with course C254.
Ms. Norseng

C180. Literature and Scandinavian Society. Discussion of selected aspects of Scandinavian society based on readings of the contemporary literature as well as other documentary material. No knowledge of a Scandinavian language is required. May be repeated for credit when undergraduate advisor determines that course content is completely different. Concurrently scheduled with course C263.

181. Contemporary Swedish Literature. Prerequisite: a reading knowledge of a Scandinavian language is required. Reading and analysis of selected texts by major twentieth-century Swedish authors. The course covers not only specific novelists, playwrights, and poets, but places them within a social and historical milieu.
Mr. Shideler

190. Honors Course in Scandinavian. Prerequisites: senior standing with a minimum 3.0 grade-point average in the major and consent of the Honors Committee of the Scandinavian Languages Section. Intensive study of a selected special topic in Scandinavian. Discussions, oral and written reports.

199A-199ZZ. Special Studies in Scandinavian (½ or 1 course). Prerequisites: senior or graduate standing and consent of instructor. 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 the same two-letter code used to identify his 599 research course. A course of independent study designed for graduates or senior undergraduates who desire more intensive or specialized investigation of material covered in a regular course, and who present such a course as a prerequisite.

Graduate Courses

For complete descriptions of graduate-level courses offered by this section, please consult the *UCLA Graduate Catalog.*

History

(Office: 6265 Bunche Hall)

Joyce O. 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 I. 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.*
Claus-Peter Clasen, 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. Galbraith, Ph.D., *Professor of History.*
Frank O. Gatell, Ph.D., *Professor of History.*
Juan Gómez-Quiñones, Ph.D., *Professor of History.*
Richard Hovannisian, Ph.D., *Professor of History.*
Daniel W. Howe, Ph.D., *Professor of History (Vice-Chair).*
Norris C. Hundley, Ph.D., *Professor of History.*
Michael O. Jones, Ph.D., *Professor of History.*
Nikki Keddie, Ph.D., *Professor of History.*
Barîsa Krekić, Ph.D., *Professor of History.*
John H. M. Laslett, D.Phil., *Professor of History.*
James Lockhart, Ph.D., *Professor of History.*
Peter Loewenberg, Ph.D., *Professor of History.*
Andrew Lossky, Ph.D., *Professor of History.*
Afaf Marsot, D.Phil., *Professor of History.*
Lauro R. Martines, 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. Rogger, Ph.D., *Professor of History (Chair).*
Richard H. Rouse, Ph.D., *Professor of History.*
Damodar R. SarDesai, Ph.D., *Professor of History.*
Alexander P. Saxton, Ph.D., *Professor of History.*
Stanford J. Shaw, Ph.D., *Professor of History.*
Kathryn Kish Sklar, Ph.D., *Professor of History.*
Speros Vryonis, Jr., Ph.D., *Professor of History.*
Eugen Weber, M.Litt., *Professor of History.*
Robert S. Westman, Ph.D., *Professor of History.*
James W. Wilkie, Ph.D., *Professor of History.*
Robert Wohl, Ph.D., *Professor of History.*
Stanley A. Wolpert, Ph.D., *Professor of History.*
Milton Anastos, Ph.D., *Emeritus Professor of Byzantine Greek and History.*
Eugene N. Anderson, Ph.D., *Emeritus Professor of History.*
Truesdell S. Brown, Ph.D., *Emeritus Professor of History.*
John G. 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. Farquhar, 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 E. Kaplan, Ph.D., *Associate Professor of History.*
Ronald J. Mellor, 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. Notehelfer, 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.*
Mary A. Yeager, Ph.D., *Associate Professor of History.*
Edward G. Berenson, Ph.D., *Assistant Professor of History.*
Margaret W. Creel, Ph.D., *Assistant Professor of History.*
Robert A. Hill, M.Sc., *Assistant Professor of History.*
Kenneth M. Morrison, Ph.D., *Assistant Professor of History.*
Debora L. Silverman, M.A., *Acting Assistant Professor of History.*

•

Amin Banani, Ph.D., *Professor of Persian and History.*
Giorgio Buccellati, Ph.D., *Professor of History and Near Eastern Languages.*
Kendall E. Bailes, *Professor of History at UC Irvine.*
Robert G. Frank, Ph.D., *Associate Professor of History and Medical History/Anatomy.*
Albert Hoxie, M.A., *Senior Lecturer in History.*
Ludwig Lauerhass, Ph.D., *Lecturer in History and Librarian.*

The Undergraduate Program

The undergraduate program in history is designed to give students an insight into the world in which they live and the forces and events that have served to shape and mold that world. In its broadest sense the discipline of history provides a background for all other subjects and disciplines. More specifically, the goal of history is the classical goal of self-knowledge. History is therefore concerned with "why we are what we are" and "how we came to be where we are today." In this sense history is the study of the past of our own society and how it emerged out of the traditions that produced it. At the same time, self-knowledge for the student of history comes not only from self-discovery, but from a comparison of his or her own tradition and experience with those of others. It is only by studying the history of other civilizations and cultures that we can

hope to gain perspective on our own. The purpose of historical study is therefore not only an understanding of our own past and our present self, but an understanding of, and empathy for, the cultures and civilizations of other peoples and other nations.

The History Department's undergraduate major has been established in keeping with these broad goals. As listed below, the department's undergraduate program begins with a three-quarter survey of Western civilization and a two-quarter study of United States history. For comparative purposes the students are asked to spend two quarters studying non-Western history. In addition they are required to devote one quarter to the study of historical methodology and philosophy. At the upper division level students are encouraged to develop their own problem consciousness and to follow their personal interests into whichever area they choose. The only further requirement at this level is a one-quarter colloquium and writing course which is designed to give the student some experience in formal historical discourse.

Students interested in careers in the field of law, teaching, public service, journalism and a variety of other areas involving the social sciences will find the History major beneficial and rewarding.

Preparation for the Major and the Major

The History Department's undergraduate program consists of 16 courses in history (6 lower division: the "Preparation for the Major"; 10 upper division: the "Major") and four courses in the social sciences outside the department. The following courses are required in the program:

(1) History 1A-1B-1C (Western Civilization)

(2) Two courses in U.S. history

(3) Two courses in non-Western history from the same area (i.e., Latin America, Asia, Near and Middle East, Africa) or in science and technology. Candidates for the California Standard Teaching Credential may not choose science and technology to fulfill their non-Western requirement.

(4) History 99 (for freshmen and sophomores), History 101 (for juniors and seniors) or History 100 (no restriction by class)

(5) History 197 (Undergraduate Seminar) or History 199 (Special Studies in History)

(6) Four courses in the social sciences outside of history (must be taken for a letter grade)

The requirements for U.S. and non-Western history may be met with either upper or lower division courses. *Students are, however, reminded that normally only six lower division courses in history need to be included in their program.* This will generally mean that if they meet the U.S. history requirement at the lower division level they will have to meet the non-Western requirement at the upper division level (or vice versa). If they choose to meet both requirements at the lower division level they will still be required to do 10 upper division courses to fulfill the upper division requirements of the major. The department recommends the following lower division courses to meet the U.S. history and non-Western requirements: History 6A-6B-6C (U.S. History); History 7A-7B (Political U.S.); History 8A, 8B (Latin America); History 9A-9B-9C (Asia); History 9D plus one suitable upper division course (Near and Middle East); History 10A-10B (Africa); History 2 (Technology); History 3A-3B-3C (Science). If only one non-Western course is taken in lower division, an appropriate upper division non-Western course must be included in the major.

All History majors are required to take at least four courses in other departments in the division of social sciences, whether lower or upper division (anthropology, geography, economics, political science, sociology, psychology). *These courses may not be taken for Passed/Not Passed grades.* A one-quarter course from the History 6A-6B-6C (U.S. History) sequence may be applied to this requirement, provided the same quarter course is not used to satisfy any other requirement of the major.

Advanced Placement Credit in History: The College of Letters and Science allows ten quarter units towards the B.A. for each Advanced Placement Test in history. The History Department applies this credit to the "Preparation for the Major" as follows: AP European History fulfills History 1C; AP American History fulfills the U.S. history requirement at the lower division level.

Only one course offered outside the History Department will count as a major course without petition: Medical History (Anatomy) 107B, Historical Development of Medical Sciences.

Transfer students with deficiencies in lower division may by petition substitute appropriate upper division courses in history for the lower division requirements. See the departmental advisor.

There is no language requirement for the major; however, students wishing to take the Honors Program or planning to do graduate work in history are urged to pursue language study early in their undergraduate careers.

History Honors Program

The Honors Program is designed for History majors who are interested in carrying out a year-long independent research project that will culminate in an honors thesis. Special honors seminars are also offered during a student's junior year. The program gives qualified students the opportunity of working closely with an individual professor in a supervised research and writing project. Students contemplating graduate work in history should find this program particularly beneficial and rewarding.

Admission: A 3.5 departmental grade-point average is normally required for admission, but students with a lower GPA may apply to the Honors Committee for admission. Students desiring to enroll in the Honors Program should consult the History Department undergraduate advisor at the beginning of their junior year in order to fill out the required application form.

Requirements: Candidates for honors will be required to meet all normal requirements of the History major described in the preceding section. An honors seminar on historiography and philosophy of history (History 101H) will satisfy requirement 4. All honors students will be required to take a three-quarter honors sequence, History 199HA-199HB-199HC, which will count as three courses of the ten upper division courses required of all History majors. The first course of this sequence (History 199HA), taken in the Spring Quarter of the junior year, will help students define their research topics, identify a faculty sponsor and explore problems of historical research. Honors students will then continue the other two courses of the sequence (History 199HB and 199HC) in the Fall and Winter Quarters of their senior year under the guidance of the sponsoring professor. The Justin Turner Prize is awarded to the outstanding honors thesis.

Lower Division Courses

1A-1B-1C. Introduction to Western Civilization. Lecture and discussion. A broad, historical study of major elements in the Western heritage from the world of the Greeks to that of the twentieth century, designed to further beginning students' general education, introduce them to ideas, attitudes, and institutions basic to Western civilization, and to acquaint them, through reading and critical discussion, with representative contemporary documents and writings of enduring interest.

2. History of Technology from Antiquity to the Twentieth Century. (Formerly numbered 2A-2B-2C.) Designed for students in the natural sciences, social sciences, and fine arts. It is a survey of the development of man's ability to understand more fully and to utilize more efficiently his natural environment, stressing technology's changing social, economic, scientific and cultural relationships. Mr. Burke

3A-3B-3C. Introduction to the History of Science. History majors may not apply these courses on the science breadth requirements:

3A. The Scientific Revolution. A survey of the beginnings of the physical sciences involving the transformation from Aristotelian to Newtonian cosmology, the mechanization of the natural world, the rise of experimental science, and the origin of scientific societies. Mr. Westman, Mr. Wise

3B. The Physical Sciences since the Enlightenment. A broad survey of the development of ideas in classical and modern physical science since Newton. The unifying theme will be theories of matter, but more specifically Chemistry, Thermodynamics, Electromagnetic Theory of Light, Energy Conservation, Relativity, and Quantum Mechanics, will be discussed. Mr. Wise

3C. The Biological Sciences, 1800-1955. A survey of the development of the biological sciences from the period of Bichat and Müller to the discovery of the double helix. Mr. Frank

4. Introduction to the History of Religions. A discussion of the various systems, ideas, and fashions of thought that have dominated Western approaches to the religions of the world since Antiquity. The course surveys the development from classical Greek and early Christian theories to modern history with its discoveries of the religions of India, China, the ancient Near East, etc., and the problem of the encounter of various religions in the 19th and 20th centuries. Mr. Bolle

6A-6B-6C. History of the American Peoples. A survey of the American Peoples from the advent of aboriginal society to the present, emphasizing racial and ethnic interaction, industrialization, urbanization, and cultural change. Mr. Nash, Mr. Saxton and Staff

6BH. History of the American Peoples (Honors). A survey of the American Peoples from the advent of aboriginal society to the present, emphasizing racial and ethnic interaction, industrialization, urbanization, and cultural change. Mr. Monkkonen

7A-7B. Survey of the Political History of the U.S. Lecture and discussion. A survey of the history of the U.S. from the Revolutionary Era to the present. Emphasis will be given to political developments, and to the social, cultural and economic bases of American politics. The courses are designed for students in the social sciences and other departments who desire a thorough grounding in American political culture. This sequence (or two quarters of History 6) is strongly recommended for History majors planning to take more advanced courses in U.S. history.
Mr. Gatell, Mr. Howe, Mr. Saxton

8A. Latin America: Reform and Revolution. A general introduction to Latin America emphasizing those institutions from the past which have shaped the present and the struggle for change in the twentieth century. Movies and discussions complement the topical lectures. Mr. Burns and Staff

8B. Latin American Social History. The historical and contemporary perspective of the role of ordinary people in Latin American society. Each lecture-film session centers on a major Latin American movie illustrative of a theme in social history. May be taken independently of course 8A. Mr. Burns and Staff

9A-9D. Introduction to Asian Civilizations (1 course each):

9A. History of India. An introductory survey for beginning students of the major cultural, social, and political ideas, traditions, and institutions of Indic civilization. Mr. Wolpert

9B. History of China. Survey of the history of China: the evolution of characteristic Chinese institutions and modes of thought from antiquity to 1950; the problems of political change; China's response to the western impact in modern times. Mr. Farquhar

9C. History of Japan. A survey of Japanese history from earliest recorded times to the present with emphasis on the development of Japan as a cultural daughter of China. Attention will be given to the manner in which Chinese culture was Japanized and the aspects of Japanese civilization which became unique. The creation of the modern state in the last century and the impact of Western civilization on Japanese culture will be treated. Mr. Notehelfer

9D. History of the Near and Middle East. An introduction to the history of the Muslim world from the advent of Islam to the present day. Ms. Marsot

10A-10B. Introduction to the Civilizations of Africa. Explores African cultures on a thematic basis within a wider framework of political change over time. Intended for students with a general interest in Africa, but also strongly recommended for those intending to take upper division courses in African history.

M70. Survey of Mediaeval Greek Culture. (Same as Classics M70.) Classical roots and mediaeval manifestation of Byzantine civilization: political theory, Roman law, pagan critique of Christianity, literature, theology, and contribution to the Renaissance (including the discovery of America). Mr. Dyck

99. Introduction to Historical Practice. Prerequisite: restricted to freshmen and sophomores. This course will take the form of discussion classes of not more than 15 students meeting with a faculty member. They will explore how works of history are written by focusing on problems of historiography and method.

99H. Introduction to Historical Practice (Honors). Prerequisite: restricted to freshmen and sophomores. This course will take the form of discussion classes of not more than 15 students meeting with a faculty member. They will explore how works of history are written by focusing on problems of historiography and method. Mr. Burns, Mr. Posnansky

*Upper Division Courses

The prerequisite for all upper division courses is upper division standing or consent of instructor, unless otherwise stated. Certain graduate courses (the 200 series) are open to students with upper division standing and with consent of instructor. See the *UCLA Graduate Catalog* or check with the History Department undergraduate advisor (6248 Bunche Hall) for course descriptions.

CONTENTS

100. History and Historians. A study of historiography, including the intellectual processes by which history is written, the results of these processes, and the sources and development of history. Attention also to representative historians. Mr. Reill

101. Introduction to Historical Practice. Prerequisite: restricted to juniors and seniors. This course will take the form of discussion classes of not more than 15 students meeting with a faculty member. They will explore how works of history are written by focusing on problems of historiography and method.

101H. Introduction to Historical Practice (Honors). Prerequisite: restricted to juniors and seniors in the History Honors Program. This course will take the form of discussion classes of not more than 15 students meeting with a faculty member. They will focus on problems in the philosophy of history, historiography and historical method.

102. Explorations in Psychoanalysis and History. (Formerly numbered 104.) Prerequisite: consent of instructor. The course will study the art of psychological and historical interpretation, and will assess recent writings in the field of psycho-history. Limited to 35 students. Mr. Loewenberg, Mr. Wohl

M103. Historical Archaeology. (Same as Anthropology M115S.) A survey of the aims and methods of Historical Archaeology, as practiced on both sides of the Atlantic, with case studies drawn from North America, the Caribbean, Africa and Europe.
Mr. Posnansky

M104A-M104B. Ancient Egyptian Civilization. (Formerly numbered 104.) (Same as Ancient Near East M104A-M104B.) Course M104A is not prerequisite to M104B. The course will study the political and cultural institutions of ancient Egypt and the ideas upon which they were based. Discussion will proceed chronologically and cover Prehistory, the Old and Middle Kingdom in **M104A**. **M104B** will cover the New Kingdom and the Late Period until 332 B.C.
Mr. Callender

105. History of Ancient Mesopotamia and Syria. (Formerly numbered 105A-105B.) The political and cultural development of the "Fertile Crescent," including Palestine, from the Neolithic to the Achaemenid period. Mr. Buccellati

106A-106B-106C. Survey of the Middle East from 500 to the Present. (Formerly numbered 106A-106B and 108A-108B.) Background and circumstances of the rise of Islam, the creation of the Islamic Empire and their development. The rise of Dynastic Successor States and the Modern Nation States. Social, intellectual, political and economic development:

106A. 500 to 1300 Mr. Morony

106B. 1300 to 1700 Ms. Marsot

106C. 1700 to Present Ms. Keddie

107A-107B. Islamic Civilization. (Formerly numbered 135A-135B.):

107A. Pre-Modern Islam: origins of Islamic civilization, Muhammad and the Quran; development of Islamic doctrine, ritual, piety and law, sectarian Islam and mysticism. Mr. Morony

107B. Islam in the Modern World. Reform movements, legal issues, socio-political trends, movements of opposition. Ms. Keddie, Ms. Marsot

108A-108B. History of the Arabs. Course 108A is prerequisite to 108B. Political, social, intellectual and economic history of the Arabs from the 18th century to the present. Ms. Marsot

109A-109B. History of North Africa from the Moslem Conquest. (Formerly numbered 133A-133B.):

109A. To 1578 Mr. Morony

109B. From 1578 to the present Ms. Marsot

110A-110B. Iranian History. (Formerly numbered 110A-110B-110C.) Political, social and cultural history of Persia:

110A. Islamic Iran to 1800 Mr. Banani

110B. Iran from 1800 to the present Ms. Keddie

111A-111B. History of the Turks. (Formerly numbered 139A-139B-139C.) A survey of the society, government, and political history of the Turks from earliest times to the present:

111A. Origins to 1808. Turkish origins, early Central Asian and Middle Eastern states. The Rise and Fall of the Ottoman Empire. Mr. Shaw

111B. 1808 to the present. Modernization of the Ottoman Empire, 1808-1923. The Turkish Republic. The Turks in the world. Mr. Shaw

112A-112B-112C. Armenian History. (Formerly numbered 131A-131B-131C.) The Armenian Experience from ancient to modern times:

112A. From epic origins to the Bagratid kingdom, Second millenium B.C. to 1071 A.D. The Urartuans; the national dynasties; relations with the Persian, Roman, Byzantine, and Arab empires; the socioeconomic structure; the impact of Christianity.
Mr. Hovannisian

112B. From the Crusades to the Armenian Question, 11th-19th centuries. The Cilician kingdom; Mongol and Mamluk conquests; the Armenian experience under Seljuk, Ottoman, and Safavid rule; the union of Eastern Armenia to the Russian empire; the Armenian intellectual and political revival.
Mr. Hovannisian

112C. Modern and Contemporary times. The Armenian Question since 1876; from reform movements to resistance; the massacres of 1894-1896; the Turkish Armenian and the Russian Armenian provinces; the Armenian Holocaust, 1915-1923; the Armenian republic, Soviet Armenia, and the Armenian communities. Mr. Hovannisian

C112D. Introduction to Armenian Oral History. (Formerly numbered 131D.) The uses and techniques of Armenian oral history; the pre-interview, the interview, and post-interview procedures; methods of compilation and evaluation. The course includes field assignments and interviews. May be concurrently scheduled with course C212. Mr. Hovannisian

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

113. The Caucasus Under Russian and Soviet Rule. (Formerly numbered 132.) A survey of the political, economic, social, and cultural history of the Caucasus region since 1801. The Georgian, Armenian, and Azerbaijani response to Russian and Soviet rule; the nationality question and the Soviet national republics. Mr. Hovannisian

115A-115B-115C. History of the Ancient Mediterranean World. (Formerly numbered 111A-111B-111C.):

115A. A survey of the history of the ancient East from earliest times to the foundation of the Persian Empire. Mr. Mellor

115B. The history and institutions of the Greeks from their arrival to the death of Alexander. Mr. Chambers, Mr. Mellor

115C. The history and institutions of Rome from the founding of the city to the death of Constantine. Mr. Chambers, Mr. Mellor

116A-116B. History of Ancient Greece. (Formerly numbered 112A-112B.):

116A. The rise of the Greek city-state. The emphasis will be on the archaic period and the early classical age, down through the Persian Wars. Mr. Chambers

116B. The classical period. The clash between Athens and Sparta, the consequent rise of Macedonia and the aftermath of Alexander the Great. Mr. Chambers

117A-117B. History of Rome. (Formerly numbered 113A-113B.):

117A. To the death of Caesar. Emphasis will be placed on the development of imperialism and on the constitutional and social struggles of the late republic. Mr. Mellor

117B. From the death of Caesar to the time of Constantine. The early empire will be treated in more detail supplemented by a survey of the social and economic changes in the third century. Mr. Mellor

118. Introduction to Roman Law. (Formerly numbered 115.) This course will provide a survey of the public (constitutional), criminal and private law of the Romans. Some subjects treated will be the social context of Roman law, the historical evolution of Roman law, mechanisms and procedures by which the law was administered, and the content of private law. Mr. Mellor

119. The Christian Church. (Formerly numbered 118A.) Constitutional, political, and economic history of the Church: Christianization of the Roman Empire and the Germanic kingdoms; governance and institutions of the Church; relations between Church and monarchy; the high tide of papalism; crises of authority on the eve of the Reformation. Mr. Benson

120. The Christian Religion. (Formerly numbered 118B.) The religious experience of Christians—conversion, doctrine, belief, heresy, spirituality, worship, liturgy, and art—from the founding of the Church till the eve of the Reformation. Examines the religious life of lay Christians as well as that of the Church's institutional, intellectual, and spiritual leaders. Mr. Benson

121A-121B. Medieval Europe. Prerequisite: Western Civilization is recommended. A basic introduction to Western Europe from Latin antiquity to the age of discovery, with emphasis on the medieval use of Greco-Roman antiquity, the history of the manuscript book and the growth of literacy:

121A. 400 to 1000 Mr. Rouse

121B. 1000 to 1500 Mr. Rouse

121C. Medieval Civilization: The Mediterranean Heartlands. A survey of Western Mediterranean Europe, social-economic-cultural within a political framework, including its relation with other cultures. Mr. R.I. Burns, S.J.

121D. Medieval People: The Thirteenth Century. Movements and creative contributions to Western culture in this central century of the Middle Ages, as seen in its representative men and works. Mr. R.I. Burns, S.J.

M122A-M122B. Byzantine Civilization:

M122A. (Same as Classics M170A.) Emphasis is laid on Byzantine Theology. Mr. Dyck

M122B. (Same as Classics M170B.) Literature, relations with Rome, and the Renaissance. Mr. Dyck

123A-123B. Byzantine History. The course stresses the political, socioeconomic, religious, and cultural continuity in the millennial history of Byzantium. It begins with the reforms of Diocletian and includes such topics as Byzantium's relations with Latin Europe, Slavs, Sassanids, Arabs, and Turks. Mr. Vryonis

125A-125E. History of Modern Europe. (Formerly numbered 125A-125G.):

125A. The Renaissance: Power and culture in the Italian City-States. Mr. Martines

125B. The Reformation: Church and religion in early 16th century. Revolutionary tendencies in German society. The Peasant Uprising. Theology and political thought of Erasmus, Luther, Zwingli, Calvin, and the Anabaptists. The new churches. The effects of the Reformation on society. Mr. Clasen

125C. Absolutism and Enlightenment: Europe under the old regime. State, society, and culture in Europe from the mid-17th century until the eve of the French Revolution. Mr. Hoxie

125D. Europe, 1789-1900. The French Revolution and Napoleon. The Industrial Revolution. The uprisings of 1848. The unification of Germany and Italy. Industrialization and Imperialism. The rise of Socialism. Population growth and changes in social structure. Mr. Reill, Mr. Silverman

125E. Europe in the 20th Century. International rivalries. The First World War and its impact on thought and society. Fascism and Communism. World War II. European recovery and integration. Mr. Loewenberg, Mr. Wohl

126A-126E. Cultural and Intellectual History of Modern Europe. (Formerly numbered 142A-142E.) Climates of taste and climates of opinion. Educational, moral and religious attitudes; the art, thought and manners of the time in a historical context. Quarter courses are oriented approximately as follows:

126A. 16th Century Mr. Hoxie, Mr. Westman

126B. 17th Century Mr. Hoxie, Mr. Funkenstein

126C. 18th Century Mr. Hoxie, Mr. Reill

126D. 19th Century Mr. Loewenberg, Mr. Weber

126E. 20th Century Mr. Loewenberg, Mr. Weber, Mr. Wohl

127A-127B. War and Diplomacy in Europe. (Formerly numbered 147A-147B-147C.):

127A. 1650-1815. Survey of military and diplomatic history, seen in relation to social and economic developments and the growth of the state. Mr. Symcox

127B. 1815-1945. The balance of power; the growth of the nation state; imperial and colonial rivalries; the two world wars. Mr. Symcox

128A-128D. History of Modern France. (Formerly numbered 128A-128E.):

128A. France 1450-1620. Institutions of the French monarchy and territorial formation of France in the fifteenth century. French humanism. Catholic and Protestant Reformations in sixteenth-century France. French Wars of Religion. Mr. Lossky

128B. France, 1620-1770. Political and intellectual history of France, principally in the seventeenth century, with special emphasis on the role of Richelieu and of Louis XIV. Mr. Lossky

128C. A Time of Revolutions, 1770-1871. Social and political history of three kingdoms, three republics and two empires. Mr. Weber

128D. The Making of a Modern France, 1871 to the present. From oligarchy to democratic bureaucracy in two wars and three republics. Mr. Weber

129A-129C. History of Modern Germany and Austria. (Formerly numbered 129A-129D.):

129A. 1500 to 1648: The political structure of empire and territories, the economy, social classes, daily life, book publishing and universities, the Reformation and Counter Reformation, the Thirty Years' War, military entrepreneurship, population losses, the Peace of Westfalia. Mr. Clasen

129B. 1648 to 1648: Survey of social, economic, cultural and political history focusing upon the following topics: the rise of absolutist and bureaucratic government, Enlightenment and reform, the emergence of Austro-Prussian dualism, the transformation of the German economy, the impact of the French Revolution and the German reform movement, Restoration and Metternichian reaction, the rise of Romanticism and the causes and failure of the Revolutions of 1848. Mr. Reill

129C. 1648 to present: Revolutions of 1648, Prussian Constitutional Struggle, German Unification, the Bismarckian and Wilhelmine Eras in Germany and the Ausgleich in Austria, Liberalism, industrialism, anti-Semitism, Social Democracy, the World Wars, revolutions, republics, fascism and Nazism, Occupation, and the Austrian, German Federal and German Democratic Republics. Mr. Loewenberg

131A-131D. History of Russia. (Formerly numbered 146A-146D.):

131A. From the Origins to the Rise of Muscovy: Kievan Russia and its Culture, Appanage Principalities and Towns; the Mongol Invasion; the Unification of the Russian State by Muscovy, Autocracy and its Servitors; Serfdom. Mr. Krekić, Mr. Lossky

131B. Imperial Russia: Westernization of State and Society; Centralization at Home and Expansion Abroad; the Peasant Problem; Beginnings of Industrialization; Political Reforms; Movements of Political and Social Protest. The Revolution of 1905. Mr. Rogger

131C. Revolutionary Russia and the Soviet Union: Relations between State and Society; Peasantry and Working Class; Russia in World War I; the Revolutions of 1917; Consolidation of the Bolshevik Regime; Succession Crisis and Ascendancy of Stalin, Collectivization and Industrialization; Foreign Policy and World War II; Death of Stalin and De-Stalinization. Mr. Rogger

131D. Intellectual History: Social Thought and Movements in Modern Russia, late 18th to early 20th centuries. Mr. Rogger

132A-132B. History of Italy. (Formerly numbered 146A-148B.):

132A. 1530-1815. Survey of social, economic, political and cultural history covering the eclipse of the Italian economy and the city-state, the rise of absolutist governments. Enlightenment reforms and the origins of the Risorgimento. Mr. Symcox

132B. 1861 to the Present. Political, economic, social, diplomatic and ideological developments. Mr. Wohl

133A-133B. The Social History of Spain and Portugal. (Formerly numbered 148C-148D.):

133A. The Age of Silver in Spain and Portugal, 1479-1789. This course will deal with the development of popular history in the Iberian Peninsula. Emphasis will be given to peasants and urban history, gold routes, slave trade, history of women, and the development of different types of collective violence. Ms. Kaplan

133B. Rebellion and Revolution in Modern Spain and Portugal, 1789 to the Present. Spain's position in Europe and its potentialities for social change will be discussed through investigations of urban history, agrarian social structure, history of women, problems of slow industrial development, imperialism, anarchism, and labor history. Ms. Kaplan

134A. Southeastern Europe, 500-1500. (Formerly numbered 149A.) A political, economic, and cultural survey of the independent Balkan states in the Middle Ages. Mr. Krekić

134B. Southeastern Europe, 1500-1918. (Formerly numbered 149B-149C.) The Balkans under Ottoman rule, movements of national liberation and the formation of nation states. Mr. Krekić

135A-135B. Marxist Theory and History. (Formerly numbered 161A-161B.) Prerequisite: course 135A is generally prerequisite to 135B or consent of instructor. Introduction to Marxist philosophy and method; conception of historical stages; competing Marxist analyses of transition from feudalism to capitalist economy via reading *Capital;* theory of politics and state in relationship to historical interpretation of 19th-century European revolutions; capitalist crises. Mr. Brenner, Ms. Kaplan

136A-136Z. Topics in European History. (Formerly numbered 160A-160Z.) The individual courses in this series aim to provide students with an integrated introduction to important aspects of European history by focusing on a specific topic within a broad framework:

136A. Social Movements. Ms. Kaplan

136B. Peasants and Agrarian Society. Mr. Brenner

136C. Urban Society. Mr. Symcox

136F. The Family: The social history of the family in western Europe since the middle ages. Household and family organization of peasants, artisans and aristocrats; kinship, child-rearing, parental authority, marriage and inheritance systems; attitudes toward love, sex, and children.

136G. Psycho-history. Mr. Loewenberg, Mr. Wohl

136I. Special Topics.

136J. Women. Ms. Kaplan

137A-137B. Themes and Problems in English History Since 1500. (Formerly numbered 150A-150B.) Prerequisite: upper division standing or consent of instructor. A general survey of English history since c. 1500 with analyses of particular social, political, religious and economic questions. The division between courses A and B occurs at c. 1714.

138A-138B. Medieval England. (Formerly numbered 151A-151B.):

138A. Anglo-Saxon England and the Norman Conquest, 900-1215; the nature of the society that emerged from the Viking invasions; the conquest and colonization by the Normans; the principles of lordship by which they ruled, to Magna Carta, 1215. Mr. Rouse

138B. England in the High Middle Ages: Magna Carta to 1400. The emphasis will be on the social and economic developments that underlay constitutional change, peasant revolt, the Black Death and the Hundred Years' War. Mr. Rouse

139. Renaissance England. (Formerly numbered 150C-150D.) Culture and Society. Emphasis on literary culture (Elizabethans, Jacobeans, Carolines), but with readings and lectures on different aspects of political and economic life as required for a serious understanding of the culture. Mr. Martines

140A-140B. Early Modern England, 1450-1700. (Formerly numbered 153A-153B.):

140A. The development of capitalism in England, especially the countryside, 1450-1700; the transformation of class relations; the emergence of political conflicts; state centralization and military aristocracy, Crown versus Parliament, the English Revolution. Mr. Brenner

140B. Analysis of the transformation of religious and political ideology in relationship to socioeconomic and political conflicts. The English Reformation and the development of the State; Protestantism and political opposition; religious radicalism and the English Revolution. (Covers same period as course 140A from different angle, so it is preferable to take courses 140A-140B in sequence.) Mr. Brenner

141A-141B. Modern England. (Formerly numbered 154A-154B.) Analyses of the English economy, society and polity since 1688, focusing upon the dynamics of both stability and change:

141A. 18th and 19th centuries, 1688-1832.

141B. 19th and 20th centuries, 1832 to World War II and its aftermath.

142A-142B. The British Empire Since 1783. (Formerly numbered 158A-158B.) The political and economic development of the British Empire, including the evolution of colonial nationalism, the development of the commonwealth idea, and changes in British colonial policy. Mr. Galbraith, Mr. SarDesai

143. History of Canada. (Formerly numbered 159.) A survey of the growth of Canada into a modern state from its beginnings under the French and British colonial empires. Mr. Galbraith

144. History of Australasia. The history of Australia and New Zealand from the European settlement, with emphasis on the interrelationships between the settlers and the aborigines; comparisons and contrasts between the Australian and New Zealand experience. Mr. Galbraith

145A. Colonial America, 1600-1763. (Formerly numbered 171A.) An examination of the molding of an American society in English North America from 1600 to 1763. Emphasis is given to the interaction of three converging cultures: Western European, West African, and American Indian. Mr. Nash

145B. Revolutionary America, 1760-1800. (Formerly numbered 171B.) An inquiry into the origins and consequences of the American Revolution, the nature of the revolutionary process, the creation of a constitutional national government, and the development of a capitalist economy. Mr. Nash

146A-146B. The United States: 1800-1850. (Formerly numbered 172A-172B.):

146A. Jeffersonian America. Jeffersonian Republican ascendancy and the Era of Good Feelings, 1800-1828; disintegration of the Federalist opposition; the testing of American nationality in the second war with Britain; beginnings of the transportation and industrial revolutions; restructuring of politics in an increasingly egalitarian age. Mr. Gatell, Mr. Howe

146B. Jacksonian America and Beyond. The "Jacksonian Revolution" and its aftermath, 1829-1850; the problem of national power versus state sovereignty; problems of rapid social change through industrialization and urbanization; reform impulse; antislavery movements; territorial expansion as focus for sectional rivalry. Mr. Gatell, Mr. Howe

147A. The United States: Civil War and Reconstruction. (Formerly numbered 173A.) The topics studied will include: the rise of sectionalism, the antislavery crusade; the formation of the Confederate States; the war years; political and social reconstruction.

147B. The United States, 1875-1900. (Formerly numbered 173B.) American political, social, and institutional history in a period of great change. Emphasis on the altering concepts of the role of government and the responses to that alteration. Mr. Saxton

148A-148B. The United States: The Twentieth Century. (Formerly numbered 174A-174B.) The political, economic, intellectual, and cultural aspects of American democracy in the twentieth century. Mr. Cohen, Mr. Weiss

148C. The United States Since 1945. (Formerly numbered 174C.) A history of the political, social and diplomatic developments that have shaped the United States since 1945. Mr. Dallek, Mr. Weiss

149A-149B. American Economic History. (Formerly numbered 175A-175B.):

149A. Examines the roles of economic forces, institutions, individuals and groups in promoting or impeding effective change in the American economy, 1790-1910. During this period the technical skeleton of the modern industrial structure was formed. The course explains why and how the American economy evolved into a dual economy, characterized by a center of firms large in size and influence, and a periphery of smaller firms. Ms. Yeager

149B. Examines the dynamics of change in the dual economy, focusing in greater detail upon interrelationships between macro and micro developments in the economy and upon the growing interdependency between the U.S. and the world economy, 1910 to the present Ms. Yeager

150A-150B. Intellectual History of the United States. (Formerly numbered 177A-177B.) The principal ideas about humanity and God, nature and society, which have been at work in American history. Includes the sources of these ideas, their connections with one another, their relationship to American life, and their expression in great documents of American thought. Mr. Howe

150C. History of Religion in the United States. (Formerly numbered 177C.) Consideration of the religious dimension of people's experience in the United States. A number of religious traditions which have been important in this country will be examined, and attention devoted to relating developments in religion to other aspects of American culture. Mr. Howe

151A-151B. Constitutional History of the United States. (Formerly numbered 179A-179B.):

151A. A study of the origins and development of constitutionalism in the United States. Particular emphasis on the framing of the Federal Constitution in 1787, and its subsequent interpretation. Topics of special emphasis include: judicial review, significance of the Marshall Court, and the effects of slavery and the Civil War on the Constitution. Mr. Gatell

151B. A study of constitutionalism since the Civil War. Particular emphasis on the development of the Supreme Court, the due process revolution, the Court and political questions, and the fact of judicial supremacy within self-prescribed limits.

152A-152B. American Diplomatic History. (Formerly numbered 178A-178B.):

152A. The establishment of an independent foreign policy, the territorial expansion of the United States, and the emergence of a world power. Mr. Dallek

152B. The role of the United States in the 20th-century world. Mr. Dallek

153. The United States and the Philippines. (Formerly numbered 183.) An examination of the interrelationships of immigration and of colonialism and independence between the United States and the Philippines focused mainly within the time period 1898 to the present. (Survey level familiarity with Southeast Asian or United States history, or both, is recommended but not a prerequisite.) Mr. Saxton

154A-154B. United States Urban History. (Formerly numbered 189A-189B.):

154A. The pre- and early industrial city. Focuses on the social, spatial and economic development of U.S. cities. Special attention will be paid to the social consequences of the pre- and early industrial economic relationships. Mr. Monkkonen

154B. The industrial and post-industrial city. (Course 154A is *not* a prerequisite.) Focuses on the mature urban network, with concentration on social, spatial, and economic interaction. The issues of mass society, neighborhood, crime, poverty, ethnicity and racial discrimination will be covered. Mr. Monkkonen

154C-154D. History of American Architecture and Urban Planning: 1600 to the Present. (Formerly numbered 180J-180K.) Aspects of American cultural history as explored through architecture, urban planning and the allied arts. The focus is on the development of an architectural consciousness in America, ways in which the built environment has affected its users and observers, and the extent to which it has reflected their values and ways of living. **154C** covers from 1600 to 1890; **154D** covers from 1890 to the present. Mr. Hines

155A-155B. American and European Working Class Movements. (Formerly numbered 185A-185B.) Examines major episodes in the institutional, economic, and cultural development of the American working class from colonial times to the present, emphasizing both organized and unorganized labor in a comparative context. A.F. of L., rise of industrial unionism, and labor politics are also discussed. Mr. Laslett

156A-156B. American Social History, 1750-1960. (Formerly numbered 180A-180B.) A historical analysis of American society and culture, with emphasis on the family, religious values, Afro-American life, women's work, urbanization and industrialization, immigration and nativism, and movements for social reform. **156A** will cover the period 1750-1860; **156B**, 1860-1960. Mr. Coben

156C-156D-156E. Social History of American Women. (Formerly numbered 171C-171D-171E.) A survey of the major demographic, economic, social and intellectual factors shaping the lives of women in families, at work, and in larger social collectivities. Class, regional, racial, and ethnic comparisons will be emphasized:

156C. Colonial and Early National — 1600-1820. Ms. Sklar

156D. Victorian and Industrial — 1800-1920. Ms. Sklar

156E. 20th Century — 1900-1975. Ms. Sklar

157A-157B-157C. North American Indian History. (Formerly numbered 180F-180G-180H.) History of Native Americans from contact to the present. Emphasizes the ethnohistorical dimensions of culture change, Indian political processes and the continuity of Native American cultures. Focuses on selected Indian peoples in each period:

157A. Contact to 1760. Mr. Morrison

157B. 1760-1860. Mr. Morrison

157C. 1860 to Present. Mr. Morrison

158A. Comparative Slavery Systems. (Formerly numbered 176C.) An examination of the slavery experience in various New World slave societies. The course focuses on outlining the similarities and the differences among the legal status, treatment and slave cultures of North American, Caribbean and Latin American Slave Societies.

158B-158C. Introduction to Afro-American History. (Formerly numbered 176A-176B.) A survey of the Afro-American experience. These courses focus on the three great transitions of Afro-American life: the transition from Africa to New World slavery, the transition from slavery to freedom, the transition from rural to urban milieus. Mr. Hill

158D. Afro-American Urban History. (Formerly numbered 176D.) An examination of Afro-American urban life prior to 1945. The course focuses on the transformation from slavery to freedom and the shift from southern to northern areas. It looks closely at the forces which both propelled Afro-Americans to the cities and which also inhibited their adjustment to them.

158E. Afro-American Nationalism in the First Half of the Twentieth Century. (Formerly numbered 176E.) A critical examination of the Afro-American search in the first half of the twentieth century for national/group cohesion through collectively built institutions, associations, organized protest movements, and ideological self-definition. Mr. Hill

159A-159B. History of the Chicano Peoples. (Formerly numbered 186A-186B.) The character, values, economy, social structure, politics, culture, and intellectual heritage of the Mexican-American peoples as related to the history of the United States and Mexico, with emphasis on the Southwest. Mr. Gómez-Quiñones

160. The Immigrant in America. (Formerly numbered 182.) A historical analysis of the social and economic causes and effects of immigration, particularly after the 1880's, emphasizing the problems of acculturation and adjustment. The restrictionists and the implications of immigration policy on U.S. foreign policy will be stressed. Mr. Laslett

161. Asians in American History. (Formerly numbered 192.) A study of the politically troubling question of entry into the United States of immigrants ineligible for citizenship, and their citizen children in American history.

162. The American West. (Formerly numbered 181.) A study of the West as frontier and as region, in transit from the Atlantic seaboard to the Pacific, and from the 17th century to the present. Mr. Hundley

163. History of California. (Formerly numbered 188.) The economic, social, intellectual, and political development of California from the earliest times to the present. Mr. Hundley

165A-165B. Colonial Latin America. (Formerly numbered 168A-168B.) Studies in the general development of Latin America prior to 1825 with emphasis on social history. Mr. Lockhart

165C. Indians of Colonial Mexico. A survey of the social and cultural history of the Indians of Mexico, especially central Mexico, from the time of the European conquest until Mexican independence, emphasizing an internal view of Indian groups and patterns on the basis of records produced by the Indians themselves. Mr. Lockhart

166. Latin America in the 19th Century. (Formerly numbered 162A.) An intensive analysis of the economic, social, and political problems of the Latin American nations from their independence to around 1910. Mr. Burns, Mr. Burr

167A-167B-167C. Latin America in the 20th Century. (Formerly numbered 162B.) Experiments in national development are analyzed for "visible" and "invisible" historical problems and processes. Timing of primary and secondary social changes are related to economic, political, cultural and geographic context. Successive country case studies each focus on world pressures and interplay of centralized-decentralized power struggles (emphasized in course 167A), the role of personalist leaders (emphasized in course 167B) and definition of the national polity (emphasized in course 167C). Mexico is treated in course 171:

167A. Haiti, Uruguay, Costa Rica, Guatemala, Cuba, Chile. Mr. Wilkie

167B. Bolivia, Dominican Republic, Nicaragua, Argentina, Paraguay, Venezuela. Mr. Wilkie

167C. Panama, Colombia, Ecuador, Peru, Honduras, El Salvador, Brazil. Mr. Wilkie

168. History of Latin American International Relations. (Formerly numbered 169.) Emphasis is given to the developing interests of the Latin American nations in their relationship with one another and with other areas of the world beginning with 19th-century independence. Mr. Burr

169. Latin American Elitelore. (Formerly numbered 164.) Prerequisite: course 167A or 167B or 171. Study focuses on Elitelore (defined as oral or noninstitutionalized knowledge involving the leaders' conceptual and perceptual life history views) in contrast to Folklore (the followers' traditional or popular views). Elitelore genres include oral history, literature, and cinema. Mr. Wilkie

170. Latin American Cultural History. (Formerly numbered 162C.) Intellectual, artistic, and folk expressions of the Latin American spirit and character are examined in readings and lectures with emphasis on the unique contribution of Latin Americans to develop self-interpretation. Music, films, and slides supplement discussions. Mr. Burns, Mr. Wilkie

171. The Mexican Revolution Since 1910. (Formerly numbered 166.) The concept of "Permanent Crisis" is examined to describe and explain the structure of "Permanent" under "one-party democracy." Mr. Wilkie

173. Modern Brazil. (Formerly numbered 163B.) Lectures treat selected topics in the political, economic, social, and cultural development of Brazil. Topical emphasis falls on modernization and the struggle for change, 1850 to the present. Discussions, films, slides, and guest speakers supplement and complement the lectures. Mr. Burns

174. Brazilian Intellectual History. (Formerly numbered 163C.) The general intellectual development of Brazil with emphasis on those introspective movements in which the Brazilians attempted to interpret themselves, their nation, and their civilization. Mr. Burns

175A-175Z. Topics in African History. (Formerly numbered 125A-125Z.) Prerequisite: one previous course in African history at UCLA or consent of instructor. Examines specific topics which have a continental application rather than proceeding on a strictly chronological or regional basis:

175A. Prehistoric Africa — Technological and Cultural Traditions. A survey of the nondocumentary sources of early African history with particular reference to technological, economic, and cultural developments from the origins of Man until the colonial period. Mr. Posnansky

175B. Africa and the Slave Trade. Focuses on the social, economic, political, and cultural impact of the slave trade on African society. Emphasizes the Atlantic trade, without neglecting those of the Ancient Mediterranean, Islamic, and Indian Ocean worlds. Abolition and the African diaspora are also explored. Mr. Alpers, Mr. Obichere

175C. Africa in the Age of Imperialism. Topics of investigation include the penetration of pre-capitalist social formations by capital, the emergence of classes, the nature of the colonial and post-colonial state, and the struggle for national liberation in a global context. Mr. Alpers

176A-176B. History of West Africa. (Formerly numbered 126A-126B.):

176A. West Africa from earliest times to 1800.

176B. West Africa since 1800. Mr. Obichere

177. Ethiopia and the Horn of Africa. (Formerly numbered 129.) Surveys the history of Ethiopia, Somalia, and Sudan from earliest times to the Twentieth Century. Mr. Alpers, Mr. Ehret

178A-178B. History of East and Central Africa. (Formerly numbered 127A-127B.):

178A. Examines the cultural diversity of East and Central African societies, the growth of more complex political systems, and the impact of international trade to the later nineteenth century. Mr. Alpers, Mr. Ehret, Mr. Posnansky

178B. Concentrates on the economic, social, and political history of Uganda, Kenya, Tanzania, Zambia, Malawi, Zimbabwe, and Mozambique since the imposition of colonial rule. The themes of underdevelopment and protest will provide a focus for the course. Mr. Alpers

179A-179B. History of Southern Africa. (Formerly numbered 128A-128B.):

179A. History of Southern Africa from origins to 1870. The origins of the South African peoples and their interactions to 1870. Attention will be given to social and economic as well as political aspects. Mr. Ehret

179B. History of Southern Africa since 1870. The interactions between the inhabitants of Southern Africa since 1870. Attention will be given to social and economic as well as political aspects. Mr. Galbraith

182A-182B-182C. History of China. (Formerly numbered 191A-191B-191C.) Prerequisite: course 9B or 182A or equivalent readings are prerequisite to 182B:

182A. Origins to 900. Bronze age and iron age China; the classical thinkers; the birth of the imperial state and the development of an aristocratic society.

182B. 900-1500. The end of aristocratic rule; the mature imperial state and bureaucratic government; the foreign presence; trade, agriculture, and the growth of cities.

182C. 1500-1800. The background to modern China; landholding and agriculture; nascent capitalism; peasant movements; Neo-Confucianism and the Manchu state. Mr. Farquhar, Mr. Huang

183. Modern China, 1840-1920. (Formerly numbered 191D.) From the Opium War to the May Fourth Movement, Imperialism, semi-colonial China, and popular movements; some attention to contrasts between established and revolutionary interpretations. Mr. Huang

184. The Chinese Revolution. (Formerly numbered 191E.) From the founding of the Chinese Communist Party to the present. Special emphasis on: the evolution of Mao's thought, the history of the Communist movement, the conditions in the Chinese countryside, the revolutionary developments under the People's Republic. Mr. Huang

185. The Mongols in East Asian History. (Formerly numbered 191F.) Prerequisite: course 9B or 182B or 182C. Emphasis on the period 1200-1900. Special attention will be paid to nomadic pastoralism, Mongolian society, the first empire, and relations with China and Tibet. Mr. Farquhar

186. Diplomatic History of the Far East. (Formerly numbered 193.) The role of the Far Eastern states in the international community beginning with the establishment of the Treaty System in China and the opening of Japan to intercourse with the rest of the world in 1854.

187A-187B-187C. Japanese History. (Formerly numbered 195A-195B-195C.) The political, economic, and cultural development of Japan, from prehistory to the present:

187A. Ancient: Prehistory to 1600. Mr. Notehelfer

187B. Early Modern: 1600-1868. Mr. Notehelfer

187C. Modern: 1868 to present. Mr. Notehelfer

188A. Early History of India. (Formerly numbered 196A.) Introduction to the civilization and institutions of India. A survey of the history and culture of the South Asian subcontinent from the earliest times to the founding of the Mughal Empire. Mr. Wolpert

188B. Recent History of India and Pakistan. (Formerly numbered 196B.) History of the South Asian subcontinent from the founding of the Mughal Empire, through the eras of European expansion, British rule, and the nationalist movement, to the present. Mr. Wolpert

189A-189B. History of Southeast Asia. (Formerly numbered 196C-196D.):

189A. Early History of Southeast Asia. A political and cultural history of the peoples of Southeast Asia from the earliest times to about 1815. Mr. SarDesai

189B. Southeast Asia since 1815. History of modern Southeast Asia with emphasis on expansion of European influence in the political and economic spheres, growth of nationalism and the process of decolonization. Mr. SarDesai

M191A-M191B. Survey of Jewish History. (Formerly numbered 138A-138B.) (Same as Jewish Studies M191A-M191B.) A survey of social, political and religious developments:

M191A. From biblical times to the end of the Middle Ages. Mr. Funkenstein

M191B. From the end of the Middle Ages to the present. Mr. Funkenstein

191C-191D. Focal Themes in Jewish History. (Formerly numbered 138C-138D.) The course will treat in depth one major theme in Jewish history (such as the history of Messianic Movements, the structure of the Jewish Communities) through the ages. Mr. Funkenstein

191E-191F. The Third Reich and the Jews:

191E. The Rise of Nazi totalitarianism; anti-Semitic theories, movements, and practices, and their impact on German Jewry.

191F. The Second World War, Nazi policies in the occupied territories, expulsion and extermination, Jewish resistance, and the fate of the Jewish communities of Eastern Europe.

192A-192B. Jewish Intellectual History. (Formerly numbered 137A-137B.) **192A** will cover the medieval period; **192B** the modern period. This course studies the development of Jewish self-understanding in relation to the intellectual climate of the environment, as expressed in the halacha, in philosophy, and in cabbalism. Mr. Funkenstein

193A. History of Religions: Myth. (Formerly numbered 124D.) The nature and function of myth in the history of religion and culture. Examples are selected from nonliterate as well as from other Asian and European traditions. Mr. Bolle

193B. Religions of South and Southeast Asia. (Formerly numbered 124E-124F.) Prerequisite: course 4 or 193A. Topics vary from year to year: Religion of the Veda; Brahmanism; (later) Hinduism. See *Schedule of Classes* for specifics. Mr. Bolle

193C. Religions of South and Southeast Asia. (Formerly numbered 124B-124G.) Prerequisite: course 4 or 193A. Topics vary from year to year: Buddhism in India; the Religions of Java and Bali; the Nonliterate Traditions of India and Southeast Asia. See *Schedule of Classes* for specifics. Courses 193B and 193C may be taken independently for credit. Mr. Bolle

193D. Religions of the Ancient Near East. (Formerly numbered 124C.) The main polytheistic systems of the ancient Near East, with emphasis on Mesopotamia and Syria, and with reference to the religion of ancient Israel: varying concepts of divinity, hierarchies of gods, prayer and cult, magics, wisdom and moral conduct. Mr. Buccellati

193E. Special Topics in the History of Religions. Topics will be announced in the *Schedule of Classes* and selected from the following: Ancient Germanic Cults; Renaissance Mysticism; Mystics of the Low Countries; Goddesses; Religion in a Secular Age. Mr. Bolle

195A-195D. History of Science. (Formerly numbered 106A-106D.) Science and scientific thought in relationship to society:

195A. Medieval and Renaissance Science. Prerequisite: course 3 or consent of instructor. Continuity and discontinuity in scientific traditions from the 12th to the 17th century; interrelationships between theology, scientific thought, and social conditions. Theories of force, motion and space stressed; some attention to the occult sciences. Mr. Funkenstein, Mr. Westman

195B. Perspectives on the Early Modern Physical Sciences. Prerequisite: course 3 or consent of instructor. A detailed view of selected topics in the development of the physical sciences 1600-1750, with a focus on explanations of historical change in science. Normally, four topics will be studied in order to cover a broad range of scientific, philosophical, and social issues.

195C. The Classical Physical Sciences: 18th and 19th Centuries. Prerequisite: course 3B or consent of instructor. Studies intensively several topics in the development of classical physical science from Newton's Mechanics to Maxwell's Electromagnetic Theory, with special attention to demands of the Enlightenment, the Industrial Revolution, and 19th-century professionalized science. Mr. Wise

195D. Physical Sciences in the 20th Century. Prerequisite: course 3B or consent of instructor. Provides a nonmathematical but nevertheless detailed look at selected physical sciences and scientific issues: for example, the birth of quantum mechanics and relativity; stellar evolution and cosmological theories; nuclear physics, nuclear weapons, and nuclear policy; and the changing character of industrialized science. Mr. Wise

M195F-M195G. History of Biological Sciences. (Formerly numbered M106E-M106F.) (Same as Medical History M108A-M108B.) Three hours per week in Fall and Winter Quarters. Prerequisite: upper division standing:

M195F. Biological sciences from ancient times to the early nineteenth century. Mr. Frank

M195G. Biological sciences from the early nineteenth century to the mid-twentieth century. Mr. Frank

197. Undergraduate Seminars. Two courses only may be taken for credit. Limited to 15 students meeting with a faculty member. Seminars will be organized on a topics basis with readings, discussions, papers. Signups and descriptions of offerings each quarter at the History Department undergraduate advisor's office (6248 Bunche Hall). When concurrently scheduled with courses 201A-201U or 203, undergraduates must obtain instructor's consent to enroll.

199. Special Studies in History. Prerequisite: consent of instructor. Two courses only may be taken for credit. An intensive directed research program. Enroll in department.

199HA-199HB-199HC. Directed Studies for Honors. A three-quarter sequence restricted to History honors majors. "IP" grading:

199HA. Seminar meetings to help students define their research topics and explore problems of historical research. Extensive reading and research in the field of the student's proposed honors thesis.

199HB. Continued reading and research culminating in a draft of the student's honors thesis.

199HC. Revisions of the draft and preparation of polished honors thesis; oral examination on thesis.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Honors Collegium

(Office: 1331 Murphy Hall)

The Honors Collegium is a unique and innovative educational alternative designed primarily for students in their freshman and sophomore years. Please refer to the section on the "College of Letters and Science" for a complete description of this program.

Humanities

(Office: 334D Royce Hall)

Arnold J. Band, Ph.D., *Professor of Hebrew and Comparative Literature.*
Pier-Maria Pasinetti, Ph.D., *Professor of Italian and Comparative Literature.*
Ross P. Shideler, Ph.D., *Professor of Scandinavian Languages and Comparative Literature (Chair).*
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.*
Albert R. Braunmuller, Ph.D., *Associate Professor of English.*
Albert D. Hutter, Ph.D., *Associate Professor of English.*

The following courses are made up of selected masterpieces of world literature. They are recommended to satisfy the humanities breadth requirements in the College of Letters and Science.

Lower Division Courses

1A. World Literature: Antiquity to Early Middle Ages. Lecture, three hours; discussion, one hour. Prerequisite: satisfaction of Subject A requirement. A study of major texts in world literature with an emphasis on Western civilization. Texts studied include major works and authors such as the *Iliad* or the *Odyssey,* Greek tragedies, portions of the *Bible,* Virgil, Petronious, St. Augustine and other texts such as *Gilgamesh* or *Tristan and Yseult.*

1B. World Literature: Late Middle Ages to the Seventeenth Century. Lecture, three hours; discussion, one hour. Prerequisite: satisfaction of Subject A requirement. A study of major texts in world literature with an emphasis on Western civilization. Texts studied include works and authors such as Chaucer's *Canterbury Tales*, Dante's *Divine Comedy*, Boccaccio's *Decameron*, Cervantes' *Don Quixote*, Shakespeare, Calderon, Moliere or Racine.

1C. World Literature: Age of Enlightenment to the Twentieth Century. Lecture, three hours; discussion, one hour. Prerequisite: satisfaction of Subject A requirement. A study of major texts in world literature with an emphasis on Western civilization. Authors studied include Swift, Voltaire, Diderot, Rousseau, Goethe, Flaubert, Ibsen, Strindberg, Dostoevsky, Kafka, Joyce, Woolf and Stevens.

2A. Survey of Literature: Antiquity to Early Middle Ages. Lecture, two hours; discussion, two hours. Prerequisite: satisfaction of Subject A requirement. The study of selected texts from Antiquity to the Middle Ages with emphasis on literary analysis and expository writing. Texts include works and authors such as the *Iliad*, Greek tragedies, the *Aeneid*, Petronious, St. Augustine or *Tristan and Yseult*.

2B. Survey of Literature: Late Middle Ages to the Seventeenth Century. Lecture, two hours; discussion, two hours. Prerequisite: satisfaction of Subject A requirement. The study of selected texts from the Middle Ages to the 17th century with emphasis on literary analysis and expository writing. Texts may include works and authors such as Chaucer, Dante's *Divine Comedy*, Cervantes' *Don Quixote*, Shakespeare, Calderon, Moliere and Racine.

2C. Survey of Literature: Age of Enlightenment to the Twentieth Century. Lecture, two hours; discussion, two hours. Prerequisite: satisfaction of Subject A requirement. The study of selected texts from the Age of Enlightenment to the 20th century with emphasis on literary analysis and expository writing. Texts may include works by authors such as Swift, Voltaire, Diderot, Rousseau, Goethe, Flaubert, Ibsen, Strindberg, Dostoevsky, Kafka, James Joyce and Wallace Stevens.

*Upper Division Courses

101. The Romantic Dilemma. Prerequisite: one course from Humanities 1A, 1B, 1C, 2A, 2B, 2C or English 3 or consent of instructor. The theme of Romantic individualism and rebellion, pursued through literary examples of Romantic hero types (and antitypes) from Rousseau and Goethe to Dostoevsky and Hesse.

102. Satire. Prerequisite: one course from Humanities 1A, 1B, 1C, 2A, 2B, 2C or English 3 or consent of instructor. The changing nature of satire as illustrated by examples of the genre from Horace and Juvenal to Ionesco and Nabokov.

104. The Twentieth-Century Continental Novel: Mann and Proust. Prerequisite: one course from Humanities 1A, 1B, 1C, 2A, 2B, 2C or English 3 or consent of instructor. An intensive study of *The Magic Mountain* and *The Remembrance of Things Past* as works of art and as expressions of the sense of social and cultural dissolution felt in early twentieth-century Europe. Mr. Pasinetti

C105. The Comic Spirit. Prerequisites: upper division standing and a literature major. May be concurrently scheduled with Comparative Literature C205. Literary masterpieces both dramatic and nondramatic, selected to demonstrate the varieties of comic expression. Undergraduates will be allowed to read all works in translation. Mr. Band

C107. The Classical Tradition: Epic. Seminar, three hours. Prerequisites: upper division standing, literature major, consent of instructor. The *Iliad*, the *Odyssey*, the *Aeneid*, the *Gerusalemme Liberata* and *Paradise Lost* will be analyzed both in relation to their contemporary societies and to the literary traditions. Emphasis will be on how poets build upon the work of their predecessors. May be concurrently scheduled with Comparative Literature C207. Ms. King

C109. The Crisis of Consciousness in Modern Literature. Prerequisites: upper division standing and a literature major. May be concurrently scheduled with Comparative Literature C209. Study of modern European and American works which are concerned both in subject matter and artistic methods with the growing self-consciousness of human beings and their society, focusing on the works of Kafka, Rilke, Woolf, Sartre and Stevens. Undergraduates will be allowed to read all works in translation. Ms. Komar

110. Man and His Fictions. Prerequisite: one course from Humanities 1A, 1B, 1C, 2A, 2B, 2C or English 3 or consent of instructor. This course explores the art of tale-telling and the nature of narrative. We will examine the wisdom or knowledge the tales possess, how the exchange of tales defines and sustains a community and how a narrator clarifies his form and meaning for his audience. Ms. Komar

C111. The Classical Tradition: Tragedy. Seminar, three hours. Prerequisite: upper division standing or consent of instructor. Analysis of selected Greek dramas and their re-creations in Rome, in the Renaissance and in the modern period. May be concurrently scheduled with Comparative Literature C211. Ms. King

114. The Short Novel. Prerequisite: one course from Humanities 1A, 1B, 1C, 2A, 2B, 2C or English 3 or consent of instructor. A study of selected short novels as works of literary art and as relevant intellectual statements. Texts by Melville, Flaubert, Dostoevsky, Kafka, et al. Mr. Pasinetti

115. Four Modern Dramatists. A study of several works by four major modern dramatists, focusing on understanding specific elements in each work and the authors' possible interrelations. Pirandello, Beckett, and Pinter will be read; the fourth author will be chosen from: Ionesco, Giradoux, Cocteau. Mr. Braunmuller

116. Man and Society in the Renaissance. Lecture, three hours; discussion, one hour. Prerequisite: one course from Humanities 1A, 1B, 1C, 2A, 2B, 2C or English 3 or consent of instructor. Explorations of a change in Western man's relationship to his world, himself, and his art; reading of such works as *Don Quixote*, the *Essays of Montaigne*, *Gargantua and Pantagruel*, *The Praise of Folly*, *Utopia*. Mr. Allen

C117. The Mystery Novel. Prerequisites: upper division standing and a literature major or consent of instructor. May be concurrently scheduled with Comparative Literature C297. A study of mystery and detective fiction in England, France, and the United States. The origin, form and historical significance of mystery fiction will be developed through close readings of selected works. Undergraduates will be allowed to read all works in translation. Mr. Hutter

C139. Early Medieval Literature. Prerequisites: upper division standing and a literature major. May be concurrently scheduled with Comparative Literature C239. The course will consist of a survey of the Latin and Germanic literatures from the fall of Rome to the beginning of the 12th century. Undergraduate students will read the works in translation. Mr. Calder

C140. Medieval Epics. Prerequisites: upper division standing and a literature major. May be concurrently scheduled with Comparative Literature C240. The seminar will consider five medieval epics: *Beowulf*, *El Cid*, *Chanson de Roland*, *Niebelungenlied* and *Njalssaga*. There will be two objectives: first, a critical 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. Undergraduates will read the works in translation. Mr. Condren

C145. Renaissance Drama. Prerequisites: upper division standing and a literature major or consent of instructor. May be concurrently scheduled with Comparative Literature C245. 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, Lope de Vega, Racine, Jonson, Shakespeare. Undergraduates will be allowed to read all works in translation. Mr. Braunmuller

C170. The Dream in English and German Romantic Literature. Prerequisites: upper division standing and a literature major or consent of instructor. May be concurrently scheduled with Comparative Literature C270. A study of the use of the dream as a standard narrative technique in English and German Romantic literature. Undergraduates will be allowed to read all works in translation. Mr. Burwick

C172. The Grotesque in Romantic Literature and Art. Prerequisites: upper division standing and a literature major or consent of instructor. May be concurrently scheduled with Comparative Literature C272. A study of the grotesque in the visual and verbal arts of the Romantic period; interpretation will address the aesthetics of tragic-comic interaction, the demonic vision, and the satirical sketches of man's abnormality and perversity. Undergraduates will be allowed to read all works in translation. Mr. Burwick

C175. The Nineteenth-Century Novel. Seminar, three hours. Prerequisites: upper division standing and a literature major. May be concurrently scheduled with Comparative Literature C275. 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 or critical problem. Undergraduates may read the texts in translation. Mr. Lehan

C176. Fiction and History. Prerequisites: upper division standing and a literature major or consent of instructor. May be concurrently scheduled with Comparative Literature C276. The course analyzes the use of historical events, situations, and characters in works of fiction that are not necessarily "historical novels." Texts and individual assignments range from nineteenth-century authors such as Stendhal, Tolstoy, Verga, to Proust and contemporaries like Vidal, Grass, Garcia Marques. Use of fictional methods by historians may also be analyzed. Undergraduates will read all works in translation. Mr. Pasinetti, Ms. Fie

C180. The Symbolist Tradition in Poetry. Prerequisites: upper division standing and a literature major or consent of instructor. May be concurrently scheduled with Comparative Literature C280. A study of the symbolist tradition in 19th- and 20th-century English, French and German poetry. Undergraduate students will be allowed to read all works in translation. Mr. Shideler

C181. Poetry and Poetics of the Post-Symbolist Period. Prerequisites: upper division standing and a literature major or consent of instructor. May be concurrently scheduled with Comparative Literature C281. A study of some of the dominant poetic trends and figures in American and European poetry in the first half of the 20th century, including such surrealists as Pound, Eliot, Valery, Rilke, George and Stevens. Undergraduates will be allowed to read all works in translation. Ms. Komar, Mr. Shideler

Immunology

The Immunology faculty is associated with several departments and is joined in a common instructional program designed to meet the diverse needs of undergraduate, graduate and professional students, as well as postdoctoral fellows. An **Interdisciplinary Course**

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

Sequence in Immunology with a brief description of each course and the faculty involved may be obtained by writing the Department of Microbiology and Immunology, 43-239 Center for Health Sciences. Students seeking degrees with emphasis in immunology may choose to meet the general requirements of any of the following four departments: Anatomy, Biology, Microbiology or Microbiology and Immunology.

Indo-European Studies (Interdepartmental)

(Office: 1037 Graduate School of Management)

The Indo-European Studies Program does not offer an undergraduate degree. The following upper division courses are offered by the program with enrollment restrictions as indicated:

Upper Division Courses

131. European Archaeology: Proto-Civilizations of Europe. A survey of European cultures from the beginning of the food-producing economy in the 7th millennium B.C. to the beginning of the Bronze Age in the 3rd millennium B.C. Mrs. Gimbutas

132. European Archaeology: The Bronze Age. Prerequisite: course 131 or consent of instructor. A survey of European cultures from around 3000 B.C. to the period of the destruction of the Mycenaean culture about 1200 B.C. The course covers the Aegean area and the rest of Europe. Mrs. Gimbutas

M150. Introduction to Indo-European Linguistics. (Same as Linguistics M150.) Prerequisites: one year of college-level study (course 3 or better, 8 units minimum) of either Greek or Latin and either German or Russian. A survey of the Indo-European languages from ancient to modern times; their relationships and their chief characteristics. Mr. Anttila

199. Special Studies (½ to 2 courses).

Graduate Courses

For complete descriptions of graduate-level courses offered by this program, please consult the *UCLA Graduate Catalog.*

Related Upper Division Courses in Other Departments

Ancient Near East (Near Eastern Languages) 160A-160B. Introduction to Near Eastern Archaeology.

161A-161B-161C. Archaeology of Mesopotamia.

Anthropology 110. World Archaeology.

112. Old Stone Age Archaeology.

115Q. Archaeological Research Techniques.

115R. Strategy of Archaeology.

116P. Laboratory Analysis in Archaeology.

M116Q. Dating Techniques in Environmental Sciences and Archaeology.

183. History of Archaeology.

Armenian (Near Eastern Languages) 130A-130B. Elementary Classical Armenian.

131A-131B. Intermediate Classical Armenian.

132A-132B. Advanced Classical Armenian.

Classics 161. Introduction to Classical Mythology.

166A. Greek Religion.

166B. Roman Religion.

168. Introduction to Comparative Mythology.

180. Introduction to Classical Linguistics.

English M111D. Celtic Mythology.

M111E. Survey of Medieval Celtic Literature.

M111F. Celtic Folklore.

Folklore M112. Survey of Medieval Celtic Literature.

M122. Celtic Mythology.

M126. Baltic and Slavic Folklore and Mythology.

M127. Celtic Folklore.

Iranian (Near Eastern Languages) 169. Civilization of Pre-Islamic Iran.

170. Religion in Ancient Iran.

190A-190B. Introduction to Modern Iranian Studies.

Linguistics 100. Introduction to Linguistics.

103. Introduction to General Phonetics.

110. Introduction to Historical Linguistics.

120A, 120B. Linguistic Analysis.

160. History of Linguistics through the 19th Century.

Old Norse and Medieval Scandinavian (Germanic Languages) 140. Viking Civilization and Literature.

151. Elementary Old Norse.

152. Intermediate Old Norse.

Oriental Languages 160. Elementary Sanskrit.

161. Intermediate Sanskrit.

162. Advanced Sanskrit.

165. Readings in Sanskrit.

Semitics (Near Eastern Languages) 140A-140B. Elementary Akkadian.

141. Advanced Akkadian.

Slavic (Slavic Languages) 177. Baltic Languages and Cultures.

M179. Baltic and Slavic Folklore and Mythology.

Urdu (Near Eastern Languages) 101A-101B-101C. Elementary Urdu.

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 advisors. 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 of the Dean of the College of Letters and Science at 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 topic of "Critical African Issues in U.S. Foreign Policy" and will be held during the Fall Quarter. For further information about this and other African Studies Center interdisciplinary colloquia, please contact the Assistant Graduate Advisor, Maxine Driggers, at 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, and meets on alternate Fridays from 1 to 3 pm in 2270 GSM during the academic year. Announcements of presentations, including abstracts of the papers to be presented, are circulated and posted on campus; announcements also appear in *UCLA This Week.*

International Relations

(Office: 4256 Bunche Hall)

Special Program in International Relations

This program can only be taken jointly with a major in Political Science, and all requirements for the Political Science major must be met by or in addition to meeting the requirements for this special program. The student completing this special program will receive a degree with a major in Political Science and specialization in International Relations. The program is designed to serve the needs of: (1) students desiring a general education focused on international affairs and (2) students preparing for graduate work in international affairs, whether in a social science or area study.

The program also partially serves the needs of: (1) students planning careers (in business, law, journalism or library service) with an international emphasis and (2) students preparing to teach social science in the secondary schools. These students should govern their programs primarily by the preparation requirements of the professional school or teaching credential of their choice.

Courses in management and administration, and in verbal and written communications, will ordinarily increase the career options of students in this program.

Preparation for the Program

Political Science 1, 2A or 2B and 3; History 1A-1B-1C or any three courses selected from History 8A, 8B, 9A, 9B, 9C, 9D, 10A, 10B; Economics 1 and 2 or 100; Sociology 1 or 101; Anthropology 5 or 22; Geography 3 or 5.

Upper Division

The Political Science major should be completed as follows: Political Science 110; any four upper division courses in Field II, International Relations; Political Science 168L or 168S and three additional upper division courses in Field IV, Comparative Government; one additional course from Field I or two additional courses both in Field III, Field V or Field VI.

Other social science courses required: one course from Geography 140, 181, 182A, 182B, 183, 184, 185, 186, 187, 188, 189, 190; one course from Anthropology 171, 173P, 173Q, 174P, 175P, 175Q, 175R, 175S, 176, 177; two courses from Economics 110, 111, 112, 180, 182, 190, 191, 192; two courses from History 116A, 117A, 127A; 127B, 142A, 142B, 148C, 152A, 152B, 168, 186.

Language requirement: completion of the sixth quarter course (or its equivalent as prescribed by the language department), with a grade of "C" or better, of any modern foreign language. French 6, German 6, Spanish 25 and Russian 6 are most frequently offered in fulfillment of this requirement, but see also the offerings listed under Portuguese, Italian, Germanic Languages, Near Eastern and African Languages, and Oriental Languages. Arabic, Chinese, French, German, Japanese, Russian and Spanish are the languages of widest career utility in international affairs.

Area Focus

Students are advised but not required to concentrate their political science, geography, history and language courses so as to achieve broad familiarity with one area such as Latin America, Africa, the Atlantic area, the Soviet sphere, East Asia, Southeast Asia, South Asia or the Middle East.

For further information, contact Vicki Waldman, Political Science Counselor, 4256 Bunche Hall (825-3862).

Islamic Studies (Interdepartmental)

(Office: 10286 Bunche Hall)

For details of the undergraduate major, please refer to "Near Eastern Studies" later in this section of the catalog.

For detailed information on graduate degrees offered by this program, please refer to the *UCLA Graduate Catalog*.

Italian

(Office: 340 Royce Hall)

Giovanni Cecchetti, Dottore in Lettere, *Professor of Italian.*
Fredi Chiappelli, Dottore in Lettere; Doct. Lett. "Honoris Causa," *Professor of Italian.*
Margherita Cottino-Jones, Ph.D., Dottore in Lettere, *Professor of Italian (Chair).*
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 Advisor).*
Lucia Re, Dottore in Lettere, *Assistant Professor of Italian and Comparative Literature.*

•

Mirella Cheeseman, Dottore in Legge, *Lecturer in Italian (Director of Language Instruction Program).*
Althea Reynolds, B.A., *Lecturer in Italian (Lower Division Undergraduate Advisor).*

The program of studies leading to the Bachelor of Arts in Italian consists of two distinct phases: preparation in the language and study of the literature. While literature courses constitute the bulk of the program, a good knowledge of the language is a prerequisite to all upper division literature courses credited toward the major in Italian. All degree programs are designed to give students the best possible preparation in the field at the appropriate level. The use of Italian is stressed at all levels of study. Detailed information on programs and specific degree requirements may be obtained in the department publication, *Programs in Italian Studies,* and in the office of the Department of Italian located in 340 Royce Hall.

Preparation for the Major

Italian 1, 2, 3, 4, 5, 6, 25 or equivalents are required.

The Major in Italian

Required: 14 upper division courses out of 16 courses regularly offered once every or every other academic year. Seven of these are required: Italian 101, 102A-102B-102C, 113A-113B, 190; an additional seven are to be chosen from the other nine courses ranging from 114 through 122.

Strongly Recommended: Three upper division courses from other departments as follows: Classics 143; History 132A or 132B and English 110. Recommended: Art 106A, 106B or 106C; upper division courses in another literature and philosophy and a second language (Latin, French, Spanish or German) at least on level 3. All majors must organize their programs in consultation with the departmental undergraduate advisor.

The Major in Italian and Special Fields

Preparation: Italian 1, 2, 3, 4, 5, 6 or equivalents are required, plus additional required courses associated with the field of specialization in consultation with the departmental undergraduate advisor.

Required: 14 upper division courses, seven of which must be in Italian. Italian 102A-102B-102C series is required, while the remaining four may be chosen from the other thirteen courses ranging from 113 through 122 as determined by the student's area of specialization. The other seven courses are to be chosen from offerings in another department, as determined by the field of specialization.

Study programs fulfilling requirements for the major in Italian and Special Fields have been developed with the Departments of Anthropology, Art, Classics (Latin), English, French, History, Linguistics, Music, Political Science and Theater Arts. Students should consult the Department of Italian undergraduate advisor for requirements in the various fields of specialization.

NOTE: Students participating in the major in Italian and Special Fields will be required to plan their Study Lists each quarter in consultation with the departmental undergraduate advisor. Courses will be assigned in accordance with the student's needs as determined by the area of specialization pursued. When consultation with an area advisor is deemed necessary, the Study List will require his approval also. In certain cases, as many as two courses (8 units) on the graduate level may be applied toward the 14-course minimum requirements.

Study in Italy

Students are encouraged to spend up to one year in Italy either (a) to study with an education abroad program or (b) to study in an Italian university. Students are also urged to take advantage of summer language workshops and study programs, either at American campuses or in Italy. (The UCLA Department of Italian offers an intensive, eight-week summer Italian studies program. For information on *Casa*

Italiana, contact the department or the Summer Sessions office, 1257 Murphy Hall.) Full credit will be granted according to the individual programs arranged in consultation with the undergraduate advisor.

Honors Program

Majors with an overall grade-point average of 3.25 and a 3.5 grade-point average in Italian, or better, are eligible to participate in the Honors Program. Prerequisites: Italian 102A-102B-102C.

The candidates to this program will select three upper division literature courses, in which additional readings are required. In the last quarter of the senior year, students are required to write a thesis on a subject related to one of the three above-mentioned courses. The average for the three courses should not fall below "A–". Applications should be made during the last quarter of the junior year.

Lower Division Courses

Enrollment in the Italian open language laboratory is required of all students in Italian 1, 1A, 2, 2A and 3. Enrollment in Italian culture sections is required of all students in Italian 2, 2A and 3 as the fifth hour of instruction for these courses.

1. Elementary Italian — Beginning. Sections meet five hours weekly plus one hour in the laboratory.
Mrs. Cheeseman in charge

1A. Elementary Italian — Accelerated (2 courses). Sections meet ten hours weekly plus two hours in the laboratory. Designed for those students having the capacity and desire to learn the language at a much faster pace than normal. Encompasses material ordinarily intended for courses 1 and 2.
Mrs. Cheeseman in charge

2. Elementary Italian — Continued. Sections meet five hours weekly plus one hour in the laboratory. Prerequisite: course 1 or one year of high school Italian.
Mrs. Cheeseman in charge

2A. Elementary Italian — Accelerated (Continued) (2 courses). Sections meet ten hours weekly plus two hours in the laboratory. Prerequisite: course 2 or 1A or two years of high school Italian. Designed for those students having the capacity and desire to learn the language at a much faster pace than normal. Encompasses the material ordinarily intended for courses 3 and 4. Mrs. Cheeseman in charge

3. Elementary Italian — Continued. Sections meet five hours weekly plus one hour in the laboratory. Prerequisite: course 2 or two years of high school Italian. Mrs. Cheeseman in charge

4. Intermediate Italian. Sections meet five hours weekly plus one hour in the laboratory. Prerequisite: course 3 or three years of high school Italian.
Mrs. Cheeseman in charge

5. Intermediate Italian. Sections meet five hours weekly plus one hour in the laboratory. Prerequisite: course 4 or four years of high school Italian.
Mrs. Cheeseman in charge

6. Intermediate Italian. Sections meet five hours weekly plus one hour in the laboratory. Prerequisite: course 5. Mrs. Cheeseman in charge

6A-6B-6C. Italian Conversation (½ course each). Sections meet two hours weekly. Prerequisite: consent of instructor. This sequence of courses is intended for students who have taken three to six quarters of language instruction and have developed considerable skills in Italian. Its purpose is to help the students to improve further their spoken proficiency through constant exposure and practice of the language. Each course may be repeated once for credit.
Ms. Reynolds in charge

25. Advanced Italian. Sections meet five hours weekly. Prerequisite: course 6. An advanced grammar and composition course with readings from select literary works.

Upper Division Courses

Sixteen quarter units in Italian or equivalent are required for admission to any upper division course. Upper division courses for the majors will be conducted in Italian, will all be 4-unit courses and will meet three hours weekly.

101. Preparation for Advanced Italian Studies. A course designed to acquaint juniors with the research tools fundamental to the study of Italian culture. Will focus on how to find texts and collateral material, how to utilize bibliographies, dictionaries, encyclopedias, manuals and periodicals and how to proceed in literary analysis. Mr. Chiappelli

102A-102B-102C. The Italian Cultural Experience. A study of the cultural development of Italy conducted especially with a view to contemporary situations:

102A. From the disruption of Roman unity to feudal and communal society and culture.

102B. From Renaissance civilization to the Baroque Age.

102C. Historical and cultural issues from the Age of Enlightenment to our day.

113A-113B. Dante's 'Divina Commedia'. This course focuses on the *Divine Comedy*. Selective readings from the text will be integrated with relevant information on scholasticism, classical tradition, medieval literature and poetics, and the sociopolitical structure of Dante's World:

113A. A General Introduction and Readings from *Inferno*.

113B. Readings from *Purgatorio* and *Paradiso*.
Mr. Cecchetti

114A-114B. Italian Literature of the Middle Ages. Classes meet three hours weekly. Emphasis on "Stil Novo," Dante's minor works, Petrarch and Boccaccio. Mrs. Cottino-Jones, Mr. Tuttle

116A-116B. Italian Literature of the Renaissance. Emphasis on Lorenzo de'Medici, Poliziano, Castiglione, Machiavelli, Ariosto, Tasso. Mr. Betti

118. Italian Literature of the Eighteenth Century. Emphasis on Goldoni, Parini, Alfieri. Mr. Betti

119. Italian Literature of the 19th Century. This course surveys the 'Romantic Age' as it expresses values and national aspirations of 19th-Century Italy. Emphasis is placed on the innovative approach to poetry as seen in the works of Foscolo and Leopardi, and to the socio-historical novel of Foscolo, Manzoni and Verga. Mr. Betti

120. Italian Literature of the Twentieth Century. Following a brief introduction to Italian literature after unification of the country, the course will concentrate on selected writers seen in their political, social, and artistic contexts. Mr. Cecchetti

121. Italian Cinema. A comparative study of specific literary works and their translations into films, and of the different techniques in the two forms of expression. Texts will include literary works, screenplays, and works on literary and film theory.

122. The Italian Theater. The course concentrates on what is alive today (read and performed) in the Italian theater. Texts will range from the Renaissance to the present. Mrs. Cottino-Jones

130. Advanced Grammar and Composition (Teaching). The Teaching of Italian Idiomatic Structure: Grammar. A study in depth of the idiomatic phenomena of the language from both the grammatical and syntactical points of view. Mr. Chiappelli

131. Reading and Reciting. Prerequisite: consent of instructor based on sufficient knowledge of Italian. Emphasis on diction, interpretation and performance of one-act plays as vehicles for perfection of pronunciation, comprehension and fluency. May be repeated twice for credit. Mrs. Reynolds

190. History of the Italian Language. Examines the main forces which have shaped literary or Standard Italian and specific ways in which the language has evolved. Traces its changing relations with other European languages, and surveys the effects wrought by historical events, changes in taste and altered social functions. Mr. Tuttle

199. Special Studies (½ to 1 course). Prerequisite: consent of instructor. A course of independent study for advanced undergraduates who wish to pursue a special research project under the direction and close supervision of a faculty member.

Service Courses

No knowledge of Italian is required for these courses. No credit is given toward the major.

1G. Special Reading Course (No credit). Class meets three hours weekly. Mainly designed for graduate students in other areas.

2G. Special Reading Course (No credit). Class meets three hours weekly. Mainly designed for graduate students in other areas.

42A-42B. Italian Civilizations or Italy Through the Ages. (Formerly numbered 42A-42B-42C.) Lecture, three hours. A general survey of the history, literature, art, music and architecture audio-visually illustrated with emphasis on Italy's cultural contributions to Western Civilization. A service course designed to meet the breadth requirements:

42A. From the origins through the Renaissance.
Mrs. Cottino-Jones, Mr. Tuttle

42B. From the Enlightenment to Modern Italy.

46A-46B-46C. Italian Cinema and Culture (in English). Italy as seen through the eyes of its great filmmakers and writers. Major Italian films and literary works will be presented and discussed in their social and historical context:

46A. The period of "neo-realism" (1942-51) when Italian cinema gained international fame. The early films of Luchino Visconti, Roberto Rossellini and Vittorio De Sica. Readings include works by Giovanni Verga, Ignazio Silone, Vasio Tratolini and Carlo Levi.

46B. The films of the 1950's and early 1960's. Included are works by Federico Fellini, Luchino Visconti, Michelangelo Antonioni and Pier Paolo Pasolini. A special emphasis is given to Fellini, from his earliest works through the famous *La Dolce Vita*. Readings from Luigi Pirandello, Alberto Moravia and Pasolini.

46C. Italian cinema from the early 1960's to the present. Classics by Fellini, Antonioni, Pasolini, Bertolucci and others. Selections include *8½, Amarcord, Blow-Up, The Passenger, Decameron, The Conformist*. Readings from Boccaccio, Moravia, Tomasi de Lampadusa, etc.
Ms. Cottino-Jones in charge

50A-50B. Main Trends in Italian Literature:

50A. Italian Literature to the Baroque Period. A study of selected works of the major writers of the period, including Dante, Petrarch, Boccaccio, Ariosto, Machiavelli, Castiglione, Tasso, Bruno, Galileo, Marino.

50B. Italian Literature from 1700 to the Present. A study of selected works by the major writers of the period, including Vico, Parini, Alfieri, Foscolo, Leopardi, Manzoni, Verga, Pirandello, Svevo, Moravia, Ungaretti, Montale.

105. Tradition and Innovation in Italian Culture. Italy's basic social structures and cultural institutions are delineated through their historical development and as they are manifest in the stresses to which the industrializing state currently is subject. Mr. Tuttle

110A-110B. The Divine Comedy in English. Class meets three hours weekly.

M140. From Boccaccio to Basile (in English). (Same as Folklore M140.) Class meets three hours weekly. A study of the origins and the development of the Italian novella in its themes, in its structure, in its historical context, and in its European ramifications. The course is designed for students in other departments who wish to become acquainted with either the premises or the growth of similar literary genres. It is also intended for students majoring in Folklore and Mythology, who will be given an insight into Italian popular tales when these (as in the case of Boccaccio) were translated into highly sophisticated literary forms, as well as when (as in the case of Basile) they become embedded into the folk tradition of the Western world. Mrs. Cottino-Jones

150. Modern Italian Fiction in Translation. Class meets three hours weekly.

M158. Women in Italy. (Same as Women's Studies M158.) This course is designed with the intent of examining the role that women have played in Italian society. It will concentrate alternatively on the world of the Medieval and Renaissance "Matriarch" and on the "liberated" women of our times. Historical and political documents and social and religious taboos will be presented and discussed together with other data derived from literature and art.
Mrs. Cottino-Jones

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Journalism

(Office: 232 Royce Hall)

Walter Wilcox, Ph.D., *Professor of Journalism.*
Joseph A. Brandt, M.A. (Oxon.), B.Litt. (Oxon.), LL.D., *Emeritus Professor of Journalism.*
William W. Johnson, M.A., *Emeritus Professor of Journalism.*

•

James H. Howard, M.A., *Emeritus Lecturer in Journalism.*
W. Lewis Perdue, B.S., *Visiting Lecturer in Journalism.*
Laurence J. Pett, B.A., *Visiting Lecturer in Journalism.*

Undergraduate Courses

The following undergraduate courses (primarily upper division courses) are offered:

2. Fundamentals of Journalism. Lectures, field trips, and workshops. Survey of journalism principles and techniques.

101A. Reporting. Fundamentals of the news communication process.

101B. Photojournalism. Basic graphic arts illustration, and photojournalism for the mass media.

112. The History of American Journalism. History of the news media and their ancillary agencies with special attention to the news and information function. Course emphasizes historical context, including the main forces in development of the free press and social responsibility concepts.

182A. Article Writing. Analysis of the magazine and of newspaper depth reportage. Writing nonfiction articles; research, style and structure.

192. The Media of Mass Communications. Institutional analysis of the mass media with emphasis upon the press and broadcasting in the mass communications process; interaction with other institutions; critical evaluation.

193. The Press, the Law and the Constitution. Legal sanctions and constitutional freedoms affecting the printed and broadcast media.

195. The Critical Function of the Press. Analysis and evaluation of the press in its role as critic of the popular arts, including television, books and motion pictures. Special lectures by professional critics.

199. Individual Studies (¼ to 1 course). Prerequisites: upper division status and consent of instructor. Individual study for upper division students wishing to do research on the performance of the news media and their relation to society. This course will permit upper division students to do research on the operation and/or influence of the mass media in areas of special interest. These areas may be coordinated with a student's major field or with various special community projects of the University. Students will be expected to develop their own study plan, execute either primary data collection or perform secondary analysis of existing data, and produce a study report.

Kinesiology

(Office: 212 Men's Gym)

R. James Barnard, Ph.D., *Professor of Kinesiology.*
Camille Brown, Ed.D., *Professor of Kinesiology.*
Bryant J. Cratty, Ed.D., *Professor of Kinesiology.*
[16]V. Reggie Edgerton, Ph.D., *Professor of Kinesiology.*
Glen H. Egstrom, Ph.D., *Professor of Kinesiology.*
Gerald W. Gardner, Ph.D., *Professor of Kinesiology (Vice-Chair).*
Louis J. Goldberg, D.D.S., Ph.D., *Professor of Dentistry, Anatomy and Kinesiology.*
Jack F. Keogh, Ed.D., *Professor of Kinesiology.*
Laurence E. Morehouse, Ph.D., *Professor of Kinesiology.*
Richard A. Schmidt, Ph.D., *Professor of Kinesiology.*
[16]Judith L. Smith, Ph.D., *Professor of Kinesiology (Chair).*
Serena E. Arnold, Ed.D., *Emeritus Professor of Kinesiology.*
Donald T. Handy, Ed.D., *Emeritus Professor of Kinesiology.*
Valerie V. Hunt, Ed.D., *Emeritus Professor of Kinesiology.*
Wayne W. Massey, Ph.D., *Emeritus Professor of Kinesiology.*
Ben W. Miller, Ph.D., *Emeritus Professor of Kinesiology.*
Norman P. Miller, Ed.D., *Emeritus Professor of Kinesiology.*
Raymond A. Synder, Ed.D., *Emeritus Professor of Kinesiology.*
Carl H. Young, Ed.D., *Emeritus Professor of Kinesiology.*
Marjorie E. Latchaw, Ph.D., *Associate Professor of Kinesiology.*
Tara K. Scanlan, Ph.D., *Associate Professor of Kinesiology.*
Ronald F. Zernicke, Ph.D., *Associate Professor of Kinesiology.*
Scott H. Chandler, Ph.D., *Assistant Professor of Neuroscience.*
Robert J. Gregor, Ph.D., *Assistant Professor of Kinesiology.*
Diane Shapiro, Ph.D., *Assistant Professor of Kinesiology.*

•

Roland Roy, Ph.D., *Adjunct Assistant Professor of Kinesiology.*
Jeff H. Rahlmann, M.S., *Lecturer in Kinesiology.*

Bachelor's Degree in Kinesiology

Kinesiology is the study of the biochemical, morphological and general physiological responses of the human to exercise and environmental conditions; the description of movement and the neuromuscular and biomechanical determinants of motor performance; and the development, acquisition and modification of motor performance. The purpose of this study is intended to develop and integrate principles and concepts of human movement.

Pre-Kinesiology Major

All students intending to major in Kinesiology are identified as Pre-Kinesiology majors until the premajor requirements have been satisfied, allowing students to identify with the Kinesiology Department while completing courses in preparation for the major.

The Pre-Kinesiology major requirements are: Kinesiology 12, 14; Chemistry 11A; Chemistry 15/15L or 23; Biology 5 or 7; Physics 3A (or 6A or 8A); one introductory statistics course; Psychology 10; and one additional introductory course from one of the following departments: Anthropology, Psychology or Sociology.

Premajor courses outside the department may be taken for a letter grade or on a P/NP basis; Kinesiology 12 and 14 must be taken for a letter grade. All premajor courses must be passed with a grade of "C" or better or a "P".

Upon completion of premajor courses, students must petition for admission to the Kinesiology major. Petitions are initiated through the Student Affairs Office in 212 Men's Gym.

In addition to the preparation courses required in the premajor, additional courses are strongly recommended or required as prerequisites for some upper division courses. Students should particularly note that two years of chemistry (11A, 11B/11BL, 11C/11CL, 21, 23, 25) are required for Kinesiology 118.

Premajors may enroll in restricted upper division core courses and electives if they meet prerequisite requirements specified for each course. Permission to enroll in these courses should be obtained from the Student Affairs Office (212 Men's Gym) prior to filing the Study List.

Students in the Kinesiology major or premajor must confer with the departmental counselor on a regular basis. Students who are interested in this major and who are transferring from another college or university should consult with the departmental counselor at least six months prior to the expected enrollment date at UCLA. This is to assist these students in meeting the departmental premajor requirements. Advisor appointments can be made in the Student Affairs Office, 212 Men's Gym (825-3891).

Requirements for the Major

Required Courses in the Department: Kinesiology 120, 120L, 122, 122L, 124, 124L, 126, 126L.

Upper Division Electives: A total of eight electives (32 units) is required. Although all eight courses may be taken in kinesiology, six upper division courses (24 units) must be taken in the department. Courses 196A-196B and 400-level courses may not be used to satisfy this requirement. One or two of the eight courses (up to 8 units) may be taken in other departments related to the student's course of study. A list of approved extradepartmental courses is available in the Student Affairs Office, 212 Men's Gym.

A "C" average must be maintained in all upper division courses taken in the department. If the student fails to attain these minimal standards, dismissal from the major will be recommended. All upper division courses required for the major (including extradepartmental electives) must be taken for a letter grade.

Preparation for Graduate Study in Kinesiology

Undergraduate students who intend to pursue graduate studies in kinesiology should be aware that both admission to graduate work and progress toward the degree will be impeded in certain areas of kinesiology if additional preparation is not obtained at the undergraduate level. For this reason, students who plan to do doctoral studies in kinesiology are advised to complete Mathematics 3A, 3B and Physics 3B. Students who wish to pursue doctoral studies in biomechanics must complete two full years of calculus. Students interested in graduate study (master's degree or Ph.D.) in areas of physiological kinesiology must complete two full years of chemistry (11A, 11B, 11C, 21, 23, 25). Consult the Student Affairs Office, 212 Men's Gym, for additional information regarding graduate study in kinesiology.

Honors in Kinesiology

The Kinesiology Honors Program provides exceptional students with the opportunity for individual research culminating in an Honors Thesis. Requirements for admission include a 3.0 overall grade-point average and a 3.5 GPA in upper division kinesiology courses, completion of four upper division kinesiology courses and identification of a sponsoring faculty advisor. Upon completion of all requirements and with the recommendation of the faculty advisor, the Undergraduate Affairs Committee will confer Departmental Honors at graduation. Highest Honors may be awarded to students with a 3.5 overall grade-point average and a 3.7 GPA in upper division kinesiology courses. Inquiries concerning the Honors Program should be directed to the Student Affairs Office, 212 Men's Gym.

Departmental Scholar Program

Under the Departmental Scholar Program, honor students in kinesiology (juniors and seniors) are permitted to pursue bachelor's and master's degree programs simultaneously. The Departmental Scholar must be provisionally admitted to the Graduate Division, and no course can be used to fulfill requirements for both degrees. The two degrees may be awarded simultaneously, but this is not a requirement of the program. The master's degree can be completed after the bachelor's degree has been awarded. Inquiries concerning the Departmental Scholar Program should be directed to the Student Affairs Office, 212 Men's Gym.

Lower Division Courses

12. Introduction to Human Physiology (1½ courses). Lecture, five hours; laboratory, three hours. Prerequisites: Biology 5 or 7, Chemistry 15 and 15L or 23. An introduction to human physiology.

13. Introduction to Human Anatomy (1½ courses). Lecture, four hours; laboratory, four hours. A structural survey of the human body including the skeletomuscular, nervous, circulatory, respiratory, digestive, and genito-urinary systems. Laboratory includes examination of human cadaver specimens. Course is not intended for Kinesiology majors; combination of courses 13 and 14 will be equivalent to nine units. Mr. Rahlmann

14. Human Neuromuscular Anatomy (1½ courses). Lecture, four hours; laboratory, four hours. A thorough study of the skeletal, articular, muscular, and nervous systems. Special emphasis is placed on relating these body structures to human movement capabilities. Laboratory includes examination of prosected human cadaver specimens. Mr. Rahlmann

Upper Division Required Courses

120. Behavioral Bases of Movement. Prerequisites: Psychology 10 and an introductory course in statistics. An examination of motor performance and motor learning and the influence of selected physiological variables upon human movement.
Ms. Scanlan, Mr. Schmidt, Ms. Shapiro

120L. Laboratory in Behavioral Bases of Movement (¼ course). Must be taken concurrently with course 120. Ms. Scanlan, Mr. Schmidt, Ms. Shapiro

122. Biomechanical Bases of Movement. Prerequisites: courses 12, 14, Physics 3A. Kinematic and kinetic principles underlying human movement focusing on the human neuromuscular and skeletal systems. Mr. Gregor, Mr. Zernicke

122L. Laboratory in Biomechanical Bases of Movement (¼ course). Must be taken concurrently with course 122. Mr. Gregor, Mr. Zernicke

124. Cardiorespiratory Bases and Environmental Factors Affecting Movement. Prerequisites: courses 12, 14. Response of the cardiovascular and respiratory systems to acute and chronic exercise, environmental stress and adaptation.
Mr. Barnard, Mr. Egstrom, Mr. Gardner

124L. Laboratory in Cardiorespiratory Bases and Environmental Factors Affecting Movement (¼ course). Must be taken concurrently with course 124.
Mr. Barnard, Mr. Egstrom, Mr. Gardner

126. Neuromuscular and Metabolic Bases of Movement. Prerequisites: courses 12, 14. Metabolic, muscular and neural processes underlying movement and adaptation to exercise.
Mr. Chandler, Mr. Edgerton, Ms. Smith

126L. Laboratory in Neuromuscular and Metabolic Bases of Movement (¼ course). Must be taken concurrently with course 126.
Mr. Chandler, Mr. Edgerton, Ms. Smith

Upper Division Elective Courses

105. Movement Taxonomy and Composition. Lecture, three hours; laboratory, two hours. Prerequisite: course 14. Clarification and organization of movement concepts through the study of definition, classification, division and composition of human movement. Ms. Brown

106. Theories of Kinesiology. A study of ethical, logical and aesthetic valuing in human movement and human development with special consideration given to traditional and modern approaches. Ms. Brown

115. Aquatic Kinesiology. Lecture, three hours; laboratory, two hours. Prerequisites: courses 12, 14 or consent of instructor. A study of man's adaptation to the aquatic environment. Mr. Egstrom

116. Exercise and Cardiovascular Function. Prerequisites: courses 120, 122, 124, 126. A consideration of the acute and chronic effects of exercise in the diagnosis, prevention and treatment of cardiovascular disorders and physical fitness.
Mr. Barnard, Mr. Gardner

117. Conditioning for Maximum Performance. Prerequisites: courses 12, 14, 122, 122L or consent of instructor. Study of factors and conditions accelerating and retarding levels of performance and work under various physiological and environmental conditions. Mr. Egstrom

118. Cellular Dynamics of Exercise. Prerequisites: courses 124, 124L, 126, 126L, Chemistry 11C, 11CL or 15 or consent of instructor. Cellular responses to acute and chronic exercise. Mr. Edgerton

119. Laboratory Experimentation in Exercise Biology. Lecture, two hours; laboratory, six hours. Prerequisites: course 118 and consent of instructor. Assessment of biochemical properties of muscle and blood, histochemistry of muscle, physiological properties of muscular and cardiorespiratory systems during exercise.

132. Biomechanics of Musculoskeletal Injury. Prerequisites: courses 122, 122L and consent of instructor. Anatomical, physiological and mechanical characteristics of cartilaginous, fibrous, and bony tissues are examined in normal and abnormal stress situations. Connective tissue growth processes, normal physiology and repair mechanisms are analyzed in conjunction with musculoskeletal injuries and effects of exercise and physical activity. Mr. Zernicke

134A. Electromyographic Assessment. Lecture, three hours; laboratory, two hours. Prerequisites: courses 122, 122L. Techniques of electromyographic analysis combining theoretical aspects with laboratory experiences. Mr. Gregor

134C. Performance Assessment. Lecture, three hours; laboratory, two hours. Prerequisites: courses 120, 120L. Critical analysis of theoretical and practical aspects of assessment techniques as well as individual and group evaluation procedures. Mr. Keogh

137. Therapeutic Exercise. Prerequisites: courses 122, 122L, 124, 124L, 126, 126L. The role of exercise in the improvement of movement in physically handicapped individuals. Mr. Morehouse

139. Dissection Anatomy. Lecture, two hours; laboratory, six hours. Prerequisites: courses 122, 122L and consent of instructor. Study and dissection of upper and lower extremities of human cadavers; dissection of thorax and abdomen limited to musculature and neurovascular supply.

140. Mechanisms of Neuromuscular Control. Lecture, three hours; laboratory, two hours. Prerequisites: courses 126, 126L; Psychology 15 or 115 recommended. Neuromuscular mechanisms for the control of somatic muscles are covered in detail including skeletomotor and fusimotor systems and proprioceptive feedback necessary for motor control. Laboratory emphasizes neuroanatomy.
Mr. Chandler, Ms. Smith

160. Human Movement Development. Prerequisites: courses 120, 120L. Movement development throughout life with emphasis upon individual and societal determinants. Mr. Cratty, Mr. Keogh

165. Perceptual Motor Education. Prerequisites: courses 120, 120L; course 160 recommended. Movement problems of the minimally-neurologically handicapped with emphasis on the clumsy child syndrome. Mr. Cratty

178. Group Dynamics in Sport. Lecture, three hours; laboratory, two hours. Prerequisites: courses 120, 120L or consent of instructor. Examination of group dynamics in sport. Topics include: group productivity, group structure, leadership, motivational factors, cohesion, conflict. Ms. Scanlan

191A-191Z. Proseminars in Kinesiology. Prerequisites: upper division standing and consent of instructor. Enrollment is limited to 15 students. Courses offer a unique opportunity for advanced study of special topics. Students may take more than one 191 course for major elective credit.

196A-196B. Laboratory Practicum in Kinesiology (½ course each). Laboratory, four hours. Prerequisites: courses 139 (for A) and 119 (for B), which may be taken concurrently, and consent of instructor. Supervised practicum and training for advanced students who will serve as undergraduate assistants in the basic anatomy (A) or physiology (B) courses in the preparation of laboratory materials and innovative projects. This course may not be applied toward the major.

199A-199ZZ. Special Studies in Kinesiology (½ or 1 course). (Formerly numbered 199.) Prerequisites: Kinesiology major with advanced junior standing and a 3.0 GPA in the major or senior standing; consent of instructor and departmental Chair. Directed independent research with Kinesiology faculty (identified in the course title by two initials). A course application (available in 212 Men's Gym) shall be submitted to the Chair on or before the first day of class. A total of eight units of 199 and 199H may be applied toward the major requirements.

199HA-199HZZ. Honors Thesis (1 or 2 courses). (Formerly numbered 199H.) Prerequisite: acceptance in the departmental Honors Program. Directed independent research for departmental Honors with faculty (identified in the course title by two initials). A course application (available in 212 Men's Gym) shall be submitted to the departmental Chair on or before the first day of class. A total of eight units of 199 and 199H may be applied toward the major requirements.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Latin American Studies (Interdepartmental)

(Office: 10347 Bunche Hall)

Rodolfo Alvarez, Ph.D., *Professor of Sociology.*
Shirley L. Arora, Ph.D., *Professor of Spanish.*
George A. Bartholomew, Ph.D., *Professor of Biology.*
Ruben Benitez, Ph.D., *Professor of Spanish.*
Charles F. Bennett, Ph.D., *Professor of Geography.*
C. Rainer Berger, Ph.D., *Professor of Anthropology, Geography and Geophysics.*
Lester Breslow, M.D., M.P.H., *Professor of Public Health.*
William O. Bright, Ph.D., *Professor of Linguistics and Anthropology.*
Henry J. Bruman, Ph.D., *Professor of Geography.*
E. Bradford Burns, Ph.D., *Professor of History.*
Leland S. Burns, Ph.D., *Professor of Architecture and Urban Planning.*
Robert Burns, S.J., Ph.D., *Professor of History.*
Robert N. Burr, Ph.D., *Professor of History.*
Bertram Bussell, Ph.D., *Professor of Engineering.*
Martin L. Cody, Ph.D., *Professor of Biology.*
Edwin L. Cooper, Ph.D., *Professor of Anatomy.*
Roger Detels, M.D., M.S., *Professor of Public Health.*
Christopher Donnan, Ph.D., *Professor of Anthropology.*
Elsie Dunin, M.A., *Professor of Dance.*
David K. Eiteman, Ph.D., *Professor of Finance.*
Howard Freeman, Ph.D., *Professor of Sociology.*
John Friedmann, Ph.D., *Professor of Planning.*
Juan Gómez-Quiñones, Ph.D., *Professor of History.*
Edward Gonzalez, Ph.D., *Professor of Political Science.*
Thomas R. Howell, Ph.D., *Professor of Biology.*
Claude L. Hulet, Ph.D., *Professor of Portuguese.*
Derrick B. Jelliffe, M.D., D.T.M., D.C.H., F.R.C.P., *Professor of Public Health and Pediatrics.*
Allan Johnson, Ph.D., *Professor of Anthropology.*
John G. Kennedy, Ph.D., *Professor of Anthropology and Biobehavioral Sciences in Residence.*
Frederick C. Kintzer, Ed.D., *Professor of Education.*
Thomas J. LaBelle, Ph.D., *Professor of Education.*
James Lockhart, Ph.D., *Professor of History.*
Gerardo Luzuriaga, Ph.D., *Professor of Spanish.*
Robert H. Mason, Ph.D., *Professor of International Business.*
Clement W. Meighan, Ph.D., *Professor of Anthropology.*
Frank G. Mittelbach, M.A., *Professor of Management and Planning.*
Alfred K. Neumann, M.D., *Professor of Public Health in Residence.*
Henry B. Nicholson, Ph.D., *Professor of Anthropology.*
Park S. Nobel, Ph.D., *Professor of Biology.*
Russell O'Neill, Ph.D., *Professor of Engineering.*
Antony R. Orme, Ph.D., *Professor of Geography.*
Carlos P. Otero, Ph.D., *Professor of Spanish and Romance Linguistics.*
José Oviedo, 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 Scothorn, M.A., *Professor of Dance.*
Allegra 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.*
Norman Thrower, 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.*
Telford H. Work, M.D., M.P.H., D.T.M.H., *Professor of Public Health.*
Maurice Zeitlin, Ph.D., *Professor of Sociology.*
Mildred E. Mathias, Ph.D., *Emeritus Professor of Botany.*
Ichak Adizes, Ph.D., *Associate Professor of Management.*
Theodore Anderson, Ph.D., *Associate Professor of Business Economics and Finance.*
Daniel M. Berry, Ph.D., *Associate Professor of Engineering and Applied Science.*
Alfonso F. Cardenas, Ph.D., *Associate Professor of Engineering.*
E. Mayone Dias, Ph.D., *Associate Professor of Spanish and Portuguese.*
Timothy Earle, Ph.D., *Associate Professor of Anthropology.*
Leo Estrada, Ph.D., *Associate Professor of Planning.*
Pierre-Michel Fontaine, Ph.D., *Acting Associate Professor of Political Science.*
Ralph Frerichs, Dr.P.H., M.P.H., *Associate Professor of Epidemiology.*
John Hawkins, Ph.D., *Associate Professor of Education.*
Henry A. Hespenheide, Ph.D., *Associate Professor of Biology.*
Marvin Karno, M.D., *Associate Professor of Psychiatry in Residence.*
Edy Kaufman, Ph.D., *Visiting Professor of Political Science.*
Cecelia Klein, Ph.D., *Associate Professor of Art.*
David Kunzle, Ph.D., *Associate Professor of Art.*
David E. Lopez, Ph.D., *Associate Professor of Sociology.*
Pamela Munro, Ph.D., *Associate Professor of Linguistics.*
Alfred E. Osborne, Ph.D., *Associate Professor of Management.*
David O'Shea, Ph.D., *Associate Professor of Education and Sociology.*
A. Carlos Quicoli, Ph.D., *Associate Professor of Portuguese and Romance Linguistics.*
Dwight W. Read, Ph.D., *Associate Professor of Anthropology.*
Richard M. Reeve, Ph.D., *Associate Professor of Spanish.*
Hans Schollhammer, M.B.A., D.B.A., *Associate Professor of Management.*
Susan Scrimshaw, Ph.D., *Associate Professor of Public Health and Anthropology.*
Sebastian Edwards, Ph.D., *Assistant Professor of Economics.*
Margaret FitzSimmons, Ph.D., *Assistant Professor of Architecture and Urban Planning.*
Teshome H. Gabriel, Ph.D., *Assistant Professor of Theater Arts.*
Susana Hecht, *Assistant Professor of Geography.*
Robert Hill, M.Sc., *Assistant Professor of History.*
Susan Plann, Ph.D., *Assistant Professor of Spanish.*
Jorge Preloran, B.A., *Assistant Professor of Theater Arts.*
A. John Skirius, Ph.D., *Assistant Professor of Spanish.*
Carlos G. Velez-I., Ph.D., *Assistant Professor of Anthropology.*
Hector Calderon, Ph.D., *Lecturer in Spanish.*
José M. Cruz-Salvadores, M.A., *Lecturer in Spanish.*
Jamie Daza, M.A., *Associate in Linguistics.*
Robert Kreuger, Ph.D., *Lecturer in Portuguese.*
Ludwig Lauerhass, Jr., Ph.D., *Lecturer in History.*
Peter R. Nehemkis, LL.B., *Lecturer in International and Comparative Management.*
Emilio Pulido-Huizar, B.A.C., *Lecturer in Dance.*
George L. Voyt, J.D., *Lecturer in Spanish.*

The Latin American Studies Program, coordinated through UCLA's NDEA Latin American Studies Center, offers the Bachelor of Arts and Master of Arts degrees. Special aspects include articulated programs with professional master's and doctoral degrees.

Interdepartmental faculty committees are appointed annually to supervise and administer the B.A. and M.A. degrees in Latin American Studies. For detailed information on the M.A. degree program, please refer to the *UCLA Graduate Catalog*.

The Bachelor's Degree in Latin American Studies

Undergraduate studies of the Latin American region are designed to serve the needs of (1) students desiring a general education focused on the Latin American cultural region; (2) students planning to enter business, government or international agency service; (3) students preparing to teach social science or language; and (4) students preparing for advanced academic study of Latin America.

For the undergraduate major in Latin American Studies, students must meet the requirements

given in the University catalog for the academic year prior to the year of graduation.

Preparation for the Major: Students must complete all preparation courses with a "C" (2.0) in each course. Courses may be taken on a Passed/Not Passed basis and are applicable on the lower division breadth requirements.

Core Areas: Students choose one of three core areas as the focus of their major: Arts and Humanities, Social Sciences, or Ecology and Environmental. Requirements for each core area are listed below.

Major Language Requirements: Language requirements are uniform for all students in the major regardless of core area. Proficiency equivalent to (a) Spanish 25 and Portuguese 3 OR (b) Portuguese 25 and Spanish 5 is required. In lieu of Portuguese 1-3, students may take Portuguese 102A-102B which is designed for students with a background in Spanish. An indigenous language of Latin America may be substituted for the minor language.

Core I: Arts and Humanities

Preparation: History 8A, 8B; Latin American Studies 99; Spanish and Portuguese M44; Spanish 5 or Portuguese 3; Art 55 or Music 81K and Dance 71J.

Core Area: Ten upper division courses from the approved list and distributed as follows:

(a) *Core Concentration:* Five courses from Literature and Folklore or Fine Arts (art, music, dance, theater arts) or Linguistics. Not more than one course from the core area list of Electives may be applied to the core concentration.

(b) *Theory and Methods:* One course from the core concentration list of Theory and Methods courses.

(c) *Internal Breadth:* Four additional courses from the Arts and Humanities core area but outside of the core concentration. Not more than two of these may be chosen from the list of Electives.

External Breadth: From the approved list, six upper division courses outside of the Arts and Humanities core area and distributed as follows: two courses in each of two core concentrations such that at least one core concentration is chosen from the Social Science core (e.g., history) and at least one is developed within the Ecology and Environment core (e.g., public health). Not more than three external breadth courses may be chosen from Electives.

Core II: Social Sciences

Preparation: History 8A, 8B; Latin American Studies 99; Economics 1 and 2 or 100; Spanish 5 or Portuguese 3; Economics 40 or Sociology 18.

Core Area: Ten upper division courses from the approved list and distributed as follows:

(a) *Core Concentration:* Five courses from Anthropology and Sociology or Economics or Geography or History or Political Science. Not more than one course from the core area list of Electives may be applied to the core concentration.

(b) *Theory and Methods:* One course from the core concentration list of Theory and Methods courses.

(c) *Internal Breadth:* Four additional courses from the Social Sciences core area but outside of the core concentration. Not more than two of these may be chosen from the list of Electives.

External Breadth: From the approved list, six upper division courses outside of the Social Sciences core area and distributed as follows: two courses in each of two core concentrations such that at least one core concentration is chosen from the Arts and Humanities core (e.g., fine arts) and at least one is developed within the Ecology and Environment core (e.g., public health). Not more than three external breadth courses may be chosen from Electives.

Core III: Ecology and Environment

Preparation: History 8A, 8B; Latin American Studies 99 or Geography 5; Mathematics 50A; Engineering 10S; Spanish 5 or Portuguese 3.

Core Area: Ten upper division courses from the approved list and distributed as follows:

(a) *Core Concentration:* Five courses from the core area, not more than one of which may be chosen from the core area list of Electives.

(b) *Theory and Methods:* One course from the core concentration list of Theory and Methods courses.

(c) *Internal Breadth:* Four additional courses from the Ecology and Environment core area; may be chosen from core courses in Theory and Methods or Electives.

External Breadth: From the approved list, six upper division courses outside of the Ecology and Environment core area and distributed as follows: two courses in each of two core concentrations such that at least one core concentration is chosen from the Arts and Humanities core (e.g., fine arts) and at least one is chosen from the Social Sciences core (e.g., history). Not more than three external breadth courses may be chosen from Electives.

Course Limitations

No student may take more than 8 units of course 199 for letter grade credit nor more than 8 units in any single term. No course taken on a Passed/Not Passed basis can be counted toward the major. In order to register in a 199 course, a student must have advanced junior standing and an overall GPA of 3.0 or senior standing.

Graduate Courses

Advanced undergraduates may enroll in graduate courses with the professor's approval. Refer to the *UCLA Graduate Catalog.*

Double Majors

Through judicious use of electives, students may find it possible to secure the B.A. degree with two majors, e.g., Latin American Studies and History. Interested students who have achieved junior standing should consult the undergraduate advisors of both departments involved, initiating the appropriate petition with the undergraduate advisor in Latin American Studies.

Study in Latin America

Students are encouraged to spend up to one year in Latin America either (a) to study with an education abroad program; (b) to study in Latin American universities; (c) to conduct research; or (d) to complete an internship in an international or development agency. Full credit will be granted according to the individual programs arranged in consultation with the undergraduate advisor. Proposals must be presented in writing to the Interdepartmental Committee.

Departmental Scholar Program

Exceptionally promising undergraduate students may be nominated as Departmental Scholars to pursue bachelor's and master's degree programs simultaneously.

Undergraduate Courses

99. Introduction to Latin American Problems. An interdisciplinary seminar for lower division students; enrollment limited to 15 students. Since this course is not a general survey and its content varies with each section, students will be permitted to repeat it for credit.

M155. Disease Problems of Socioeconomic and Political Impact in Latin America. (Same as Public Health M115.) Lecture, six hours; discussion, six hours. Prerequisite: one upper division course in Latin American Studies Program. Social, economic and political impact of important disease problems in Latin American countries. Mr. Work

197. Interdisciplinary Topics in Latin American Studies. Advanced interdisciplinary course for upper division students. Content varies with each section. May be repeated for credit.

199. Special Studies in Latin American Studies (1 or 2 courses). Prerequisite: upper division standing. An intensive directed research program in which students conduct interdisciplinary research or complete an internship with an international agency or program dealing with Latin America. Faculty sponsorship and written reports are required.

(I) Arts and Humanities Core

(A) Literature and Folklore

Folklore M149. Folk Literature of the Hispanic World (same as Spanish M149).

History 169. Latin American Elitelore.

Portuguese (Spanish and Portuguese) 121A, 121B. Survey of Brazilian Literature.

C127. Colonial Brazilian Literature.

C129. Romanticism in Brazil.

C135. Naturalism, Realism and Parnaslanism in Brazil.

C137. Contemporary Brazilian Literature.

Spanish (Spanish and Portuguese) 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).

170B. Senior Seminar: Topics in Spanish American Literature (requires consent).

Theory and Methods

Folklore 101. Introduction to Folklore.

190. Selected Topics.

199. Special Studies.

Portuguese (Spanish and Portuguese) 199. Special Studies.

Spanish (Spanish and Portuguese) 119. Literary Analysis.

199. Special Studies.

(B) Fine Arts

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.

Dance 146. Dance in Latin America.

171J. Dance of Mexico (½ course).

Music 131A-131B. Music of Hispanic America.

157. Music of Brazil.

Theater Arts 106C. History of African, Asian and Latin American Film.

Theory and Methods

Anthropology 118A, 118B. Museum Studies.

133R. Aesthetic Anthropology.

137. Ethnography on Film.

Art 199. Special Studies.

Dance 199. Special Studies.

Music M180. Analytical Approaches to Folk Music (same as Folklore M180).

190A-190B. Proseminar in Ethnomusicology.

199. Special Studies in Music.

Theater Arts 199. Special Studies in Theater Arts.

(C) Linguistics

Portuguese (Spanish and Portuguese) 100. Phonology and Pronunciation.

103. Syntax.

M118. History of the Portuguese and Spanish Languages.

Spanish (Spanish and Portuguese) 100. Phonology and Pronunciation.

103. Syntax.

115. Applied Linguistics.

M118. History of the Portuguese and Spanish Languages.

119. Literary Analysis.

170C. Senior Seminar: Topics in Hispanic Linguistics (requires consent).

Theory and Methods

Anthropology 143A, 143B. Field Methods in Linguistics Anthropology.

Linguistics 100. Introduction to Linguistics.

103. Introduction to General Phonetics.

110. Introduction to Historical Linguistics.

120A. Linguistic Analysis: Phonology.

120B. Linguistic Analysis: Grammar.

164. Modern Theories of Language.

C165A. Linguistic Theory: Phonology.

C165B. Linguistic Theory: Grammar.

170. Language and Society: Introduction to Sociolinguistics.

199. Special Studies in Linguistics.

Portuguese (Spanish and Portuguese) 199. Special Studies.

Spanish (Spanish and Portuguese) 199. Special Studies.

(D) Electives

Anthropology M140. Language in Culture (same as Linguistics M146).

Folklore 118. Folk Art and Technology.

Latin American Studies 197. Interdisciplinary Topics in Latin American Studies.

199. Special Studies in Latin American Studies.

Music M154A-M154B. The Afro-American Musical Heritage (same as Folklore M154A-M154B).

Philosophy 190. Third World Political Thought.

Portuguese (Spanish and Portuguese) 140A-140B. Luso-Brazilian Literature in Translation.

Spanish (Spanish and Portuguese) 160B. Hispanic Literatures in Translation: Spanish America and Brazil.

Theater Arts 112. Film and Social Change.

(II) Social Sciences Core

(A) Anthropology and Sociology

Anthropology 114P. Ancient Civilizations of Western Middle America (Nahuatl Sphere).

114Q. Ancient Civilizations of Eastern Middle America (Maya Sphere).

114R. Ancient Civilizations of Andean South America.

173P. Cultures of Middle America.

173Q. Latin American Communities.

174P. Ethnography of South American Indians.

Sociology 131. Latin American Societies.

Theory and Methods

Anthropology 115P. Archaeological Field Training.

115Q. Archaeological Research Techniques.

115R. Strategy of Archaeology.

116P. Laboratory Analysis in Archaeology.

M116Q. Dating Techniques in Environmental Sciences and Archaeology (same as Geography M178).

118A, 118B. Museum Studies.

136P. Ethnology: Field Training.

M136Q. A Laboratory for Naturalistic Observations: Developing Skills and Techniques (same as Psychology M155).

137. Ethnography on Film.

138. Methods and Techniques of Ethnohistory.

186A-186B. Quantitative Methods and Models in Anthropology.

199. Special Studies.

Sociology 109. Introduction to Sociological Research Methods.

115. Experimentation and Laboratory Methodology in Sociology.

116. Introduction to Mathematical Sociology.

199. Special Studies.

(B) Economics

Economics 110. Economic Problems of Underdeveloped Countries.

111. Theories of Economic Growth and Development.

112. Policies for Economic Development.

190. International Economics.

191. International Trade Theory.

192. International Finance.

Theory and Methods

Economics 103A-103Z. Applications of Economic Theory.

M135. Economic Models of the Political Process (same as Political Science M103).

199. Special Studies.

Management 197. Special Topics in Management.

(C) History

History 165A-165B. Colonial Latin America.

166. Latin America in the 19th Century.

167A-167B. Latin America in the 20th Century.

168. History of Latin American International Relations.

169. Latin American Elitelore.

170. Latin American Cultural History.

171. The Mexican Revolution since 1910.

173. Modern Brazil.

174. Brazilian Intellectual History.

197. Undergraduate Seminar: Latin America.

Theory and Methods

History 101. Introduction to Historical Practice.

199. Special Studies.

Library and Information Science 111C. Ethnic Groups and Their Bibliographies: Latino History and Culture.

(D) Political Science

Political Science 131. Latin American International Relations.

139A-139Z. Special Studies in International Relations: Latin America.

149A-149Z. Special Studies in Politics: Latin America.

163A, 163B. Government and Politics in Latin America.

M169A-M169Z. Special Studies in Comparative Government: Latin America.

C197B. Seminar for Majors: Latin America.

199. Readings in Political Science: Latin America.

Theory and Methods

Political Science C102. The Statistical Analysis of Political Data.

M103. Economic Models of the Political Process (same as Economics M135).

104A-104B. Introduction to Survey Research.

119A-119Z. Special Studies in Political Theory.

137. International Relations Theory.

146. Political Behavior Analysis.

168S. Comparative Political Analysis.

(E) Geography

Geography 121. Conservation of Resources: Underdeveloped World.

128. The World's Ecosystems: Problems and Issues.

181. Middle America.

182A. Spanish South America.

182B. Brazil.

Theory and Methods

Geography 170. Presentation and Analysis of Geographic Data.

171. Quantitative Analysis.

(F) Electives

Anthropology 132. Technology and Environment.

150. Comparative Society.

153A-153B. Production and Exchange in Traditional Societies.

161. Development Anthropology.

M163. Women in Culture and Society (same as Women's Studies M163).

167. Urban Anthropology.

Economics 120. Introduction to Urban and Regional Economics.

121. Urban Economic Analysis.

180. Comparative Economic Systems.

Geography M102. Geomorphology (same as Architecture and Urban Planning M196).

118. Medical Geography.

129. Problems of the Environment: Seminar.

140. Political Geography.

142. Population Geography.

148. Economic Geography.

152. World Cities.

History 159A-159B. History of the Chicano Peoples.

Latin American Studies 197. Interdisciplinary Topics in Latin American Studies.

199. Special Studies in Latin American Studies.

Political Science 123. International Organization and Administration.

124. International Political Economy.

167. Ideology and Development in World Politics.

183. Administration of International Agencies and Programs.

188A. Comparative Public Administration.

188B. Comparative Urban Government.

191. Urban and Regional Planning and Development.

Sociology 120. Social Change.

123. Social Stratification.

126. Social Demography.

140. Political Sociology.

(III) Ecology and Environment Core

Geography 121. Conservation of Resources: Underdeveloped World.

128. The World's Ecosystems: Problems and Issues.

181. Middle America.

182A. Spanish South America.

182B. Brazil.

Public Health 174E. Health, Disease and Health Services in Latin America.

186. The World's Population and Food.

Theory and Methods

Geography 170. Presentation and Analysis of Geographic Data.

171. Quantitative Analysis.

Public Health 100A, 100B, 100C. Introduction to Biostatistics.

181. Introduction to Social Research Methods in Health.

Electives

Anthropology 132. Technology and Environment.

153A-153B. Production and Exchange in Traditional Societies.

167. Urban Anthropology.

Economics 120. Introduction to Urban and Regional Economics.

Geography M102. Geomorphology (same as Architecture and Urban Planning M196).

118. Medical Geography.

129. Problems of the Environment: Seminar.

140. Political Geography.

142. Population Geography.

148. Economic Geography.

152. World Cities.

Latin American Studies 197. Interdisciplinary Topics in Latin American Studies.

199. Special Studies in Latin American Studies.

Public Health 161. Nutrition and Health (½ course).

173. Population, Ecology and Health.

Sociology 126. Social Demography.

Law

(Office: 1242 Law)

The School of Law does not offer an undergraduate degree. For detailed information on graduate degrees offered by this School, please consult the *Announcement of the UCLA School of Law.*

Library and Information Science

(Office: 120 Powell Library Building)

The Graduate School of Library and Information Science does not offer an undergraduate degree. The following upper division courses are offered with enrollment restrictions as indicated:

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 methodology. 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). Not open for credit to M.L.S. students. 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 PL/1 (programming language) suitable for librarians, students of language and literature and similar disciplines. Concept of text 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 computers, programming or MARC required. There will be a lab fee for this course.

Graduate Courses

For complete descriptions of graduate-level courses offered by this School, please consult the *UCLA Graduate Catalog.*

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).*
Sandra A. Thompson, Ph.D., *Professor of Linguistics.*
George D. Bedell, Ph.D., *Associate Professor of Linguistics.*
Thomas J. Hinnebusch, 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 G. 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.*
Timothy A. Stowell, Ph.D., *Visiting Assistant Professor of Linguistics.*

•

Roger W. Andersen, Ph.D., *Associate Professor of English.*
Christiane A. M. Baltaxe, Ph.D., *Adjunct Associate Professor of Psychiatry.*
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.*
Michael S. Flier, Ph.D., *Professor of Slavic Languages.*
Jose Galvan, Ph.D., *Lecturer in English.*
Patricia M. Greenfield, Ph.D., *Professor of Psychology.*
Evelyn R. Hatch, Ph.D., *Professor of English.*
Frances B. Hinofotis, Ph.D., *Associate Professor of English.*

Robert S. Kirsner, Ph.D., *Associate Professor of Dutch-Flemish and Afrikaans.*
Paul V. Kroskrity, 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. Otero, 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. Schegloff, Ph.D., *Professor of Sociology.*
John A. Schumann, Ph.D., *Associate Professor of English.*
Michael Shapiro, Ph.D., *Professor of Russian Linguistics and Poetics.*
Alan H. Timberlake, 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 Zaidel, Ph.D., *Associate Professor of Psychology.*

Undergraduate Majors

The majors described below are of three types: (1) a major which concentrates entirely on general linguistics; (2) several majors which combine the basic courses of the general program with a language concentration or other related fields; and (3) a major which concentrates entirely on an African language area. The combined majors in conjunction with teacher certification programs are especially appropriate for students who have nonuniversity teaching careers as goals, and the African major is for students with specific African interests.

The Major in Linguistics

This major should be elected only by students with an exceptional interest in and aptitude for the study of languages and linguistics. It enables the undergraduate to gain substantial familiarity with several languages and types of linguistic structure, and to become conversant with the historical study of language and formal theories of linguistics.

Preparation for the Major: In the lower division, in addition to the general University requirements, the student must complete the equivalent of the sixth quarter of work in two foreign languages or the sixth quarter in one language and the third quarter in each of two others. In addition the student must take Linguistics 1 and two of the following three courses: Philosophy 31, Psychology 10, one course in cultural anthropology.

The Major: A minimum of eleven upper division or graduate courses which must include Linguistics 100, 103, 110, 120A, 120B or 127, and either 164, C165A or C165B (both C165A and C165B are strongly recommended for students planning to go into linguistics graduate work; course 164 is recommended for students *not* planning to go into linguistics graduate work); the remaining courses are electives, three of which must be upper division linguistics courses, to be selected by the student subject to the approval of his advisor. These electives have typically been selected from the following list, though it is not exhaustive: Linguistics 104, 120B, 125, 127, 130, M135, 140, M146, M150, 160, C165A, C165B, 170, 175, 180, 195, 199 (if four units), African Languages 190, Anthropology 143B, Philosophy 127A, 127B, 172, Psychology 122, 123, English 121, 122, 123 or advanced courses in a foreign language or literature (those beyond the sixth quarter of language instruction). In addition to the eleven upper division courses, at least three courses (which may be either upper or lower division) are required in a language other than those in the Romance, Slavic or Germanic families. These courses may be applied toward fulfillment of the foreign language requirement described above under "Preparation for the Major." A student who completes an advanced language course is considered to have completed the equivalent of whatever courses are prerequisite to that one: e.g., if he completes French 101, he has automatically satisfied the requirement of the sixth quarter of work in one language.

Course 195 is recommended for students planning to pursue graduate work in linguistics at UCLA, or indeed anywhere, since it provides a unique opportunity to engage in independent research and to write a paper which can be used as evidence by graduate admissions committees. To enroll in course 195, the student must consult with the department's Senior Essay Counselor.

Honors in Linguistics

Honors in Linguistics will be awarded at graduation to those students who have a grade-point average of 3.6 or better in their junior and senior years and who have received a grade of "A" in Linguistics 195.

The Major in Linguistics and Computer Science

Preparation for the Major: Linguistics 1, Engineering 10C, Computer Science 20, 30, Philosophy 31, completion of the sixth quarter in a foreign language and the third quarter in a second foreign language. A mathematics background to precalculus or beyond is strongly recommended.

The Major: Fourteen upper division courses as follows: Linguistics 100, 103, 104, 120A, 120B or 127, 164, 180, two upper division electives in linguistics, Computer Science 111, 131, 132, 141, 181.

The Major in Linguistics and English

Preparation for the Major: Linguistics 1, English 3, 10A, 10B, 10C, Philosophy 31, completion of the sixth quarter of work in two foreign languages or the sixth quarter in one foreign language and the third quarter in each of two other foreign languages.

The Major: Fifteen upper division courses as follows: Linguistics 100, 103, 110, 120A, 120B or 127, 164, two upper division electives from other linguistics courses or English 123; English 121, 122, 140A and four electives chosen from 141A, 141B, 142A, 142B, 143, the 150 series (one course only), the 160 series (one course only), the 170 series (one course only).

The Major in Linguistics and French

Preparation for the Major: Linguistics 1, French 1-6, 12, 15, completion of the sixth quarter of work in one other foreign language or the third quarter in each of two other foreign languages.

The Major: Sixteen upper division courses as follows: Linguistics 100, 103, 110, 120A, 120B or 127, 164, two upper division electives in linguistics, French 100A, 100B, 100C, 103, 105, 106 and two elective upper division literature courses.

The Major in Linguistics and Italian

Preparation for the Major: Linguistics 1, Italian 1-6, 25, Latin 1-3, completion of the third quarter in another foreign language or the sixth quarter in Latin, Philosophy 31, one course in cultural anthropology.

The Major: Thirteen upper division courses as follows: Linguistics 100, 103, 110, 120A, 120B or 127, 164, two upper division electives in linguistics, Italian 102A, 130 and three additional upper division electives in Italian.

The Major in Linguistics and Oriental Languages

Preparation for the Major: Completion of the sixth quarter in either Chinese or Japanese; Linguistics 1; Philosophy 31; one course in cultural anthropology; either Oriental Languages 40A or 40B, as appropriate; completion of the sixth quarter in another foreign language or the third in each of two others.

The Major: Linguistics 100, 103, 110, 120A, 120B or 127, 164, one upper division elective in linguistics; for the classical Japanese track: Oriental Languages 119A-119B, 129, 137, 175, 179A, 179B; for the modern Japanese track: Oriental Languages 119A-119B, 175, three courses chosen from 134A, 134B, 142A, 142B, 145, 153A, 153B; for the classical Chinese track: Oriental Languages 13A-13B-13C, 113A-113B, two courses chosen from 152A, 152B, 163A, 163B, 163C; for the modern Chinese track: Oriental Languages 121A-121B-121C, four courses chosen from 122A, 122B, 124A, 124B, 124C, 126, 151A, 151B.

The Major in Linguistics and Philosophy

Preparation for the Major: Linguistics 1; Philosophy 31 and two courses from 1, 6, 7, 21; completion of the sixth quarter in each of two foreign languages or the sixth quarter in one language and the third quarter in each of two others.

The Major: Fourteen upper division courses as follows: Linguistics 100, 103, 120A, 120B or

127, C165B, three upper division electives in linguistics; six upper division courses in Philosophy including at least five from 125-135, 170-174 and 184-188, of which at least two must be from 127A, 127B, 172.

The Major in Linguistics and Psychology

Preparation for the Major: Linguistics 1, Psychology 10, 41, 42, completion of the sixth quarter in a foreign language and the third quarter in a second foreign language. Engineering 10 strongly recommended.

The Major: Fourteen upper division courses as follows: Linguistics 100, 103, 120A, 120B or 127, 130, 195, two upper division electives in linguistics, Psychology 110, 120, 121, 122 or 123, 130 and the remaining elective to be chosen from 112A, 112B, 112C, 112D, 112E, 115, 116, 124B, 135, 137A. Linguistics 164 and Psychology 115 are strongly recommended.

The Major in Linguistics and Scandinavian Languages

Preparation for the Major: Linguistics 1, Scandinavian Languages 1-5 or 11-15 or 21-25, 30, completion of the sixth quarter in one other foreign language or the third quarter in each of two other foreign languages.

The Major: Fourteen upper division courses as follows: Linguistics 100, 103, 110, 120A, 120B or 127, 164, two upper division electives in linguistics, Scandinavian Languages 105 and 106 or 110 twice, 199 (in a topic related to Scandinavian linguistics, under the direction of a Scandinavian or Linguistics faculty member) and three upper division electives in Scandinavian.

The Major in Linguistics and Spanish

Preparation for the Major: Linguistics 1, Spanish 1-5, 25, M42, M44, completion of a sixth quarter of work in one other foreign language or the third quarter in each of two other foreign languages.

The Major: Fifteen upper division courses distributed as follows: Linguistics 100, 103, 110, 120A, 120B or 127, 164, two additional upper division courses in linguistics (preferably 130 and 170), Spanish 100, 103, 115 or M118, 119 and three additional upper division courses in Spanish.

The Major in African Languages

Preparation for the Major: In the lower division, in addition to the general University requirements, the student must complete Linguistics 1 and nine courses in African languages (1-42, 199), six in one language and three in another.

The Major: A minimum of fifteen upper division courses which must include three courses in an African language; African Languages 150A-150B, 190, 192; Linguistics 100, 103; three courses selected from English 114, 123, Geography 189, History 125A, 125B, 125C, 126A, 126B, 127A, 127B, 128A, 128B, Linguistics 110, 120A, 120B or 127, 140, M146, 170, Music 143A, 143B, Political Science 166A, 166B, 166C. Linguistics 164 and completion of the sixth quarter in one of the following non-African languages are strongly recommended: French, Dutch-Flemish-Afrikaans, German, Portuguese, Arabic.

General Linguistics

Lower Division Courses

1. Introduction to the Study of Language. A summary, for the general undergraduate, of what is known about human language; the unique nature of human language, its structure, its universality, and its diversity; language in its social and cultural setting; language in relation to other aspects of human inquiry and knowledge.

2. Language and Social Issues. Prerequisite: course 1 or consent of instructor. A survey of linguistic problems that have social or political importance. Topics to be discussed include minority languages and dialects (particularly "Black English" and Chicano-American), bilingualism, literacy, second-language education and language standardization in developing and developed nations.

5. Language in Africa. A survey of the languages spoken in Africa and their social and cultural context; languages found on the African continent; history of African language study; literature in African languages; African languages in the mass media; language policy and planning in modern Africa.

10. The Structure of English Words. Lecture, three to four hours. An introduction to the structure of English words of classical origin including the most common base forms and the rules by which alternate forms are derived. The student may expect to achieve substantial enrichment of his vocabulary while learning also about etymology, semantic change, and abstract rules of English word formation.
Mr. Stockwell

*Upper Division Courses

100. Introduction to Linguistics. An introduction to the theory and methods of linguistics: universal properties of human language; phonetic, phonological, morphological, syntactic, and semantic structures and analysis; the nature and form of grammar.

103. Introduction to General Phonetics. Prerequisite: course 100 or equivalent (course 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 the perception and production of such phenomena. A special section emphasizes those languages likely to be of interest to teachers of English as a Second Language. Ms. Keating, Mr. Ladefoged

104. Experimental Phonetics. Prerequisite: course 103. Survey of the principal techniques of experimental phonetics. Use of laboratory equipment for recording and measuring phonetic phenomena.
Ms. Keating, Mr. Ladefoged

110. Introduction to Historical Linguistics. Prerequisites: courses 100, 103. The methods and theories appropriate to the historical study of language, such as the comparative method and method of internal reconstruction. Sound change, grammatical change, semantic change.
Mr. Anttila, Mr. Schuh, Mr. Stockwell

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

114A. American Indian Linguistics. Prerequisite: course 100 strongly recommended; course 114A is not prerequisite to 114B. Survey of genetic, areal, and typological classifications 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. Ms. Munro

114B. American Indian Language Structures. Prerequisite: course 100 strongly recommended; course 114A is not prerequisite to 114B. Detailed introduction to the linguistic structure of three different American Indian languages, representing at least two separate genetic groupings. Ms. Munro

120A. Linguistic Analysis: Phonology. Prerequisites: courses 100, 103; course 120A is not prerequisite to 120B. Descriptive analysis of phonological structures in natural languages; emphasis on insight into the nature of such structures rather than linguistic formalization. Mr. Bedell, Mr. Bright, Mr. Hayes

120B. Linguistic Analysis: Grammar. Prerequisite: course 100; course 120A is not prerequisite to 120B. Descriptive analysis of morphological and syntactic structures in natural languages; emphasis on insight into the nature of such structures rather than linguistic formalization. Mr. Bedell, Mr. Bright, Mr. Stowell

125. Semantics. Prerequisite: course 120B. A survey of the most important theoretical and descriptive claims about the nature of meaning. Ms. Thompson

127. Syntactic Typology and Universals. Prerequisite: course 100. A study of the essential similarities and differences among languages in the grammatical devices they use to signal the following kinds of concepts: relations between nouns and verbs (case and word order), negation, comparison, existence/location/possession, causation, interrogation, reflexivization, relativization, attribution (adjectives), time (tense and aspect), and backgrounding (subordination). Data from a range of languages will be presented and analyzed. Mr. Keenan, Ms. Thompson

130. Child Language Acquisition: Introduction. Prerequisites: courses 100, 120A, 120B or consent of instructor. A survey of contemporary research and theoretical perspectives in the acquisition of language. Emphasis on linguistic interpretation of existing data with some attention to relationship with second language learning, cognitive development, and other topics. Includes discussion of acquisition of English and other languages, and universals of linguistic development. Ms. Keating

131. Child Language Acquisition (for Nonmajors). Prerequisite: course 1 strongly recommended. A survey of current knowledge of the acquisition of a first language by children, including some general processes of language learning and some specific cases from several languages. Some attention to animal communication, relation between language learning and teaching. Not open to Linguistics majors or Linguistics graduate students.

CM135. Theoretical Issues in Disorders of Language Development. (Same as Psychiatry and Biobehavioral Sciences CM135.) Prerequisites: courses 1 or 100 and 130 or 131 or consent of instructor. 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 each other will be examined. Such questions as the relationship of cognition to linguistic ability will be considered. Concurrently scheduled with Psychiatry CM237/Linguistics CM235. Graduate students will be expected to apply more sophisticated knowledge and produce a research paper of greater depth. Ms. Needleman

140. Linguistics in Relation to Language Teaching. Prerequisites: courses 120A, 120B. Aspects of linguistics in relation to the teaching of language with particular focus on the special problems entailed in the teaching of non-European languages.
Mr. Stockwell

M146. Language in Culture. (Same as Anthropology M140.) Prerequisite: upper division standing or consent of instructor. The study of language as an aspect of culture; the relation of habitual thought and behavior to language; and language and the classification of experience. The course offers a holistic approach to the study of language and emphasizes the relationship of Linguistic Anthropology to the fields of Biological, Cultural and Social Anthropology, as well as Archaeology. Mr. Kroskrity

M150. Introduction to Indo-European Linguistics. (Same as Indo-European Studies M150.) Prerequisites: one year of college-level study (course 3 or better, 8 units minimum) of either Greek or Latin and either German or Russian. A survey of the Indo-European languages from ancient to modern times; their relationships and their chief characteristics. Mr. Anttila

160. History of Linguistics Through the 19th Century. Prerequisites: courses 120A, 120B. Historical survey of the development of linguistics from Panini through the 19th century, including approaches to grammar, phonology, and language universals. Mr. Anttila, Mr. Bedell

164. Modern Theories of Language. Prerequisites: courses 120A and 120B or 127. A critical and historical survey of some of the central claims and types of supporting evidence put forward by transformational theory and by at least one other influential school of contemporary linguistics. About one-third of the course deals with phonology, the remainder with syntax and semantics. Students who plan to take courses C165A, C165B should not take 164. Mr. Schachter, Mr. Stowell

C165A. Linguistic Theory: Phonology. Prerequisite: course 120A. Concurrently scheduled with course C200A. 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. While the topics of coverage are the same for undergraduate and graduate students, the depth of reading required of graduate students is greater, with more primary sources included. Also, graduate students are expected to produce a substantially deeper and more thorough research paper. Mr. Anderson, Mr. Hayes

C165B. Linguistic Theory: Grammar. Prerequisite: course 120B or 127. Concurrently scheduled with course C200B. 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. While the topics of coverage are the same for undergraduate and graduate students, the depth of reading required of graduate students is greater, with more primary sources included. Also, graduate students are expected to produce a substantially deeper and more thorough research paper. Mr. Schachter, Mr. Stowell

170. Language and Society: Introduction to Sociolinguistics. Prerequisite: course 100 or consent of instructor. Study of the patterned covariation of language and society; social dialects and social styles in language; problems of multilingual societies.

175. Linguistic Change in English. Prerequisites: courses 110, 120A, 120B. Principles of linguistic change as exemplified through a detailed study of the history of English pronunciation, lexicon, and syntax. Mr. Stockwell

180. Mathematical Backgrounds for Linguistics. Prerequisites: courses 120A, 120B. Introduction to selected topics in set theory, logic and formal systems, modern algebra, and automata theory, with elementary applications to linguistics. In any given quarter one or more of these topics may be emphasized. No previous mathematics assumed. Mr. Keenan

195. Senior Essay. Prerequisites: consent of instructor; open only to Linguistics majors in their senior year. An extended piece of writing will be undertaken on a linguistic topic selected by the student to be completed under the supervision of a member of the faculty in Linguistics (either Linguistics Department or, as appropriate, some faculty of other departments). To enroll in this course the student must consult the professor in charge.

199. Special Studies in Linguistics (½ to 1 course). Prerequisites: courses 120A, 120B and consent of instructor. May be repeated for credit.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

African Languages

Lower Division Courses

1A-1B-1C. Elementary Swahili. (Formerly numbered 101A-101B-101C.) Lecture, five hours. The major language of East Africa, particularly Tanzania. Mr. Hinnebusch

2A-2B-2C. Intermediate Swahili. (Formerly numbered 102A-102B-102C.) Prerequisites: courses 1A-1B-1C or consent of instructor. Mr. Hinnebusch

7A-7B-7C. Elementary Zulu. (Formerly numbered 107A-107B-107C.) Lecture, five hours. The most widely spoken of the Nguni languages of South Africa, mutually intelligible with other members of this group. Mr. Kunene

8A-8B-8C. Intermediate Zulu. (Formerly numbered 108A-108B-108C.) Prerequisites: courses 7A-7B-7C or consent of instructor. Mr. Kunene

***9A-9B-9C. Elementary Xhosa.** (Formerly numbered 109A-109B-109C.) Lecture, five hours. A major Nguni language of South Africa, mutually intelligible with other members of this group. Mr. Kunene

***10A-10B-10C. Intermediate Xhosa.** (Formerly numbered 110A-110B-110C.) Prerequisites: courses 9A-9B-9C or consent of instructor. Mr. Kunene

***11A-11B-11C. Elementary Yoruba.** (Formerly numbered 111A-111B-111C.) Lecture, five hours. Prerequisite: consent of instructor. The major language of western Nigeria.

***12A-12B-12C. Intermediate Yoruba.** (Formerly numbered 112A-112B-112C.) Prerequisites: courses 11A-11B-11C or consent of instructor.

***13A-13B-13C. Elementary Igbo.** (Formerly numbered 113A-113B-113C.) Lecture, five hours. The major language of eastern Nigeria.

***14A-14B-14C. Intermediate Igbo.** (Formerly numbered 114A-114B-114C.) Prerequisites: courses 13A-13B-13C or consent of instructor.

***15A-15B-15C. Elementary Akan.** (Formerly numbered 115A-115B-115C.) Lecture, five hours. The major language of Ghana.

***21A-21B-21C. Elementary Fula.** (Formerly numbered 121A-121B-121C.) Lecture, five hours. The language of the Fulani, spoken in widely scattered areas of West Africa, including major concentrations in Guinea and the Nigeria-Cameroon area.

31A-31B-31C. Elementary Bambara. (Formerly numbered 131A-131B-131C.) Lecture, five hours. Prerequisite: consent of instructor. The major language of Mali, also widely spoken in adjacent parts of West Africa; includes Maninka (Malinke), Dyula, and other mutually intelligible dialects.

***32A-32B-32C. Intermediate Bambara.** (Formerly numbered 132A-132B-132C.) Prerequisites: courses 31A-31B-31C or consent of instructor.

41A-41B-41C. Elementary Hausa. (Formerly numbered 141A-141B-141C.) Lecture, five hours. The major language of northern Nigeria and adjacent areas. Mr. Schuh

42A-42B-42C. Intermediate Hausa. (Formerly numbered 142A-142B-142C.) Prerequisites: courses 41A-41B-41C or consent of instructor. Mr. Schuh

Upper Division Courses

103A-103B-103C. Advanced Swahili. Prerequisites: courses 2A-2B-2C or consent of instructor. Readings in Swahili literature and the contemporary press. Discussions mainly in Swahili. Mr. Hinnebusch

***133A-133B-133C. Advanced Bambara.** Prerequisites: courses 32A-32B-32C or consent of instructor. Readings in Bambara literature and the contemporary press. Discussions mainly in Bambara.

143A-143B-143C. Advanced Hausa. Prerequisites: courses 42A-42B-42C or consent of instructor. Readings in Hausa literature and the contemporary press. Discussions mainly in Hausa. Mr. Schuh

***150A-150B-150C. African Literature in English Translation.** Courses 150A and 150B may be taken independently for credit. Narrative and didactic oral prose and poetry of sub-Saharan Africa, and written prose and poetry of South Africa. Mr. Kunene

190. Survey of African Languages. An introduction to the languages of Africa, their distribution and classification, and their phonological and grammatical structures; illustrations from several representative languages, with appropriate language laboratory demonstrations and drills.

192. Comparative Studies in African Languages. Prerequisite: two quarter courses in an African language or course 190; Linguistics 110 is recommended as a prior or concurrent course. Comparison of structural and lexical features of a group of closely related languages, such as southern Bantu, southwestern Mande, Akan, or Senufo.

199. Special Studies in African Languages (½ to 1½ courses). Prerequisite: consent of instructor. Instruction or supervised research based on the needs of the individual student, in any language or group of languages for which appropriate facilities are available.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Indigenous Languages of the Americas

Lower Division Courses

18A-18B-18C. Elementary Quechua. (Formerly numbered 118A-118B-118C.) Lecture, five hours. The language of the Incas and its present day dialects, as spoken in Andean South America.

Related Upper Division Courses in Other Departments (Other than Language Courses)

Anthropology 143A. Field Methods in Linguistic Anthropology: Practical Phonetics.

143B. Field Methods in Linguistic Anthropology: Syntax, Semantics, Textual Cohesion.

English 121. The History of the English Language.

122. Introduction to the Structure of Present-Day English.

German (Germanic Languages) 137. Language and Linguistics.

Hebrew (Near Eastern Languages) 190A-190B. Survey of Hebrew Grammar.

Oriental Languages 175. The Structure of the Japanese Language.

Philosophy 127A, 127B. Philosophy of Language.

172. Philosophy of Language.

Portuguese (Spanish and Portuguese) 100. Phonology and Pronunciation.

103. Syntax.

M118. History of the Portuguese and Spanish Languages.

Psychology 122. Language and Communication.

123. Psycholinguistics.

Russian (Slavic Languages) 121. Russian Phonology.

122. Russian Morphology.

123. Historical Commentary on Modern Russian.

Sociology 144A. Conversational Structures I.

Spanish (Spanish and Portuguese) 100. Phonology and Pronunciation.

103. Syntax.

115. Applied Linguistics.

M118. History of the Portuguese and Spanish Languages.

Management

(Office: 3250 Graduate School of Management)

The Graduate School of Management (GSM) offers a variety of programs leading to graduate degrees at the master's and doctoral levels. The School also offers an Executive Program, research conferences and seminars for experienced managers; information about these programs may be obtained from the Office of Executive Education, 2381 GSM (825-2001).

Although the School does not offer an undergraduate major in management, undergraduate courses in management are open to all University students who have completed the necessary prerequisites. Enrollments in these courses are very limited, however. Non-GSM students are therefore forewarned not to count on gaining admission to them in order to meet the requirements of other departments or for any other necessity.

Lower Division Courses

1A-1B. Elementary Accounting. Prerequisite: sophomore standing. Course 1A is prerequisite to 1B. An introduction to accounting theory and practice. 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 accounts, manufacturing and cost accounting, and supplementary statements.

Upper Division Courses

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: Mathematics 2, 4A-4B, Management 115 or equivalent. Survey of management science from an applied rather than theoretical viewpoint. Emphasis on the formulation of mathematical models and the most basic techniques for obtaining useful results. Problem types discussed: allocation, competition, inventories, networks, project management, waiting lines, replacement, sequencing, transportation.

113B. Computer Programming Methods. Prerequisite: Engineering 10 or Management 13 or 404 or equivalent experience with some general purpose programming language. Use of PL/C and PL/1 for programming management applications. Sequential and nonsequential file processing. Data considerations. Report generation. Computational algorithms. Considerations of program structure. Extensive programming assignments.

Mr. Carmichael, Mr. Sprowls

113C. Interactive Computing for Management. Prerequisite: Engineering 10 or Management 13 or 404 or equivalent experience with some general purpose programming language. Conversational, interactive computing for management applications. Problem logic, array processing, file handling, formating and report generation, graphics and user dialogues are covered. Examples are drawn from various aspects of management. Extensive programming assignments (using APL) are required.

Mr. McLean

115. Business Statistics. Prerequisites: Mathematics 2, 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 principles of index numbers. Applications to the analysis of and the decision-making aspects of everyday business problems.

120. Intermediate Accounting. Prerequisites: courses 1A-1B or consent of instructor. The preparation of the principal accounting statements. Recording, valuation and presentation of cash, temporary investments, receivables, inventories, investments, plant and equipment, intangibles, current obligations, long-term debt, paid-in capital and retained earnings. Statement analysis. Statement of application of funds.

122. Cost 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.

124. 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; receiverships; 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 firms large and small, corporate and noncorporate. The emphasis is on financial planning and developing judgment in formulating decisions on financial problems. Financial problems are also considered in their social, legal and economic effects.

Mr. Andersen, Mr. Dominguez, Mr. May

133. Investment Principles and Policies. Prerequisite: course 130. Principles underlying investment analysis and policy; salient characteristics of governmental and corporate securities; policies of investment companies and investing institutions; relation of investment policy to money markets and business fluctuations; security price-making forces; construction of personal investment programs.

Mr. Eiteman, Mr. Shelton

140. Elements of Production and Operations Research. Prerequisite: course 111 or equivalent. Principles and decision analysis 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, facilities design, and the design of control systems for production operations.

150. Elements of Industrial Relations. Principles and methods of effectively utilizing human resources in organizations. The relationship between social, economic and other environmental factors and current problems in industrial relations.

Mr. Fogel, Mr. Hutchinson, Mr. Mitchell

175. Elements of Real Estate and Urban Land Economics. An examination of business decision making as related to logical forces shaping cities and influencing real estate market functions and land uses. Emphasis is placed on decision making as it relates to appraising, building, financing, managing, marketing and using urban property.

Mr. Case, Mr. Clapp, Mr. Mittelbach

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 of group process, 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 organizations. 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

For complete descriptions of graduate-level courses offered by this School, please consult the *UCLA Graduate Catalog*.

Mathematics

(Office: 6356 Math Sciences)

Richard F. Arens, Ph.D., *Professor of Mathematics.*
Donald G. Babbitt, Ph.D., *Professor of Mathematics.*
Kirby A. Baker, Ph.D., *Professor of Mathematics.*
A. V. Balakrishnan, Ph.D., *Professor of Mathematics and Engineering and Applied Science.*
Robert J. Blattner, Ph.D., *Professor of Mathematics (Chair).*
Robert F. Brown, Ph.D., *Professor of Mathematics.*
Friedrich Busse, Ph.D., *Professor of Mathematics and Earth and Space Sciences.*
David G. Cantor, Ph.D., *Professor of Mathematics and Engineering and Applied Science.*
C. C. Chang, Ph.D., *Professor of Mathematics.*
[14]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.*
[14]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.*
[6]Edward Effros, Ph.D., *Professor of Mathematics.*

[6]Björn 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.*
[7]John Garnett, Ph.D., *Professor of Mathematics.*
David Gieseker, 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 (Vice-Chair, Administrative).*
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 I. Jennrich, Ph.D., *Professor of Mathematics and Biomathematics.*
Paul B. Johnson, Ph.D., *Professor of Mathematics.*
[14]Paul J. Koosis, Ph.D., *Professor of Mathematics.*
Thomas M. Liggett, Ph.D., *Professor of Mathematics.*
[6]D. Anthony Martin, *Professor of Mathematics.*
Ronald Miech, Ph.D., *Professor of Mathematics.*
John J. Millson, Ph.D., *Professor of Mathematics.*
Ylannis N. Moschovakis, Ph.D., *Professor of Mathematics.*
Barrett O'Neill, Ph.D., *Professor of Mathematics.*
Stanley J. Osher, Ph.D., *Professor of Mathematics.*
[14]Lowell J. Paige, Ph.D., *Professor of Mathematics.*
Sidney Port, Ph.D., *Professor of Mathematics.*
[6]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. Shapley, 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.*
[6]V. S. Varadarajan, Ph.D., *Professor of Mathematics.*
James White, Ph.D., *Professor of Mathematics.*
[6]N. Donald Ylvisaker, 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.*
[6]S. Y. Alice Chang, Ph.D., *Associate Professor of Mathematics.*
Pamela Cook-Ioannidis, Ph.D., *Associate Professor of Mathematics.*
Rodolfo De Sapio, Ph.D., *Associate Professor of Mathematics.*
[7]Richard T. Durrett, Ph.D., *Associate Professor of Mathematics.*
Richard S. Elman, Ph.D., *Associate Professor of Mathematics.*
[6]David Gillman, Ph.D., *Associate Professor of Mathematics.*
[9]Mark Green, Ph.D., *Associate Professor of Mathematics.*
Charles G. Lange, Ph.D., *Associate Professor of Mathematics.*
John R. Steel, 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.*

Undergraduate Programs

Students who wish advice or current information on any of the undergraduate mathematics programs should inquire at the Undergraduate Mathematics Office, 6356 Math Sciences.

Courses taken to fulfill any of the requirements for any of the Mathematics Department's majors must be taken for a letter grade and not on a Passed/Not Passed basis.

Preparation for the Major

Required: Mathematics 31A, 31B, 32A-32B, 33A, 33B (this is the revised calculus sequence; students who have completed the former course 31C must complete the old sequence 31A-31B-31C, 32A-32B, 32C) or the corresponding courses in the honors sequence. These courses must be completed with an average grade of "C" or higher. Prospective majors who qualify are strongly urged to take the honors sequence (Mathematics 31AH-31BH, 32AH-32BH, 33AH-33BH). Also required: Engineering 10C (Engineering 10F may be substituted for Engineering 10C) and three courses in physical sciences chosen from Chemistry 11 or 11H sequences (formerly Chemistry 1 or 3), Physics 6, 8 or 8H sequences, Astronomy 101, Atmospheric Sciences 3H (former Atmospheric Sciences courses 10, 40A, 40B are also acceptable) or approved upper division courses in chemistry, atmospheric sciences, earth and space sciences and physics.

Transfer Students

Transfer students and UCLA students wishing to change their major to Mathematics, with 60 or more quarter units of credit, must have completed one year of calculus and have a "C" average or better in all college-level mathematics courses completed. Transfer students should consult with a departmental advisor at their earliest opportunity. Particular areas where evaluation and direction may be necessary are linear algebra and differential equations.

The Major

Required: Mathematics 110A, 115, 120A, 131A-131B and at least five additional courses numbered between 105 and 199. Students who wish to pursue a graduate degree in mathematics are urged to take several more than this minimum of ten courses. Strongly recommended as preparation for graduate study: course 132 and (for pure mathematics) courses 110B-110C and a reading knowledge of French, German or Russian.

Honors Calculus Sequence

The first- and second-year honors sequence, Mathematics 31AH-31BH, 32AH-32BH, 33AH-33BH, is intended for students (not necessarily Mathematics majors) who have a strong interest in mathematics and desire a broader and more comprehensive and demanding introduction to university-level topics. On occasion, the courses may range beyond the stated topics of calculus, linear algebra and differential equations. Admission to the sequence is by consent of instructor. The preliminary examination in mathematics is required. Students who have done unusually well in the standard sequence are welcome to apply for transfer to the honors sequence. (The honors sequence is not connected with the Undergraduate Honors Program described below.)

Undergraduate Honors Program

A student majoring in Mathematics and wishing to graduate with Honors in Mathematics should apply for admission to the Honors Program. This may be done any time after the fourth undergraduate quarter. Minimum entrance requirements for fifth-quarter students are the completion of courses 31A, 31B, 32A-32B with three "A's" and one "B". Applications from students past the fifth quarter and from transfer students will be judged on prospects for successful completion of the program. Honors will be granted to students in the program who in addition to the usual course requirements: (a) complete courses 110B-110C or 110BH-110CH or approved graduate substitutes; (b) complete course 190, Honors Mathematics Seminar; (c) earn a grade-point average of at least 3.6 in approved upper division and graduate mathematics courses. Students who demonstrate exceptional achievement will be awarded Highest Honors.

Departmental Scholar Program in Mathematics

This program allows exceptionally promising undergraduates to enroll in graduate courses and begin work toward the master's degree in Mathematics. See "Departmental Scholar Program" in the section on the "College of Letters and Science."

The Major in the Teaching of Mathematics

Mathematics 101A-101B-101C, 102A-102B, 152A, 370 and at least three other courses in the 100 series beyond 105 are required. Highly recommended are courses 106, 111A-111B-111C, 115, 120A-120B, 131A-131B, 132, 140A, 142, 144, 152B. A knowledge of Spanish is recommended for students who intend to teach in the Southwest.

Note: Due to the infrequent offering of courses 101A-101B-101C and 102A-102B, students should consult the Mathematics Department undergraduate counselor in 6356 Math Sciences for information.

The Major in Mathematics/Applied Science

This is a program designed for students with a substantial interest both in mathematics and its applications to related fields.

Preparation for the Major: Mathematics 31A, 31B, 32A-32B, 33A, 33B (this is the revised calculus sequence; students who have completed the former course 31C must complete the old calculus sequence 31A-31B-31C, 32A-32B, 32C) with an average grade of "C" or better are required.

The Major: Seven courses in mathematics in the 100 series chosen from those numbered 110 and above with an average grade of "C" or better are required, as are seven upper division courses chosen from not more than two related departments approved by the Mathematics/Applied Science Curriculum Committee of the Mathematics Department.

Students contemplating this major normally apply during their sophomore year, at which time a proposed program of study is drawn up in consultation with a committee member. At least five of the courses from the related discipline must be taken after the program has been approved. Students who will have 135 or more units by the end of the quarter in which entrance to the program is sought will not be admitted.

Actuarial Plan (Under the Mathematics/Applied Science Major)

The following package of courses is designed especially for students interested in actuarial science. Anyone may use it as a plan under the Mathematics/Applied Science major. To change to this plan, just apply at the Undergraduate Mathematics Office, 6356 Math Sciences.

Preparation for the Major: Mathematics 31A, 31B, 32A-32B, 33A, 33B (this is the revised calculus sequence; students who have completed the former course 31C must complete the old calculus sequence 31A-31B-31C, 32A-32B, 32C), Engineering 10C, Economics 1, 2 or 100 are required. Economics 100 may not be counted as one of the upper division courses of the major. The lower division seminars in economics, Economics 3 and 4, are not required but are highly recommended.

The Major: Seven courses in mathematics, five in economics and two in management are required.

Five of the seven mathematics courses are specifically required. These are: Mathematics 115, 140A, 144, 152A, 152B. The student is to choose two other courses from the following list: Mathematics 113, 142, 151, M153.

The five required courses in economics are: Economics 101A, 101B, 102, 147, 160. One of the management courses, Management 111, is required. The remaining course is to be chosen from Management 133 or 190.

Variations of this program are possible with the consent of the Mathematics/Applied Science Curriculum Committee.

The Major in Mathematics/Computer Science

The major, the Pre-Mathematics/Computer Science major, the minimum standards for progress and the Honors Program in the major are described later in this section of the catalog.

The Major in Mathematics/System Science

The major is described later in this section of the catalog.

Changes in the 31-32 Calculus Sequence

The calculus sequence (courses 31A-31B-31C, 32A-32B, 32C) has been revised. The new sequence (courses 31A, 31B, 32A-32B, 33A, 33B) is now phased in.

For any special problems, contact the Undergraduate Mathematics Office, 6356 Math Sciences (825-4701).

Preliminary Examination in Mathematics

All students planning to enroll in Mathematics 3A or 31A are required to take and pass the mathematics section of the Chemistry/Mathematics Preliminary Examination during the enrollment period for the quarter in which they intend to enroll in these courses. This examination is designed to test the student's mastery of algebra and precalculus mathematics. During 1982-83 this preliminary examination is scheduled on September 28, 1982, for Fall Quarter; January 5, 1983, for Winter Quarter; and March 30, 1983, for Spring Quarter. These dates may be changed. The time and location of the examination will be posted outside the Precalculus Office, 6342 Math Sciences, and the Undergraduate Mathematics Office, 6356 Math Sciences.

Advanced Placement in Calculus

Students with transfer credit in calculus or Advanced Placement Test credit in calculus are exempt from the preliminary examination in mathematics. These students must consult the Mathematics Department undergraduate counselor in 6356 Math Sciences for appropriate advanced placement in the calculus sequences. (A departmental placement examination may be recommended.)

Students who have had a calculus course in high school but who do not have Advanced Placement Test credit have a choice: they may take calculus beginning again with a first calculus course (for 3A and 31A the preliminary examination is still required), or they may seek advanced placement, in which case they must consult the undergraduate counselor. (A departmental placement examination may be recommended.)

Students wishing placement in the 31AH honors calculus sequence must likewise take the preliminary examination in mathematics. Students wishing placement in the 32BH honors calculus sequence may need to pass a placement examination in mathematics. Enrollment in 31AH and 32BH is by consent of instructor. Before consent is obtained, students are advised to enroll in the corresponding non-honors course.

Advanced Placement Calculus AB and BC Tests: students who pass the AB Examination with a score of 3, 4 or 5 receive 5 units of credit and Mathematics 31A equivalency. Students who score 3, 4 or 5 on the BC Examination receive 10 units of credit and Mathematics 31A, 31B equivalency. Students who take both examinations will receive at most 10 units of credit.

Conflicts or Duplication of Calculus Sequences

Since each of the sequences (3A, 3B, 3C; 3A, 3E; 4A-4B; 31A, 31B, 32A-32B, 33A, 33B — and the former 31A-31B-31C, 32A-32B, 32C) has been designed in accordance with the requirements of majors in a particular group of departments, it will be difficult for students to transfer from one sequence to another. Good students who wish to pursue advanced mathematics should be able to enter course 32A after completing 3B. Credit will be given for at most one course in each of the following groups: (1) 31A, 31AH, 3A, 4A, 2B; (2) 3B, 3E, 4B; (3) 3C, 3E; (4) 31B, 31BH, 3B, 4B, 2C; (5) 32A, 32AH; (6) 32B, 32BH; (7) 33A, 33AH, 31C, 31CH; (8) 33A, 33AH, 32C, 32CH; (9) 33B, 33BH, 31C, 31CH.

Other changes should be made only with the concurrence of a departmental advisor who will determine the total allowable credit. Similar caution applies to transfer students entering with incomplete calculus sequences. Such students should be prepared to supply complete information as to texts used and chapters covered in their previous work. If necessary, a placement examination may be required.

Courses Taken Out of Order

A student may not take a mathematics course for credit if he has credit for a more advanced course which has the first course as a prerequisite.

Upper Division Mathematics Course Offerings

Mathematics 110A, 115, 120A, 131A-131B and 152A are offered each quarter. However, the full 110A-110B-110C sequence and other three-course sequences are usually offered only on a Fall-Winter-Spring schedule.

Lower Division Courses

1A. Intermediate Algebra (½ course). Mathematics 1A displaces 4 units on the student's Study List but yields 2 units credit toward the degree. Restrictions: Mathematics 1A may not be used to satisfy College breadth requirements. Not open for credit to students with credit for other mathematics courses. Arithmetical operations on the real numbers, algebraic notation, polynomials, rational exponents, linear and quadratic equations and inequalities, coordinate geometry. Intended for students requiring a review of elementary and intermediate algebra.

1B. Precalculus. Prerequisites: course 1A with a grade of "C – " or better or two and one half years of high school mathematics and satisfactory performance on a placement examination given the first class meeting. Not open for credit to students with credit for other mathematics courses except 38A-38B and 100. The function concept. Linear and polynomial functions and their graphs, zeroes of polynomials. Inverse, exponential and logarithmic functions. Trigonometric functions.

2. Finite Mathematics for Social Science Students. Prerequisite: three years of high school mathematics or course 1B. Finite mathematics consisting of elementary logic, sets, combinatorics, probability, vectors and matrices.

3A. Calculus for Life Science Students. Prerequisites: three and one-half years of high school mathematics (including trigonometry) and passing of the mathematics section of the Chemistry/Mathematics Preliminary Examination or completion of course 1B with a grade of "C – " or higher. Course 3A is not open for credit to students with credit in another calculus sequence. Techniques and applications of the differential calculus.

3B. Calculus for Life Science Students. Prerequisite: course 3A with a grade of "C – " or higher. Techniques and applications of the integral calculus.

3C. Calculus for Life Science Students. Prerequisite: course 3B with a grade of "C – " or higher. Functions of several variables, vectors, partial differentiation, and multiple integration.

3E. Calculus for Economics Students. Prerequisite: course 3A or 31A with a grade of "C – " or higher. Not open for credit to students with credit for courses 3B, 31B, 3C, 4B. Functions of several variables; techniques of graphing, partial derivatives, maxima and minima, Lagrange multipliers. Exponential functions.

4A-4B. Calculus for Social Science Students. Prerequisite: three years of high school mathematics (including trigonometry) or course 1B. **4A:** Functions, graphs, differentiation and integration with applications. **4B:** Further applications of the calculus, differential equations, functions of several variables.

15. Lower Division Seminars. Prerequisite: consent of instructor. Each quarter the department will offer a limited number of seminars in various branches of mathematics. The method of teaching will involve substantial student participation and enrollment will be limited to 15 students. Course may be repeated for credit.

31A. Calculus and Analytic Geometry. Prerequisites: at least three and one-half years of high school mathematics including some coordinate geometry and trigonometry and passing of the mathematics section of the Chemistry/Mathematics Preliminary Examination or completion of course 1B with a grade of "C – " or higher. Differential calculus and applications; introduction to integration.

31B. Calculus and Analytic Geometry. Prerequisite: course 31A with a grade of "C – " or higher or course 31AH. Transcendental functions; methods and applications of integration.

31AH-31BH. Calculus and Analytic Geometry, Honors Sequence. Prerequisites: satisfactory performance on the preliminary examination in mathematics or an additional Honors placement examination and consent of instructor. An honors sequence parallel to courses 31A, 31B.

31AL. Laboratory in Scientific Computing (½ course). Prerequisite: concurrent enrollment in (or completion of) course 31A. Introduction to scientific computing and elementary numerical analysis. Evaluation of functions: finding zeros and extrema of functions. Interpolation. Linear equations. Introduction to the BASIC and PASCAL computer languages. Students with credit for Engineering 10C, 10F or 10S may receive only one unit of credit for this course.

31BL. Laboratory in Scientific Computing (½ course). Prerequisites: completion of course 31AL and concurrent enrollment in (or completion of) course 31B. Introduction to scientific computing and elementary numerical analysis. Numerical quadrature. Solution of differential equations. Least squares and orthogonal polynomials. Further study of the PASCAL computer language and introduction to the FORTRAN computer language. Students with credit for Engineerig 10C, 10F or 10S may receive only one unit of credit for this course.

32A-32B. Calculus of Several Variables. Prerequisite: course 31B or 31BH. **32A:** Introduction to differential calculus of several variables. **32B:** Introduction to integral calculus of several variables.

32AH-32BH. Calculus of Several Variables, Honors Sequence. Prerequisites: course 31BH or 31B with a grade of "A" and consent of instructor. An honors sequence parallel to courses 32A-32B.

33A. Matrices and Differential Equations. Prerequisite: course 32A or 32AH. Introduction to matrix theory; introduction to differential equations.

33B. Infinite Series. Prerequisite: course 33A or 33AH or consent of instructor. Infinite sequences and series; complex numbers.

33AH-33BH. Matrices, Differential Equations and Infinite Series, Honors Sequence. Prerequisites: course 32BH or 32B with a grade of "A" and consent of instructor. An honors sequence parallel to courses 33A, 33B.

38A-38B. Fundamentals of Arithmetic. Lecture, three hours; laboratory, two hours. Prerequisites: sophomore standing, two years of high school mathematics. Designed for prospective elementary teachers (see also Mathematics 104). The real number system, its origins, development, structure, and use. Emphasis is on understanding of arithmetic procedures. The laboratory includes experience with aids and models. **38A:** May not be used to fulfill Letters and Science breadth requirement. Counting numbers and other subsystems of the rational numbers; sets; operations; relations; algorithms; measurement and approximation; applications. **38B:** Prerequisite: course 38A. May not be used to fulfill Letters and Science breadth requirement. The real numbers, functions; relations; elementary ideas of number theory; probability and statistics; the microcomputer and simple instructional programs. Other topics appropriate for the elementary classroom.

50A-50B. Elementary Statistics. Course 50A is not open to students with credit for Economics 40. Prerequisite to course 50A: three years of high school mathematics or course 1B or consent of instructor. Prerequisite to course 50B: course 50A. **50A:** Descriptive statistics, elementary probability, random variables, binomial and normal distributions. Large and small sample inference concerning means. **50B:** Linear regression and correlation, chi-square tests, design of experiments, analysis of variance, nonparametric statistics, computerized statistical analysis via prepackaged routines.

99. Individual Projects in Programming (½ course). Prerequisites: course 32A (or former course 31C), Engineering 10C or 10F and consent of instructor. Limited to majors in Mathematics, Teaching of Mathematics, Mathematics/Applied Science, Mathematics/Computer Science, Mathematics/System Science. Course may only be taken on a Passed/Not Passed basis and may be taken up to eight times. This is an unstructured course in computer programming. Students submit proposals for their own programming projects and, after approval, proceed to carry them out, either independently or in small groups. To pass this course students must submit a final report indicating what they have actually done, and evidence that they have successfully run computer programs.

Upper Division Courses

GENERAL AND TEACHER TRAINING

100. The Nature of Mathematics. Prerequisite: junior standing. Not open to students majoring in Mathematics, Engineering or physical science. A course designed to acquaint students in the arts, humanities, and social sciences with the nature of modern mathematics and the mathematical method.

101A-101B-101C. Topics in Algebra. Prerequisite: course 32A (or former course 31C). Course 101A is not open to students with credit for either course 110A or 117. A sequence intended primarily for prospective secondary teachers. Group theory, numbers and number systems, relations and equivalence, topics from elementary number theory, the rational numbers, integral domains, rings and fields, the real numbers, cardinals, complex numbers, polynomials, vector spaces, nonconstructibility, nonsolvability. (This course sequence may not be offered every year.)

102A-102B. Topics in Geometry. Prerequisite: course 32A (or former course 31C.) A sequence intended primarily for prospective secondary teachers. Axiomatic methods, advanced topics in Euclidean geometry, hyperbolic and other geometries, constructions, symmetries, isometry and related topics, projective geometry, map coloring, Jordan curve theorem. (This course sequence may not be offered every year.)

104. Fundamental Concepts of Geometry. Lecture, three hours; laboratory, two hours. Prerequisite: two years of high school mathematics including geometry. Designed for prospective elementary teachers (see also Mathematics 38A-38B). Plane and solid Euclidean geometry; axioms, parallels, congruence, similarity, area and volume, geometric constructions; non-Euclidean geometry.

106. History of Mathematics. Prerequisite: course 32A (or former course 31C). Topics in the history of mathematics with emphasis on the development of modern mathematics.

ALGEBRA, NUMBER THEORY AND LOGIC

110A-110B-110C. Algebra. Prerequisite: course 115 or consent of instructor. Course 110A is not open for credit to students with credit for course 101A or 101B or 117. **110A:** The ring of integers, integral domains, fields, polynomial domains, unique factorization. **110B:** Groups, structure of finite groups. **110C:** Further topics in rings and modules; field extensions, Galois Theory, applications to geometric constructions and solvability by radicals.

110AH-110BH-110CH. Algebra, Honors Sequence. Prerequisite: consent of instructor. An honors sequence parallel to courses 110A-110B-110C.

111A-111B-111C. Theory of Numbers. Prerequisite: course 115 or consent of instructor. Divisibility, congruences, Diophantine analysis, selected topics in the theory of primes, algebraic number theory, Diophantine equations.

112A-112B-112C. Set Theory and Logic. Prerequisites: courses 32A-32B, 33A, 33B (or former courses 32A-32B, 32C). Course **112A** deals with informal axiomatic set theory presented as a foundation for modern mathematics. **112B** and **112C** cover predicate logic, formalized theories. Gödel's completeness and incompleteness theorems.

113. Combinatorics. Prerequisites: courses 32A-32B, 33A, 33B (or former courses 32A-32B, 32C). Permutations and combinations, counting principles, recurrence relations and generating functions, combinatorial designs, graphs and trees, with applications including games of complete information. Combinatorial existence theorems, Ramsey's theorem.

114. Theory of Computability. Prerequisite: any course in mathematics numbered 110 to 198. Machines and recursive functions. Church's thesis. Gödel numbers, enumeration theorem, universal machines. Unsolvable problems. Relative recursiveness. Further topics selected from: word problems, arithmetical relations, subrecursive hierarchies, primitive recursive functions, computational complexity.

115. Linear Algebra. Prerequisite: course 33A (or former course 31C). Abstract vector spaces; linear transformations and matrices; determinants; similarity; eigenvalues and eigenvectors; inner product spaces; quadratic forms.

117. Algebra for Applications. Prerequisite: course 115. At most one of the courses 101A, 110A and 117 may be taken for credit. Integers, congruences; fields, applications of finite fields; polynomials; permutations, introduction to groups.

118. Combinatorial Algorithms. Prerequisites: courses 32A-32B, 33A, 33B (or former courses 32A-32B, 32C), Computer Science 141 (formerly Engineering 123A). Applied aspects of combinatorial mathematics including counting and enumeration; searching and sorting techniques; recurrence relations; graph algorithms; computational complexity.

GEOMETRY AND TOPOLOGY

120A-120B. Differential Geometry. Prerequisites: course 32B and either course 33A or former course 31C. Curves in 3-space, Frenet formulas, surfaces in 3-space, normal curvature. Gaussian curvature. Congruence of curves and of surfaces. Intrinsic geometry of surfaces, isometrics, geodesics, Gauss-Bonnet theorem.

121. Introduction to Topology. Prerequisite: course 131A. Metric and topological spaces, topological properties, completeness, mappings and homeomorphisms, the metrization problem.

122. Projective Geometry. Prerequisite: course 115. Projective spaces, especially lines and planes; homogeneous coordinates; the principles of duality; projectivities, the fundamental theorem, and the theorems of Desargues, Pappus, Steiner and Pascal.

ANALYSIS

131A-131B. Analysis. Prerequisites to course 131A: courses 32A-32B, 33A, 33B (or former courses 31C and 32A-32B). Prerequisites to course 131B: courses 131A and 115. **131A:** Real numbers, point set topology in $\mathbb{R}^n$ and in metric spaces, limits, continuity, derivatives, infinite sequences and series. **131B:** Functions of bounded variation, Riemann-Stieltjes integral, sequences and series of functions, multivariable differential calculus, implicit and inverse function theorems, extremum problems.

131AH-131BH. Analysis, Honors Sequence. Prerequisite: consent of instructor. An honors sequence parallel to courses 131A-131B. The courses 131AH-131BH, 132H form a full honors sequence in analysis.

132. Introduction to Complex Analysis. Prerequisites: courses 32A-32B, 33A, 33B (or former courses 31C and 32A-32B). Complex numbers, functions, differentiability, series, extensions of elementary functions, integrals, calculus of residues, conformal maps and mapping functions with applications.

132H. Introduction to Complex Analysis, Honors Course. Prerequisites: course 131BH and consent of instructor. An honors course parallel to course 132. The courses 131AH-131BH, 132H form a full honors sequence in analysis.

133. Integration on Manifolds. Prerequisite: course 131B. Integration theory for functions of several variables, multilinear algebra, differential forms, Stokes' Theorem on manifolds.

134. Measure and Integration. Prerequisite: course 131B or consent of instructor. An introduction to Lebesgue measure and integration.

135A-135B-135C. Differential Equations. Prerequisites: courses 32A-32B, 33A, 33B (or former courses 32A-32B, 32C). Course 131A is recommended. Systems of differential equations, linear systems, existence theory, stability of linear and almost linear systems, Lyapunov's Second Method, Sturm-Liouville problems, applications, linear partial differential equations, the wave equation, the heat equation and Laplace's equation.

APPLIED MATHEMATICS

140A-140B-140C. Numerical Analysis. Prerequisites: courses 32A-32B, 33A, 33B (or former courses 32A-32B, 32C), 115 and Engineering 10C or 10F. These courses are not normally open for credit to students with credit for courses 141A, 141B, Engineering 124A or former Computer Science M124A. These courses emphasize both theory, with error analysis, and applications. Analysis of numerical methods for the following areas: **140A:** Nonlinear equations, systems of linear equations, and eigenvalue problems. **140B:** Interpolation, approximation, fast Fourier transforms, differentiation, and integration. **140C:** Differential equations, systems of nonlinear equations, and optimization.

141A-141B. Applied Numerical Methods. Prerequisites: courses 32A-32B, 33A, 33B, 115 and Engineering 10C or 10F. These courses are not open for credit to students with credit for courses 140A, 140B, Engineering 124A or former Computer Science M124A. Introduction to scientific computing. These courses emphasize programming, algorithms, and applications. Case studies. Numerical methods and computer implementation for the following areas: **141A:** Nonlinear equations, systems of linear equations, optimization, interpolation, differentiation, and integration. **141B:** Differential equations, least squares approximation, Monte Carlo methods, and linear programming.

142. Introduction to Applied Mathematics. Prerequisites: courses 32A-32B, 33A, 33B (or former courses 32A-32B, 32C) or consent of instructor. An introduction to the fundamental principles and the spirit of applied mathematics. Emphasis is placed on the manner in which mathematical models are constructed for physical problems. Illustrations are drawn from many fields of endeavor (e.g., physical science, biology, economics, traffic dynamics, etc.).

143. Analytic Mechanics. Prerequisites: courses 32A-32B, 33A, 33B (or former courses 32A-32B, 32C). Foundations of Newtonian mechanics, kinematics and dynamics of a rigid body, variational principles and Lagrange's equations; calculus of variations, variable mass; related topics in applied mathematics.

144. Theory of Games and Linear Programming. Prerequisite: course 115 or consent of instructor. The basic theorems of two person zero-sum matrix games including the minimax theorem; applications to games of chance and strategy; principles of linear programming, the duality theorem, and simplex methods; applications to industrial and business problems.

145A-145B. Methods of Applied Mathematics. Prerequisites: courses 32A-32B, 33A, 33B (or former courses 32A-32B, 32C). Calculus of variations, linear integral equations (Volterra and Fredholm) and applications to differential equations, Fourier series and integrals, elements of tensor calculus, special topics as time permits.

PROBABILITY AND STATISTICS

The 150 and 152 sequences are parallel courses and transferring between them is not permitted.

150A-150B-150C. Probability and Statistics. Prerequisites: courses 32A-32B, 33A, 33B (or former courses 31C and 32A-32B). Course **150A** and the first half of **150B** constitute an introduction to probability theory. The second half of course **150B** and **150C** constitute an introduction to statistics. These courses emphasize both theory and applications.

151. Stochastic Processes. Prerequisites: courses 150A-150B or 152A and consent of instructor. An introduction to the theory and application of stochastic models, emphasizing Markov chains and pure jump processes; illustrations from queueing systems, point processes, birth and death processes, renewal theory; Poisson processes, Brownian motion.

152A-152B. Applied Mathematical Statistics. Prerequisite: course 32B or consent of instructor. A basic introductory course in the theory and application of statistical methods. This sequence condenses courses 150A-150B-150C into two quarters mainly by devoting less time to the underlying theory.

M153. Introduction to Computational Statistics. (Same as Biomathematics M153.) Prerequisite: course 150C or 152B or equivalent. Statistical analysis of data by means of package programs. Regression, analysis of variance, discriminant analysis, and analysis of categorical data. Emphasis will be on understanding the connection between statistical theory, numerical results, and analysis of real data.

169. Mathematics of Computer Graphics. Prerequisites: course 115, Engineering 10C and consent of instructor. Enrollment will be limited to 15 students. Study of curves, projective transformations, approximation theory, and other mathematical topics related to computer graphics. "Hands-on" use of computer-driven curve plotting facility. Seminar format; student presentation required.

190. Honors Mathematics Seminar. Prerequisites: admission to Mathematics Honors Program and consent of instructor. A participating seminar on advanced topics in mathematics.

191. Upper Division Seminars (½ to 1 course). Prerequisites: courses 32A-32B, 33A, 33B (or former courses 32A-32B, 32C) and consent of instructor. Each quarter the department will offer a limited number of seminars in various branches of mathematics. The method of teaching will involve substantial student participation and enrollment will be limited to 15 students. Course may be repeated for credit.

199. Special Studies in Mathematics (¼ to 1 course). Prerequisites: approval of departmental Chair and consent of instructor. At the discretion of the Chair and subject to the availability of staff, individuals or groups may study topics suitable for undergraduate course credit but not specifically offered as separate courses. Course may be repeated for credit, but no more than one 199 course may be counted toward the ten upper division courses required for the major.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Mathematics/ Computer Science (Interdepartmental)

(Office: 6356 Math Sciences)

Major in Mathematics/Computer Science

The Mathematics/Computer Science major, an alternate to the regular departmental major in Mathematics, consists of an integrated program of courses offered by the Department of Mathematics and the Computer Science Department (School of Engineering and Applied Science). In addition to the appropriate studies in mathematics, the interdepartmental major permits study in the principal disciplines of computer science, including theoretical foundations of computer science, methodology of computing, computer system design, programming languages and systems, and computer applications. The Mathematics Department can arrange advising appointments and can provide current information on changes in requirements. The major leads to the Bachelor of Science degree.

Pre-Mathematics/Computer Science Major

Students who intend to enter the Mathematics/Computer Science major but have not completed the courses required for entrance into the major must enroll in the Pre-Mathematics/Computer Science major. Entrance requirements are as follows:

(1) *Immediately after the freshman year (first three quarters of college or university work)*, students may apply for the Mathematics/Computer Science major if they have a minimum 3.3 GPA in all premajor courses and if the following courses have been completed with grades of "C" or better: Mathematics 31A, 31B, 32A, Engineering 10C, Computer Science 20, Physics 8A.

(2) *Students applying later than their fourth quarter of college or university work* are normally required to complete additional courses in preparation for the major and the major. They must have a minimum 3.3 GPA in all "Preparation for the Major" and major courses and must earn at least a "C" in each course.

(3) *Students transferring from other institutions*, in addition, must earn a 3.3 GPA in at least three "Preparation for the Major" and major courses at UCLA.

(4) *Students enrolled in the Pre-Mathematics/Computer Science major* by February 1982 should consult the Undergraduate Mathematics Office, 6356 Math Sciences, regarding the transition set of requirements and standards.

NOTE: Students should recognize that petitioning does not guarantee admission to the major (transcripts are required with the petition).

Students with 60 or more quarter units of college credit will not be admitted to the premajor unless they have completed one year of calculus and one computer programming course with grades of "C" or better.

Preparation for the Major

Mathematics 31A, 31B, 32A-32B, 33A, 33B (this is the revised calculus sequence; students who have completed 31C must complete the old sequence — 31A-31B-31C, 32A-32B-32C), Physics 8A, 8C, Engineering 10C, Computer Science 20, 30. Physics 8B is recommended.

Students with substantial knowledge of programming in the PASCAL language may be exempted from Engineering 10C by passing a special placement examination. This examination is given during registration week each quarter by the Computer Science Department. Students seeking exemption from other courses should consult a mathematics/computer science advisor.

The Major

Fourteen courses as follows: (1) Mathematics 110A, 115, 150B or 152A (normal order: 115, 110A, 152A or 150B; students may petition to substitute course 117 for course 110A); (2) four additional courses in mathematics chosen from those numbered 110 or above (suggested: 118, 141A, 141B, 142, 144, 152B or 150A, 153, 113, 114, 132, 140A, 140B, 140C); (3) Computer Science 181 (formerly Computer Science 123B), 131, 141, 151A and 152A, 151B and 152B (recommended order for Hardware: 151A with 152A, 151B with 152B; recommended order for Software: 131, 141, 181; 152A and 152B are laboratories counting ½ course each); (4) one additional course chosen from Engineering 121A, 121C, 124A, 127B or computer science courses numbered 100-199. Credit will not be allowed toward the major for more than one of Mathematics 140A, 141A, Engineering 124A. Management 210A is an approved substitute for Mathematics 144.

Minimum Standards

Each course taken in preparation for the Mathematics/Computer Science major and in the major itself must be completed with a grade of "C−" or higher. (Students who receive a "D" or "F" the first time they take a course must repeat the course. If a "D" or "F" is received the second time, they may not remain in the major unless they petition to do so and the petition is approved.) Furthermore, each student in the major must maintain an average of 2.0 or better in upper division mathematics courses in the major and a 2.0 or better in the upper division computer science and engineering courses in the major. Current UCLA students accepted into the Mathematics/Computer Science major before Fall 1980 must also meet these standards for the preparation for the major: (1) a minimum grade of "C−" in each course required as preparation and (2) a 2.0 average or better in all courses required as preparation.

Transfer Students

Eligible transfer students will normally be admitted only to the premajor. They should consult an advisor for the major at the earliest opportunity.

Honors Opportunities

Department Honors in Mathematics/Computer Science will be awarded at graduation to those students who (a) have been admitted to the Mathematics/Computer Science Honors Program, (b) have completed a suitable special project or participating seminar as part of the program and (c) at graduation, have a GPA of at least 3.6 in upper division mathematics courses in the major and 3.6 in upper division computer science and engineering courses in the major. Students may apply for admission to the program after having completed at least two upper division courses in mathematics and eight upper division units in computer science and engineering courses in the major. Application forms and further information can be obtained at the Undergraduate Mathematics Office, 6356 Math Sciences.

Departmental Scholar Program in Mathematics/Computer Science

This program allows exceptionally promising mathematics/computer science undergraduates to enroll in graduate courses and begin work toward the master's degree in Computer Science or the master's degree in Mathematics. See "Departmental Scholar Program" in the section on the "College of Letters and Science."

For further information, contact Sally Yamashita, Mathematics Counselor, 6356 Math Sciences (825-4701).

Mathematics/ System Science (Interdepartmental)

(Office: 6356 Math Sciences)

Major in Mathematics/System Science

This major is an alternate to the regular departmental major in Mathematics and combines work in the Department of System Science

(School of Engineering and Applied Science) with thorough preparation in mathematics, including those aspects significant in the theory of systems, information and control. The major is appropriate for students who plan graduate study in mathematics, applied mathematics or engineering, with emphasis on mathematically based research relevant to such fields as communication, computation, control, operations research, optimization, stochastic processes, system analysis. The major leads to the Bachelor of Science degree.

Preparation for the Major

Mathematics 31A, 31B, 32A-32B, 33A, 33B (this is the revised calculus sequence; students who have completed 31C must complete the old calculus sequence — 31A-31B-31C, 32A-32B-32C), Engineering 10C, Physics 8A or 6A, 8C or 6B.

The Major

Fourteen upper division courses as follows: (1) Mathematics 115 and five additional mathematics courses numbered between 110 and 199; (2) Engineering 121C and six other courses selected from Engineering 100, 110A, 110B, 120A, 122A, 128A, 128L, 129A; (3) one additional upper division course in biology, chemistry, economics (numbered 101 or above), mathematics (numbered between 110 and 199), physics or psychology. One of the fourteen courses must be either Mathematics 150A or Engineering 120A (credit will not be allowed toward the major for both). Due to the similarity of Mathematics 144 and Engineering 129A (formerly numbered 129L), credit will not be allowed toward the major for both courses.

Note: Students enrolled under the "OLD" Mathematics/System Science requirements (i.e., students enrolled in the major prior to Fall 1981) may petition to graduate under these "NEW" requirements.

For further information, contact Sally Yamashita, Mathematics Counselor, 6356 Math Sciences (825-4701).

Medicine

(Office: 12-109 Center for Health Sciences)

The School of Medicine does not offer an undergraduate degree. For detailed information on graduate degrees offered by this School, please consult the *Announcement of the UCLA School of Medicine.*

Meteorology

See Atmospheric Sciences

Microbiology

(Office: 5304 Life Sciences)

R. John Collier, Ph.D., *Professor of Microbiology.*
Frederick A. Eiserling, Ph.D., *Professor of Microbiology (Chair).*
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.*
John H. Silliker, Ph.D., *Adjunct Professor of Microbiology.*
Meridian Ruth Ball, 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.*
Bernadine Wisnieski, Ph.D., *Associate Professor of Microbiology.*
Arnold J. Berk, M.D., *Assistant Professor of Microbiology.*
Robert P. Gunsalus, Ph.D., *Assistant Professor of Microbiology.*
Owen N. Witte, M.D., *Assistant Professor of Microbiology.*
Laurel G. Heffernan, Ph.D., *Adjunct Assistant Professor of Microbiology.*

•

William R. Clark, Ph.D., *Professor of Biology.*
Donald A. Kaplan, Ph.D., *Associate Research Microbiologist.*
Aldons J. Lusis, Ph.D., *Assistant Professor of Medicine in Residence.*
Robert A. Mah, Ph.D., *Professor of Public Health.*
Mary Ann K. Markwell, Ph.D., *Assistant Research Microbiologist.*
Alexander Miller, Ph.D., *Research Microbiologist.*

Preparation for the Major

Biology 5, 7 (or Microbiology 7), 8; Chemistry 11A, 11B, 11BL, 11C, 11CL, 21, 23, 25; Mathematics 3A, 3B, 3C (or 31A, 31B, 32A); Physics 6A, 6B, 6C (or 8A, 8B, 8C, 8D).

Pre-Microbiology Major

Students (new, transfer or change of major) desiring to major in Microbiology will first register as Pre-Microbiology students. After a minimum of two quarters in this status, Pre-Microbiology students may petition to change to the Microbiology major on completion of the following: ten of the 15 courses required in preparation for the major and completion of Microbiology 101 with a grade of "C" or better. Whenever possible, Microbiology 7 should be taken in place of Biology 7. Students entering with 80 or more units credit, in order to specify pre-microbiology as their major, must have completed one year of general chemistry; Biology 5, 7 or equivalent; one of the following: organic chemistry with laboratory (two courses), physics (one year), calculus (one year).

The Major

The degree program in microbiology has as its goals not only the introduction of the student to general and medical microbiology, but also to the inseparably associated subdisciplines of biochemistry, genetics, cellular physiology, immunology and molecular biology. To qualify a student for study in such broadly related subjects, a heavy concentration of courses in the basic sciences (chemistry, mathematics and physics) is required. The student is then prepared for the advanced discussion of specialized topics required of him or her in the upper division courses. These include, in addition to the broad survey of general and medical microbiology presented in Microbiology 101, 102 and 103 or 110, courses in the subcellular structure and physiology of bacteria, genetics and specialized courses in microbiology which include advanced laboratory training. In addition to the core program, the student may choose elective courses from a diversity of microbiology-related topics to complete the program. It is this combination of rigor in the study of fundamentals and the diversity and flexibility in making up the actual Microbiology major that makes this program appropriate preparation for those planning careers in a laboratory of microbiology or biochemistry, industrial research and development, or for further studies leading to higher academic or professional degrees in such fields as microbiology, medicine, dentistry, biochemistry, pharmacology, immunology, genetics, cellular physiology and molecular biology.

Core Requirements: Microbiology 101, 102, 103 or 110, 119, M185; Chemistry 152; four additional upper division courses from the departmental list or from related departments, chosen with approval of the faculty advisor. In addition to requirements for graduation prescribed by the College of Letters and Science, the student is required to maintain a minimal grade-point average of 2.0 ("C") in the Microbiology major. Additionally, a student must obtain a "C" or better in Microbiology 101 and 102 before continuing with further departmental upper division courses. A student repeating one of these courses must obtain a grade of "B" or better to remain in the major.

Lower Division Courses

6. Introduction to Microbiology. Lecture, three hours. Not open for credit to students with credit for courses 7, 10, 101, Biology 5, 6, 7, 8 or equivalent courses taken elsewhere. For the nontechnical student; an introduction to the biology of microorganisms (bacteria, viruses, protozoa, algae, fungi), their significance as model systems for understanding fundamental cellular processes, and their role in human affairs. (F,W,Sp)

7. The New Cell Biology. Lecture, three hours; laboratory, four hours. Prerequisites: Biology 5, Chemistry 11A. Lecture and laboratory sessions to give students basic elements of scientific observation using procaryotic and eucaryotic cell structure and cellular interactions. Intensive training in use of light microscope techniques. Actual on-hand training in microscopic techniques using video microscope, slides and demonstrations. Extensive exposure to landmark observations and experiments in development of modern cell biology and structure. Outstanding invited experts in the scientific community will present lectures in their special areas. For undergraduate students intending to major in Microbiology and others as interested. Mr. Fox, Mr. Witte (W)

10. General Microbiology. Lecture, three hours; laboratory, six hours. Prerequisites: Biology 5, 7 (or Microbiology 7); Chemistry 11A, 15. For health sciences students; not open for credit to students with credit for Microbiology 101; does not substitute for Microbiology 101 in the major. An introduction to the biology of bacteria and their role in diseases of man. (Sp)

51. The Development of Bacteriology (½ course). Lecture, two hours. Prerequisites: Biology 5, Chemistry 11A, 11B, 11C. Discussion of the early investigations important in the development of bacteriology and the now independent sciences of virology and immunology. P/NP grading. Mr. Rittenberg

*Upper Division Courses

101. Fundamentals of Bacteriology. Lecture, three hours; laboratory/discussion, six hours. Prerequisites: Biology 5, 7 (or Microbiology 7); Chemistry 21, 23, 25. The historical foundations of the sciences; the structure, physiology, ecology and applications of bacteria. Mr. Gunsalus, Ms. Lascelles

102. Introductory Virology. Lecture, three hours; laboratory, four hours. Prerequisite: course 101. Biological properties of bacterial and animal viruses; replication; methods of detection; interactions with host cells and multicellular hosts. Mr. Berk, Mr. Romig (W)

103. Host-Parasite Interactions. Lecture, four hours; discussion, one hour. Prerequisites: course 101, Chemistry 152. Biochemistry and biology of host-parasite interactions; host responses to invasion; mechanisms of virulence, bactericidal mechanisms; discussion on the immunity to infection by bacteria. Mr. Martinez (W)

C104A. Molecular Biology of Bacterial Growth (½ course). Lecture, three hours. Prerequisites: Biology 8, Chemistry 25, Microbiology 101 or equivalent or consent of instructor. Introduction to bacterial physiology with lectures stressing its experimental foundation. Topics include chromosome replication, gene expression, control of growth rate and cell division, role of cyclic AMP and other regulatory factors, cloning and genetic engineering. May be concurrently scheduled with course C204A. First five weeks in Spring Quarter. Mr. Nierlich

C104B. Biochemical Genetics of Eucaryotic Cells (½ course). Lecture, three hours. Prerequisites: some background in microbiology, biochemistry and genetics and consent of instructor. Important concepts and experimental approaches in biochemical genetics will be illustrated with selected research papers and reviews. Topics include: Systematic genetic analysis of mammalian cells, somatic cell genetics, developmental genetics, genetic analysis of cancer and human genetic disorders, genetic analysis of hormonal regulation. May be concurrently scheduled with course C204B. Five weeks in Fall Quarter. Mr. Lusis

C104C. The Mammalian Cell as a Microorganism (½ 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 contents include regulation of cell growth in chemically defined medium; establishment, cloning and characterization of cell lines, cultured cells as model systems in the study of normal growth and development, disease mechanisms and cancer. May be concurrently scheduled with course C204C. Five weeks in Fall Quarter. Mr. Fox

C104D. Protein Metabolism (½ course). Lecture, three hours. Prerequisites: Chemistry 152 and consent of instructor. Aspects of protein metabolism in both procaryotes and eucaryotes will be covered. Course will include a brief review of synthesis but will concentrate on other aspects of protein metabolism not normally covered in biochemistry or cell physiology courses. These include: breakdown and turnover of enzymes and implications for metabolic control; protein secretion, end processing; factors affecting protein localization in cells; uptake and degradation of proteins. May be concurrently scheduled with course C204D. Five weeks in Spring Quarter. Mr. Collier

C104E. RNA Tumor Viruses (½ course). Lecture, three hours. Prerequisites: Chemistry 152 and consent of instructor. This course will concentrate on interactions of RNA tumor viruses with differentiating tissues such as the immune system and erythroid development. May be concurrently scheduled with course C204E. Five weeks in Spring Quarter. Mr. Witte

105. Bacterial Diversity. Lecture, three hours; laboratory, six hours. Prerequisite: course 101. The biology of the major groups of bacteria, and the application of elective culture procedures. Mr. Rittenberg (Sp)

106. Principles of Microbial Ecology. Lecture, three hours. Prerequisites: Biology 5, 7 (or Microbiology 7); Chemistry 23; Microbiology majors must have completed Microbiology 101. An introduction to the interactions of microbes and their environment, stressing the basic biological, biochemical and physiological elements controlling growth in selected habitats and systems. Mr. Mah, Mr. Nierlich (W)

108. Hematology (½ course). Prerequisites: senior standing and consent of instructor. Diagnostic procedures used for the study of normal and pathological blood cells. (W)

110. The Microbiology of Infection. Lecture, three hours; laboratory, six hours. Prerequisites: courses 101, 102, Chemistry 152 or consent of instructor. The salient characteristics of bacteria, rickettsiae, and viruses, both pathogenic and adventitious, associated with diseases of man. Mr. Pickett (F)

110C. The Laboratory Diagnosis of Infection. Lecture, two hours; laboratory, nine hours. Prerequisite: course 110. Techniques in the laboratory examination of clinical material. Mr. Pickett (W)

111. Biology of the Procaryotic Cell. Lecture, three hours; discussion, one hour. Prerequisites: course 101, Chemistry 152 or consent of instructor. A review of current knowledge of the structural organization of procaryotic cells. Emphasis on isolation methods, chemical composition, structure and assembly of subcellular components, including membranes, walls, flagella, ribosomes and viruses. Mr. Collier, Mr. Eiserling, Ms. Wisnieski (W)

113. Bacterial Metabolism. Lecture, three hours; discussion, one hour. Prerequisite: Chemistry 152 or consent of instructor. The major patterns of energy generation and biosynthesis, and their regulation. Discussion sections on selected topics will be centered around readings from the current literature. Ms. Lascelles (W)

119. Microbial Genetics and Genetic Engineering. Lecture, three hours; discussion, one hour. Prerequisites: course 102, Biology 8 or consent of instructor. Genetics of bacteria and bacteriophages with emphasis on recombinant DNA technology and use of microbial systems in genetic engineering. Mr. Wilcox (Sp)

151. Principles of Food Microbiology. Lecture, three hours. Prerequisite: course 101 (or equivalent with consent of instructor). Fundamental principles of food microbiology. Emphasis on basic microbiological principles as applied to food products and processing. The approach is science-oriented rather than technology oriented. The course will consist of a series of formal lectures with an assigned text and readings in past and current research literature in food microbiology. Mr. Silliker (Sp)

M185. Immunology. (Same as Biology M185 and Microbiology and Immunology M185.) Lecture, three hours; discussion, one hour. Prerequisites: Chemistry 23, 25, Biology 8. Concurrent enrollment in Chemistry 152 or 156 is recommended. Introduction to experimental immunobiology and immunochemistry; cellular and molecular aspects of humoral and cell immune reactions. Mr. Clark, Mr. Sercarz (F)

M186. Experimental Design in Immunology. (Same as Biology M186 and Microbiology and Immunology M186.) Laboratory, twelve hours. Prerequisites: course M185 and consent of instructor. This course will focus on a limited number of situations designed to train the student in organizing and evaluating immunological laboratory experiments. Must be taken concurrently with course M187. Mr. Clark, Mr. Sercarz (W)

M187. Immunology Seminar (½ course). (Same as Biology M187 and Microbiology and Immunology M187.) Discussion, two hours. Prerequisites: course M185 and consent of instructor. Student presentation of selected papers from the immunology literature. Designed to serve as a forum for the critical analysis of research papers. Must be taken concurrently with course M186. Mr. Clark, Mr. Sercarz (W)

M188. Immunological Techniques (½ course). (Same as Microbiology and Immunology M188.) Prerequisites: course M185 with an "A" grade and consent of instructor. Techniques in immunochemistry and immunobiology. State of the art advanced technology for performance of experiments in modern immunology in a workshop format. Each workshop is of approximately two full days duration. Mr. Sercarz (W)

195. Proseminar (½ course). Discussion, one hour. Prerequisites: senior standing and consent of instructor. Small groups of students and instructor discuss current research literature. Topic announced each quarter. Enrollment limited. (F,W,Sp)

199. Special Studies in Microbiology (½ to 4 courses). Prerequisites: open only to students with superior academic standing and consent of instructor and departmental Chair, based on written research proposal. Maximum enrollment for four quarters. (F,W,Sp)

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Microbiology and Immunology

(Office: 43-239 Center for Health Sciences)

Although the Department of Microbiology and Immunology does not present courses in microbiology in the undergaduate series, there are a number of the graduate courses in which

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

undergraduates may enroll with consent of instructor. Among such offerings are MI 208 (Virology), MI 210 (Mycology), MI 214 (Bacterial Pathogenesis) and MI 250 (Topics in New Biology). Undergraduates should consult the *UCLA Graduate Catalog* for other opportunities of this sort.

The following upper division courses are offered with enrollment restrictions as indicated:

Upper Division Courses

M185. Immunology. (Same as Microbiology M185 and Biology M185.) Lecture, three hours; discussion, one hour. Prerequisites: Biology 8, Chemistry 23, 25. Concurrent enrollment in Chemistry 152 or 156 is recommended. Introduction to experimental immunobiology and immunochemistry; cellular and molecular aspects of humoral and cell immune reactions.
Mr. Clark, Mr. Sercarz (F)

M186. Experimental Design in Immunology. (Same as Biology M186 and Microbiology M186.) Laboratory, twelve hours. Prerequisites: course M185 and consent of instructor. This course will focus on a limited number of situations designed to train the student in organizing and evaluating immunological laboratory experiments. Must be taken concurrently with course M187. Mr. Clark, Mr. Sercarz (W)

M187. Immunology Seminar (½ course). (Same as Microbiology M187 and Biology M187.) Discussion, two hours. Prerequisites: course M185 and consent of instructor. Student presentation of selected papers from the immunology literature. Designed to serve as a forum for the critical analysis of research papers. Must be taken concurrently with course M186.
Mr. Clark, Mr. Sercarz (W)

M188. Immunological Techniques (½ course). (Same as Microbiology M188.) Prerequisites: course M185 with an "A" grade and consent of instructor. Techniques in immunochemistry and immunobiology. State of the art advanced technology for performance of experiments in modern immunology in a workshop format. Each workshop is of approximately two full days duration. Mr. Sercarz (W)

199. Directed Individual Research Studies in Microbiology and Immunology (½ to 2 courses). Prerequisites: senior standing and consent of instructor, based on written research proposal. Individual research projects carried out under direction of individual professor.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Military Science

(Office: 131 Men's Gym)

Claude R. Sasso, Ph.D., *Major, Air Defense Artillery, Professor of Military Science.*
Bruce G. Lawson, M.B.A., *Major, Signal Corps, Assistant Professor of Military Science.*
Gregory Olson, M.B.A., *Major, USAR, Field Artillery, Assistant Professor of Military Science.*
Roy C. Wentrcek, M.A., *Captain (P), Transportation Corps, Assistant Professor of Military Science.*

Army Reserve Officers' Training Corps

The department offers a general military science curriculum which conforms to the academic pattern of the UCLA campus. Military science classes are open to all students; enrollment as an ROTC cadet is not required. Cross-enrollment is available through the UCLA Extension for students attending other colleges that do not offer Army ROTC.

The military science curriculum is a part of the Army Reserve Officers' Training Corps (ROTC) program. Enrollment in the ROTC program is on a voluntary basis and is limited to qualified full-time male and female students.

The military science curriculum is divided into two parts: (1) the **Basic Course,** two years of lower division study to prepare students for advanced instruction and (2) the **Advanced Course,** two years of upper division study. Satisfactory completion of the Advanced Course and attainment of a bachelor's degree leads to a commission as a second lieutenant in the Army Reserve, National Guard or Active Army. Distinguished students may qualify for a commission in the Regular Army.

Transfer students and others who were unable to enroll in the Basic Course can receive equivalent credit by attending a six-week camp during the summer between their sophomore and junior years. Successful completion of this camp will qualify students for direct entry into the Advanced Course. Attendees are given an allowance for travel expenses and are paid for attendance. Equivalent ROTC credit is granted to those students who have participated in a high school Junior ROTC program for a minimum of three years. Basic Course credit can also be obtained by enrolling in the two-week Basic Course Summer Compression Program.

Eligible veterans and members of the Reserve or National Guard can enroll directly into the Advanced Course. Veterans may receive VA benefits concurrently with Advanced Course subsistence allowances.

Admission to the Advanced Course is limited to selected students who meet all academic and physical requirements. Students in this course receive a subsistence allowance of $100 a month for ten months during each of the two academic years. Upon completion of the Advanced Course and fulfillment of degree requirements, the students are commissioned as second lieutenants in one of the Army's speciality areas. Insofar as possible, students' desires and academic major will be considered.

Students selected for Advanced ROTC must attend a six-week Advanced Camp between their Military Science III and IV years. Cadets will receive an allowance for travel expenses and are paid for attendance.

Army ROTC scholarships are available to selected applicants. Scholarships pay the normal costs associated with tuition, books and other student fees. In addition, scholarship recipients receive a subsistence allowance of $100 per month for the academic year. Full four-year scholarships are offered to high school seniors selected by national competition. Three-, two- and one-year scholarships are also available.

The active duty obligation for those students selected to enter the Reserves or National Guard is only three months. Students accepting ROTC scholarships, a commission in the Regular Army, or selected to enter the Active Army will serve longer terms. ROTC students desiring to obtain advanced degrees may be granted a delay in reporting to their initial assignment. For further information, contact the Department of Military Science located in the Men's Gym (825-7384 or 825-7381).

Four-Year Program: Students are enrolled in the Basic Course (freshman and sophomore years) on a voluntary basis. Upon completion of the Basic Course and entrance into the Advanced Course (junior and senior years), students are required to execute a contract with the Department of the Army agreeing to complete the Advanced Course, enlist in the United States Army Reserve and accept a commission if offered. Advanced Course students receive $100 subsistence allowance per academic month, military science books and uniforms.

Two-Year Program: This program is primarily designed for students with prior military service or three years of Junior ROTC in high school. In addition, students that do not have any prior military experience and have less than four years of schooling remaining may qualify for this program by attending an ROTC Basic Course Summer Compression Program or Basic Camp offered only in the summer. Students who attend Camp receive allowances for travel expenses and are paid for Camp attendance. Students who choose the Compression Program attend a two-week accredited course taught in the Los Angeles area. A registration fee is required for this Program. Upon successful completion of either program, students may enter the Advanced Course under the same requirements as stated for the four-year program.

Lower Division Courses

11. U.S. Defense Establishment (½ course). A study of the evolution of the U.S. Department of Defense; includes a study of the military services, with emphasis on the U.S. Army.

12. U.S. Defense Establishment (½ course). A study of the military institution and other elements of national power as instruments of national policy and strategy in conditions of peace and war.

13. Theory of Warfare (½ course). Inquiry into the theory, nature, causes, and elements of warfare, with attention also directed to the evolution of weapons and warfare.

21. United States Military History (½ course). Prerequisites: CADET: completion of courses 11, 12, 13 or equivalent; NON-CADET: college student. In-depth study of U.S. Army from 1755-1860, with emphasis on leaders and combat actions. An introductory survey of opposing strategies and relationships to the men leading and serving in the U.S. Army.

22. United States Military History (½ course). Prerequisites: CADET: completion of courses 11, 12, 13 or equivalent; NON-CADET: college student. In-depth study of the U.S. Army from the beginning of the Civil War to World War II (1860-1939) with emphasis on leadership at all levels and campaigns involving the U.S. Army. Emphasis on the development of strategy and combat operations of both sides.

23. United States Military History (½ course). Prerequisites: CADET: completion of courses 11, 12, 13 or equivalent; NON-CADET: college student. In-depth study of the U.S. Army from World War II to present, with emphasis on strategies and leadership on both sides.

Upper Division Courses

111. Psychology of Leadership (½ course). Prerequisites: CADET: completion of Basic Course or equivalent; NON-CADET: upper division standing; Psychology 10 (for both). Familiarization of the student with current concepts in the behavioral sciences which builds the theoretical framework for understanding human behavior in relating to the basic problems of management and the organizational context of leadership. Emphasis is placed on the leader/manager problems of directing and controlling resources.

112. Theory of Learning Applied to Teaching I (½ course). Prerequisites: CADET: completion of Basic Course or equivalent; NON-CADET: consent of instructor. An examination of learning theories to support development of knowledge, skills and attitudes necessary for the instructing-teaching application. Emphasis is placed on the education/instructional processes.

113. Theory of Learning Applied to Teaching II (½ course). Prerequisites: CADET: completion of Basic Course or equivalent; NON-CADET: consent of instructor. A study of instructional processes, lesson content planning procedures, techniques of applicatory education, role of testing including evaluation and analysis. Emphasis is placed on improvement of teaching and group process.

123. Military Legal Systems (½ course). Prerequisites: CADET: first-year Advanced Military Science; NON-CADET: upper division standing. An introduction to the theory and application of military law and legal systems. Course focuses on the Uniform Code of Military Justice and the rights of the accused under the constitution.

124. Military-Societal Relations (½ course). Prerequisites: CADET: first-year Advanced Military Science, Management 190, Political Science 138A or equivalent; NON-CADET: upper division standing, Political Science 138A or equivalent. An advanced study of the U.S. Army as a professional organization: its relationship to society; professional ethics; and social problems.

125. Decision Making (½ course). Prerequisites: CADET: one introductory course in probability and statistics, one course in computer science, Management 190; NON-CADET: same as for cadet; consent of instructor. Theory of decision making, functions of the decision-making process, optimizing decisions, information systems, operations research, systems management.

Molecular Biology (Interdepartmental)

(Office: 168 Molecular Biology Institute)

Undergraduate Study

Undergraduate studies which readily lead to advanced work or employment in the molecular biology area include undergraduate majors in Biochemistry, Biology, Chemistry, Microbiology or Physics. Students may wish to supplement their course programs in consultation with the appropriate undergraduate advisors.

For detailed information on graduate degrees offered by this program, please consult the *UCLA Graduate Catalog*.

Music

(Office: 2539 Schoenberg Hall 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.*
Frank 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 Göllner, 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. Hutchinson, Ph.D., *Professor of Music.*
Nazir 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).*
Robert M. Stevenson, Ph.D., *Professor of Music.*
Roy 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., *Emeritus Professor of Music.*
Mantle L. Hood, Ph.D., *Emeritus Professor of Music.*
Boris A. Kremenliev, Ph.D., *Emeritus Professor of Music.*
W. Thomas Marrocco, Ph.D., *Emeritus Professor of Music.*
Robert U. Nelson, Ph.D., *Emeritus Professor of Music.*
H. Jan Popper, Ph.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. Dje Dje, 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. Jihad 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.*
Salome R. Arkatov, M.A., *Visiting Lecturer in Music.*
Elliot Asarnow, Ph.D., *Visiting Lecturer in Music.*
Mario Carta, *Adjunct Assistant Professor of Music.*
Robert Fleisher, D.M.A., *Visiting Lecturer in Music.*
Jeffrey Goodman, M.A., *Visiting Lecturer in Music.*
Robyn Graham, B.M., *Visiting Lecturer in Music.*
Gary G. Gray, M.M., *Lecturer in Music.*
John A. Guarnieri, *Visiting Lecturer in Music.*
John L. Hall, M.M., *Lecturer in Music.*
Johana Harris, *Lecturer in Music.*
Sybil D. Hast, M.A., *Visiting Lecturer in Music.*
William Hatcher, M.M., *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.*
Yukiko Kamei, *Visiting Lecturer in Music.*
Bess Karp, M.A., *Lecturer in Music.*
Leon Knopoff, Ph.D., *Professor of Geophysics and Physics.*
Samuel Krachmalnick, *Senior Lecturer in Music.*
Kobla Ladzekpo, B.F.A., *Visiting Lecturer in Music.*
Sidney M. Lazar, M.A., *Visiting Lecturer in Music.*
Danny Lee, *Visiting Lecturer in Music.*
James R. Low, B.M., *Visiting Lecturer in Music.*
Tsun Y. Lui, *Lecturer in Music.*
Shirley L. Marcus, B.M., *Visiting Lecturer in Music.*
Lou Anne Neill, M.A., *Visiting Lecturer in Music.*
Theodore Norman, *Visiting Lecturer in Music.*
Michael R. O'Donovan, *Visiting Lecturer in Music.*
Nils Oliver, M.M., *Visiting Lecturer in Music.*
Barbara R. Patton, B.A., *Senior Lecturer in Music.*
Mitchell T. Peters, M.M., *Visiting Lecturer in Music.*
William 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.*
Lois Rosow, Ph.D., *Visiting Lecturer in Music.*
Peggy Ann Sheffield, M.M., *Lecturer in Music.*
Donald J. Staples, B.A., *Visiting Lecturer in Music.*
Sheridon W. Stokes, *Lecturer in Music.*
Suenobu Togi, *Lecturer in Music.*
Alexander Treger, *Visiting Lecturer in Music.*
Aube Tzerko, B.M., *Senior Lecturer in Music.*
Allan Vogel, D.M.A., *Visiting Lecturer in Music.*
Donn E. Weiss, M.M., *Senior Lecturer in Music.*
Ikuko Yuge, *Visiting Lecturer in Music.*
Paul Zibits, M.M., *Visiting Lecturer in Music.*

Requirements for Entering Music Students

All applicants for admission are required to pass an audition in their principal performing medium.

Aptitude and achievement tests are required for enrollment in Music 17A, Theory of Music. These examinations are administered during registration week only; dates are published in the *Schedule of Classes*. Students planning to complete a major in Music, whether or not they have taken courses elsewhere, are required to pass a piano skills test (those without keyboard background may take courses 4A-4B-4C concurrently with 17A-17B-17C). The test must be passed by the end of course 17C or the first year as a Music major, whichever comes first. Students with exceptional ability and achievement are placed into the Music

17A-17F sequence. Further information may be obtained from the Student Services Office in the Department of Music.

General Requirements

All Music majors must enroll in one performance organization (90A-90N, 91A-91Z) each quarter in residence and must participate in a minimum of two different organizations over the course of their stay at UCLA, one of which must be from Music 90A-90H or 91A-91Z.

Preparation for the Major

Music 17A-17F, 26A-26B-26C, two courses from 60A-65. Music majors must take French, German, Italian or Spanish to fulfill the College of Fine Arts language requirement. Students who plan to specialize in historical or systematic musicology are encouraged to take six quarters, or the equivalent, of German.

The Major

A minimum of 10 courses in upper division, including 105 or 107A, 126A-126B-126C; five courses selected from one of the specializations listed below and one course free elective for all areas except music education.

(1) Composition and Theory: Courses 106A-106B, 107B-107C and one elective course from 101, 103A, 103B, 104A, 104B, 108, 109A, 109B, 109C, 110A, 110B, 111A, 111B, 140-149, 156A, 156B and 199. Undergraduate composition specialists must have an original work completed and ready for rehearsal and performance on campus during their senior year.

(2) History and Literature: One course from 127A, 127B, 127C, one course from 127D, 127E, 127F, one course from 140A, 140B, 140C and two electives from 104A, 104B, 108, 127A-127F, 130, 131A, 131B, 133, 134, 135A, 135B, 135C, 151A, 151B, 156A, 156B, 157, 187, 188A-188Z and 199 (4 units only).

(3) Ethnomusicology: Courses 140A-140B-140C and two courses selected from 108, 127A-127F, 131A, 131B, 141, 142A, 142B, 143A, 143B, 145-149, 152, 153A, 153B, 153C, 157, 190A, 190B and 199.

(4) Performance: Twelve units in performance instruction courses 160-165 (including junior and senior recital requirements), 4 units of chamber ensembles (175) and 4 units of electives from 101, 106A, 106B, 108, 110A, 110B, 111A, 111B, 112A, 112B, 127A-127F, 130-135, 139, 140A, 140B, 140C, 151A, 151B, 187 and 199.

(5) Music Education: Courses 193, 195, 100A-100B-100C, 110A, 111A, eight units from 115A-115E and two units of electives selected under advisement from 110B, 111B, 112A, 112B, 140A, 140B, 140C, 185, 187 and 199. All students considering a music education specialization are urged to meet with a music education advisor during their *freshman* year.

(6) Systematic Musicology: Five courses from the following list: 103A, 103B, 108, 138, one course from 140A, 140B, 140C, 149, 184, 187, 199, Anthropology 133R.

Lower Division Courses

1A-1B. Fundamentals of Music. (Formerly numbered 1.) Lecture, three hours; laboratory, two hours. Prerequisite to course 1B: course 1A or consent of instructor. **1A:** Sight-singing, ear training, reading music, and harmonization of simple melodies. **1B:** diatonic harmony; four-part writing, including inversions, 7ths, secondary dominants and modulation; organization of melody and accompaniment; simple analysis; advanced sight-singing and ear training.
Ms. Karp, Mrs. Patton

2A-2B. Introduction to the Literature of Music. (Formerly numbered 2A-2B-2C.) Lecture, four hours; laboratory, one hour. Designed for the non-Music major. **2A** surveys the technical and formal principles of music literature through the mid-eighteenth century; **2B** surveys music literature from the mid-eighteenth century to the present.

4A-4B-4C. Basic Musicianship (¼ course each). Laboratory, three hours. Class instruction in elementary ear training and keyboard skills. Ms. Sheffield

5A-5B-5C. Fundamentals of Sound and Music of the World (½ course each). Prerequisite: consent of instructor. The acoustical makeup of sound (pitch, tone quality); tuning systems; modes and scales; harmony and polyphony, rhythm and meter; notational systems; relationships of music to culture. Laboratory: ear training and instrumental techniques.
Mr. Draper, Mr. Hutchinson

6GA-6GB. Graduate Review of Music History and Analysis (No credit). Lecture, two hours. Prerequisite: graduate status. This course is designed to help entering graduate students remedy entrance deficiencies. Clearance of deficiencies will be by examination. The course may be repeated and will displace 2 units on the Study List. Mr. Cole

8G. Graduate Piano Sight-Reading (No credit). Laboratory, two hours. Prerequisite: graduate status. This course is designed to help entering graduate students remedy entrance deficiencies. Clearance of deficiencies will be by examination. The course may be repeated and will displace 1 unit on the Study List.
Ms. Sheffield

10. Computer Assisted Sight-Singing Laboratory (½ course). Three hours weekly, including one laboratory hour. Prerequisites: course 1 or equivalent and consent of instructor. An individualized, self-instructional approach for the development of sight-singing skills through the use of a music computer, keyboard instrument, and linear program learning.
Mr. Gerow

16. Contrapuntal Techniques (½ course). Three hours weekly. Prerequisite: one year of music theory. Not open to students with credit for courses 17A-17B-17C. Must be taken concurrently with course 17D. Introduction to two- and three-part species counterpoint; will include written exercises and analysis.

17A-17F. Theory of Music. Eight hours weekly, including four laboratory hours. Prerequisites: aptitude, achievement and the piano skills test. Series must be taken in order (A, B, C, D, E, F). An integrated study of theoretical and practical techniques. First Year: harmony through chromatic embellishment of diatonic progressions; elementary contrapuntal techniques; structural analysis; keyboard skills including open-score clef-reading and figured bass; melodic and rhythmic dictation and sight-singing. Second Year: advanced harmony through modulations and total chromaticism; stylistic counterpoint including motet and invention; basic instrumentation; advanced keyboard skills; dictation and sight-singing of modulating melodies.

18A-18B-18C. Keyboard Techniques (½ course each). Two hours weekly. Prerequisites: courses 17A-17B-17C; course 18A is prerequisite to 18B; course 18B is prerequisite to 18C. This course is an intensive workshop in the development of keyboard skills and is designed to supplement the development of keyboard facility beyond course 17C. Techniques of figured bass, score reading, transposition, and keyboard harmony will be stressed. Ms. Karp

19. Instrumentation (½ course). Two hours weekly. Prerequisite: two years of music theory. Not open to students with credit for courses 17A-17F at UCLA. The study of ranges and transpositions of all orchestral instruments; instrumental characteristics, exercises in orchestration, and orchestral analysis.

26A-26B-26C. History and Literature of Music I. Five hours weekly, including one laboratory hour. Prerequisites: courses 17A-17B-17C. Course 26A is prerequisite to 26B; course 26B is prerequisite to 26C. The history and literature of music from the beginning to the Christian era to 1750, with emphasis upon analysis of representative works of each style period. Materials selected will illustrate the history of style and changing techniques of composition.

60-65. Undergraduate Instruction in Performance. *For Music majors only* (all lower division majors and majors not in the performance specialization). May be repeated for credit. Units will be distributed on the basis of one unit each for Fall and Winter Quarters and two units for Spring Quarter. Grades will be assigned by the applied instructor in Fall and Winter and by jury examination in Spring. Individual instruction of one hour per week. All students must perform in a practicum once during the academic year:

60A. Violin.	Ms. Kamei, Mr. Treger
60B. Viola.	Mr. Reher
60C. Cello.	Mr. Oliver
60D. String Bass.	Mr. Zibits
60E. Harp.	Ms. Neill
60F. Classical Guitar.	Mr. Goodman, Mr. Norman
60G. Viola da gamba.	Ms. Marcus
60K. Lute.	Mr. Buetens
61A. Flute.	Mr. Stokes
61B. Oboe.	Mr. Vogel
61C. Clarinet.	Mr. Gray
61D. Bassoon.	Mr. O'Donovan
61E. Saxophone.	Mr. Gray
62A. Trumpet.	Mr. Lazar
62B. French Horn.	Ms. Graham
62C. Trombone.	Mr. Staples
62D. Tuba.	Mr. Johnson
63. Percussion.	Mr. Peters
64A. Piano.	Ms. Harris, Mr. Tzerko and Staff
64B. Organ.	Mr. Harmon
64C. Harpsichord.	Ms. Karp
65. Voice.	Mr. Guarnieri, Ms. Hinson, Ms. Patton and Staff

80A-80N. Performance Organizations (¼ course each). *For non-Music majors only* (courses 90A-90N are for the Music major). Three hours weekly. Prerequisite: audition. May be repeated for credit:

80A. A Cappella Choir; **80B.** University Chorus; **80C.** Madrigal Singers; **80D.** Opera Workshop; **80E.** Symphony Orchestra; **80F.** Concert Band; **80G.** Symphonic Wind Ensemble; **80H.** Collegium Musicum; **80J.** Men's Glee Club; **80K.** Women's Glee Club; **80L.** Musical Comedy Workshop; **80M.** Marching and Varsity Bands; **80N.** Jazz Band.

81A-81Z. Ethnomusicology Performance Organizations (¼ course each). *For non-Music majors only* (courses 91A-91Z are for the Music major). Three hours weekly. Prerequisite: consent of instructor. May be repeated for credit:

81A. Music and Dance of the American Indian; **81B.** Music and Dance of Bali; **81C.** Music and Dance of Bulgaria; **81D.** Music and Dance of China; **81E.** Music and Dance of Ghana; **81F.** Music and Dance of India; **81G.** Music and Dance of Japan; **81H.** Music of Java; **81J.** Music of Korea; **81K.** Music of Mexico; **81L.** Music of Persia; **81M.** Music of Thailand; **81N.** Music of the Near East; **81Z.** Open Ensemble.

90A-90N. Performance Organizations (No credit). *For Music majors only* (courses 80A-80N are for the non-Music major). Three hours weekly. Prerequisite: audition. May be repeated. Music majors may enroll in only one performance organization per quarter:

90A. A Cappella Choir; **90B.** University Chorus; **90C.** Madrigal Singers; **90D.** Opera Workshop; **90E.** Symphony Orchestra; **90F.** Concert Band; **90G.** Symphonic Wind Ensemble; **90H.** Collegium Musicum; **90J.** Men's Glee Club; **90K.** Women's Glee Club; **90L.** Musical Comedy Workshop; **90M.** Marching and Varsity Bands; **90N.** Jazz Bands.

91A-91Z. Ethnomusicology Performance Organizations (No credit). *For Music majors only* (courses 81A-81Z are for the non-Music major). Three hours weekly. Prerequisite: consent of instructor. May be repeated. Music majors may enroll in only one performance organization per quarter:

91A. Music and Dance of the American Indian; **91B.** Music and Dance of Bali; **91C.** Music and Dance of Bulgaria; **91D.** Music and Dance of China; **91E.** Music and Dance of Ghana; **91F.** Music and Dance of India; **91G.** Music and Dance of Japan; **91H.** Music of Java; **91J.** Music of Korea; **91K.** Music of Mexico; **91L.** Music of Persia; **91M.** Music of Thailand; **91N.** Music of the Near East; **91Z.** Open Ensemble.

Upper Division Courses

100A-100B-100C. Music in American Education (½ course each). Lecture, three hours; laboratory, one hour. Prerequisites: courses 17A-17F, 26A-26B-26C, 193, 195. Course 110A is prerequisite to 100B; course 111A is prerequisite to 100C. Course 100A is not prerequisite to 100B; course 100B is not prerequisite to 100C. A critical study of principles and practices in music education, historical and current, at elementary and secondary levels. **100A.** General Music; **100B.** Choral Music; **100C.** Instrumental Music. Courses 100A-100B-100C may be taken in any order.

101. Keyboard Harmony and Score Reading. Prerequisites: courses 17A-17F. Emphasizes the reading of figured bass, sequences, modulations in the harmonic vocabulary of the 16th and 19th centuries. Reading at the piano of multistaff notation, the various C clefs, and parts for transposing instruments; chamber music and simple orchestral scores.
Mr. Des Marais

103A-103B. Advanced Theory. Three hours weekly. Prerequisites: courses 17A-17F. Course 103A or consent of instructor is prerequisite to 103B. Techniques of tonal coherence studied through analysis and compositional exercises in the styles of given periods.

***†104A-104B. Advanced Counterpoint.** Three hours weekly. Prerequisites: courses 17A-17F. Course 104A or consent of instructor is prerequisite to 104B. Comparative contrapuntal practices and forms from all periods studied through analysis and compositional exercises in the styles of the given periods.
Mr. Reale

105. Introduction to Composition. Three hours weekly. Prerequisites: courses 17A-17F. This course is intended for Music majors whose specializations are in areas other than composition. The nature of the compositional process will be explored with selected exercises exploring specific techniques and styles.

106A-106B. Advanced Orchestration. Three hours weekly. Prerequisites: courses 17A-17F. Course 106A is prerequisite to 106B. Scoring and analysis for ensembles and full orchestra. (Course 106A is not open to students with credit for former course 106B; course 106B is not open to students with credit for former course 106C.)
Mr. Travis

107A-107B-107C. Composition. Three hours weekly. Prerequisites: courses 17A-17F. Course 107A is prerequisite to 107B; course 107B is prerequisite to 107C. This course is designed for students specializing in composition and theory. Vocal and instrumental composition in the smaller forms, including style composition and 20th-century techniques.
Mr. Lazarof

108. Acoustics. Three hours weekly. Prerequisite: consent of instructor. The interrelationship of acoustical and musical phenomena. Tuning systems, consonance and dissonance, tonal quality. Lecture, demonstration, and discussion and tours of instrumental collections and acoustical research facilities.
Mr. Hutchinson

109A-109B-109C. Composition for Motion Pictures and Television (½ course each). Two hours weekly. Prerequisites: courses 17A-17F or consent of instructor. Course 109A is prerequisite to 109B; course 109B is prerequisite to 109C. Composition of music for the dramatic and documentary film in cinema and television. Techniques used in recording and editing.
Mr. Raksin

110A-110B. Study and Conducting of Choral Literature (½ course each). Three hours weekly. Prerequisites: courses 17A-17F, 26A-26B-26C. Course 110A is prerequisite to 110B. The theory and practice of conducting as related to the study of choral works from the Renaissance to the present day. **110A.** Conducting fundamentals including basic skills, techniques, analysis and repertoire. **110B.** Stylistic interpretation of music literature. Mr. Hatcher, Mr. Weiss

111A-111B. Study and Conducting of Instrumental Literature (½ course each). Three hours weekly. Prerequisites: courses 17A-17F, 26A-26B-26C. Course 111A is prerequisite to 111B. The theory and practice of conducting as related to the study of instrumental works for string and wind ensembles. **111A.** Conducting fundamentals including basic skills, techniques, analysis and repertoire. **111B.** Stylistic interpretation of music literature.
Mr. Anderson, Mr. Westbrook

112A-112B. Practical Scoring. Prerequisites: courses 17A-17F, 26A-26B-26C and consent of instructor. Emphasis on practical problems in scoring for small and large ensembles at various educational levels. **112A.** Band Scoring; **112B.** Choral Scoring.
Mr. Weiss

113A-113B. Music Literature for Children. Four hours weekly, including one laboratory hour. Prerequisites: courses 1, 2A or consent of instructor. Course 113A is not prerequisite to 113B. Designed for the non-Music major, particularly the elementary education student. A study of music literature applicable to elementary school programs. **113A.** Emphasis on listening analysis, movement, and improvisation. **113B.** Emphasis on class performance — music reading, singing, and folk instruments.
Mr. Gerow, Miss Hooper

115A-115E. Study of Instrumental and Vocal Techniques (¼ course each). Laboratory, three hours. Prerequisites: courses 17A, 193 and consent of instructor. Courses 17A and 193 may be taken concurrently. Applied studies in basic performance techniques and tutorial materials. Each of courses 115A-115D may be repeated once for credit. **115A.** Strings; **115B.** Woodwinds; **115C.** Brass; **115D.** Percussion; **115E.** Voice.
Mr. Anderson, Mr. Gerow

118. Advanced Study and Conducting of Orchestral Literature (½ course). Lecture, one hour; laboratory, two hours. Prerequisites: courses 111A-111B or consent of instructor. Detailed investigation of musical styles of orchestral literature, performance practices and rehearsal techniques. Preparation by student to conduct an established student chamber ensemble.
Mr. Krachmalnick

119A-119B-119C. Advanced Study and Conducting of Choral Literature (½ course each). Three hours weekly. Prerequisites: courses 110A-110B. Course 119A is prerequisite to 119B; course 119B is prerequisite to 119C. Advanced theory and practice of conducting; the study of representative choral works from the conductor's viewpoint.
Mr. Hatcher, Mr. Weiss

126A-126B-126C. History and Literature of Music II. Five hours weekly, including one laboratory hour. Prerequisites: courses 17A-17F, 26A-26B-26C. Course 126A is prerequisite to 126B; course 126B is prerequisite to 126C. The history and literature of music from 1750 to the present with emphasis upon analysis of representative works of each style period. Materials selected will illustrate the history of style and changing techniques of composition.

127A-127F. Selected Topics in the History of Music. Three hours weekly. Designed as a proseminar in preparation for graduate work. Each course may be repeated once for credit by graduate students. Special aspects of the music of each period, studied in depth. **127A.** Middle Ages; **127B.** Renaissance; **127C.** Baroque. Prerequisites: courses 17A-17F, 26A-26B-26C; **127D.** Classic. Prerequisites: courses 17A-17F, 26A-26B-26C, 126A; **127E.** Romantic. Prerequisites: courses 17A-17F, 26A-26B-26C, 126A-126B; **127F.** Twentieth Century. Prerequisites: courses 17A-17F, 26A-26B-26C, 126A-126B-126C.

130. Music of the United States. Prerequisite: course 2A or consent of instructor. A survey of art music from colonial times to the present.
Mr. Stevenson

131A-131B. Music of Hispanic America. Prerequisite: consent of instructor. Course 131A is not prerequisite to 131B. Survey of art music including attention to ethnic developments and Peninsular background. **131A.** Mexico, Central America and the Caribbean isles; **131B.** Hispanic South America. Mr. Stevenson

132A-132B. Development of Jazz. Four hours weekly, including one laboratory hour. Prerequisite: course 2A or consent of instructor. Course 132A is prerequisite to 132B. An introduction to jazz; its historical background and its development in the United States.
Mr. Pinckney

133. Bach. Four hours weekly, including two laboratory hours. The life and works of Johann Sebastian Bach.
Mr. Harmon and the Staff

134. Beethoven. Four hours weekly, including two laboratory hours. The life and works of Ludwig van Beethoven.
Mr. Reaney, Mr. Winter

135A-135B-135C. History of the Opera. Five hours weekly, including one laboratory hour. **135A.** Opera of the Baroque and Classical Periods; **135B.** Opera of the Romantic Period; **135C.** Opera of the Twentieth Century.
Mr. Bradshaw, Mr. Cole

137A-137B. Psychology of Music. 137A. An introduction to the psychology of music; historical background and the broad field of study to include the use of music as a stimulus, tests and measurements, and related modes of musical behavior. **137B.** Prerequisites: courses 17A-17B-17C, 26A-26B-26C or consent of instructor. A study of the psychological factors and problems in music from the points of view of the listener, performer, and composer.
Ms. Murray

138. Aesthetics of Music. Three hours weekly. Recommended for the non-Music major. A historical survey of musical aesthetic thought and practice. Selected readings and musical examples.
Mr. Schwadron

139. History and Literature of Church Music. Prerequisite: course 2A or consent of instructor. A study of the forms and liturgies of Western church music.

140A-140B-140C. Musical Cultures of the World. Prerequisite: consent of instructor. Course 140A is not prerequisite to 140B; course 140B is not prerequisite to 140C. A survey of the musical cultures of the world (excluding Western art music), the role of music in society and its relationship to other arts; consideration will also be given to scale structure, instruments, musical forms and performance standards.

141. Survey of Music in Japan. Three hours weekly. A survey of the main genres of Japanese traditional music, including Gagaku, Buddhist chant, Biwa music, Koto music, Shamisen music, and the music used in various theatrical forms.
Mr Harrell

142A-142B. Folk Music of Eastern Europe and the Mediterranean. Prerequisite: consent of instructor. Course 142A is not prerequisite to 142B. **142A** introduces the student to the forms and styles of traditional music in Eastern Europe (including the Balkans). Historical and ethnological aspects of the music are illustrated by numerous recorded examples from the major cultural subdivisions of the area; **142B** introduces the student to the forms and styles of traditional music in the Mediterranean basin, particularly those in which interaction between European and oriental styles is apparent. Mr. Porter, Mr. Racy

143A-143B. Music of Africa. Five hours weekly, including two laboratory hours. Prerequisites: courses 140A-140B-140C or consent of instructor. Course 143A is prerequisite to 143B. An investigation of the historical aspects, social functions and relationships of music to other art forms in selected areas of Africa. Ms. Dje Dje, Mr. Nketia

144. American Popular Music. Five hours weekly, including two laboratory hours. Prerequisite: course 1 or its equivalent is recommended. A survey of the history and characteristics of American popular music and its relationship to American culture, with emphasis on 20th-century popular music and its major composers, including a comparison between traditional pre-1950 popular music and trends in post-1950 popular music. Mr. Morton

145. History of Chinese Opera. Prerequisite: consent of instructor. A survey of dramatic elements in Chinese operas, incorporating singing, dance, and acrobatics. Emphasis on traditional and modern Peking opera and its relation to Cantonese and other genres. Mr. Lui

***146A-146B-146C. Studies in Chinese Instrumental Music.** Four hours weekly, including one laboratory hour. Prerequisite: consent of instructor. Course 146A is not prerequisite to 146B; course 146B is not prerequisite to 146C. **146A.** A study of the literature, major sources, paleography, theory, and philosophy of the Ch'in and P'i P'a, including transcription and analysis. **146B.** A comprehensive study of Chinese musical instruments, classification system, specific musical notation, and use in the context of Chinese society. **146C.** A study of the rules of improvisation, particularly as related to the Shanghai style, as realized on the P'i P'a, Ti, Er Hu, San Shien, Sheo, and related instruments. Mr. Lui

147A-147B. Music of China. Five hours weekly, including two laboratory hours. Prerequisites: courses 140A-140B-140C or consent of instructor. Course 147A is prerequisite to 147B. **147A.** History and theory of the music of China, including a survey of various provinces. Instrumental techniques. **147B.** Introduction to various notational systems. Analysis of representative styles. Course 147A is not open for credit to students with credit for former course 147. Mr. Lui

148. Folk Music of South Asia. Prerequisite: consent of instructor. An illustrated survey of some of the regional genres, styles, and musical instruments found in India and Pakistan, with special reference to the religious, social, economic, and cultural context of their occurrence. Mr. Jairazbhoy

149. The Anthropology of Music. A cross-cultural examination of music in the context of social behavior, and how musical patterns reflect patterns exhibited in other cultural systems; including economic, political, religious and social structure. Mr. Draper

151A-151B. History of Musical Performance Practices. Prerequisites: courses 17A-17F, 26A-26B-26C. A general survey of musical interpretation and re-creation from the viewpoint of stylistic authenticity. **151A.** Medieval through Baroque; **151B.** Classic through 20th Century. Not open for credit to students with credit for former course 151. Mr. Harmon

152. Survey of Music in India. A consideration of the main music genres in India, with particular reference to the religious, sociocultural and historical background of the country. Mr. Jairazbhoy

153A-153B-153C. Music of the American Indians. American Indian music will be studied within the broader context of styles, cultural values, and sources. Films, recordings, lectures, and limited group singing and dancing will relate the music to the culture producing it. **153A.** Musics of the Eastern, California-Yuman, Great Basin, and Northwest Coast areas; **153B.** Musics of the Athabascan, Pueblo, Plains, and modern Pan-Indian trends; **153C.** Sociology of American Indian music with specific reference to the manner in which cultural values, prescriptions, oral traditions, language and technological advances have affected music of various tribes. Mr. Draper, Ms. Heth

M154A-M154B. The Afro-American Musical Heritage. (Same as Folklore M154A-M154B.) Prerequisite: course 1 or consent of instructor. Course M154A is prerequisite to M154B. A study of Afro-American rhythm, dance, music, field hollers, work songs, spirituals, blues, and jazz; the contrast between West African, Afro-American and Afro-Brazilian musical traditions. Ms. Dje Dje

156A-156B. Techniques of Electronic Music. (Formerly numbered 156.) Prerequisites: course 107A or equivalent and consent of instructor. Course 156A is not open for credit to students with credit for former course 156. Course 156A is prerequisite to 156B. Manipulation of analog synthesizers and auxiliary equipment, tape techniques, and realization of original compositional materials. Mr. Ashforth

157. Music of Brazil. Prerequisites: consent of instructor and some knowledge of Portuguese. History of ethnic and art music in Brazil with some reference to Portuguese antecedents. Mr. Stevenson

158. New Orleans Jazz. Lecture, three hours; discussion, two hours. Major black and creole figures in the origin and development of jazz in New Orleans from the turn of the twentieth century through the 1960's with emphasis on polycultural roots, local municipal traditions, and stylistic analysis. Mr. Ashforth

159. The Development of Rock. Prerequisite: consent of instructor. The history of rock from the 1950's to the 1970's. An in-depth survey of stylistic trends illustrated by pertinent examples and accompanied by extensive musical analysis. Mr. Stevenson

160-165. Undergraduate Instruction in Performance for the Performance Specialist. Limited to upper division Music majors who have been accepted by audition into the performance specialization. May be repeated for credit. Units will be distributed on the basis of one unit each for Fall and Winter Quarters and four units for Spring Quarter. Grades will be assigned by the applied instructor in Fall and Winter and by jury examination in Spring. Individual instruction of one hour per week. Students will be required to perform in a noon concert once during their junior year and will be required to present a full recital in their senior year:

160A. Violin.	Ms. Kamei, Mr. Treger
160B. Viola.	Mr. Reher
160C. Cello.	Mr. Oliver
160D. String Bass.	Mr. Zibits
160E. Harp.	Ms. Neill
160F. Classical Guitar.	Mr. Goodman, Mr. Norman
160G. Viola da gamba.	Ms. Marcus
160K. Lute.	Mr. Buetens
161A. Flute.	Mr. Stokes
161B. Oboe.	Mr. Vogel
161C. Clarinet.	Mr. Gray
161D. Bassoon.	Mr. O'Donovan
161E. Saxophone.	Mr. Gray
162A. Trumpet.	Mr. Lazar
162B. French Horn.	Ms. Graham
162C. Trombone.	Mr. Staples
162D. Tuba.	Mr. Johnson
163. Percussion.	Mr. Peters
164A. Piano.	Ms. Harris, Mr. Tzerko and Staff
164B. Organ.	Mr. Harmon
164C. Harpsichord.	Ms. Karp
165. Voice.	Mr. Guarnieri, Ms. Hinson, Ms. Patton and Staff

174A-174D. Musical Terminology and Diction for Musicians (¼ course each). Lecture, one hour. Prerequisite: Music major or consent of instructor. Intensive work in basic pronunciation and diction (for students with no background in the language), as well as more specialized work in terminology and translation of song texts and performance directions (for students with some background in the language). This course is highly recommended for students enrolled in the Opera Workshop, as well as students in performance and music education. Each course may be repeated once for credit. Students may enroll in two sections per quarter and may receive credit for a maximum of four units toward the degree. **174A.** German; **174B.** French; **174C.** Spanish; **174D.** Italian. Ms. Hast

175. Chamber Ensembles (½ course). Two hours weekly. Prerequisite: audition. Students must be at the advanced level of their instrument to participate in the course. May be repeated for credit. Students may not enroll in more than two sections per quarter and may receive credit for a maximum of 12 units toward the degree. Applied study of the performance practices of literature appropriate to the ensemble.

M180. Analytical Approaches to Folk Music. (Same as Folklore M180.) Prerequisites: courses 5A-5B-5C or consent of instructor. An intensive study of the methods and techniques necessary to the understanding of Western folk music. Mr. Porter

M181. Folk Music of Western Europe. (Same as Folklore M181.) Prerequisite: consent of instructor. This course introduces the student to the forms and styles of traditional music in Western Europe. Historical and ethnological perspectives on this music are combined with numerous recorded examples from the major cultural subdivisions of the region. Mr. Porter

184. Experimental Research in Music. Three hours weekly. Prerequisites: courses 17A-17F, 26A-26B-26C or consent of instructor. Theories and processes in various modes of musical experimentation: physical, perceptual, psychological, pedagogical, quantificational, statistical procedures. Recommended for Music majors in all specializations. Ms. Murray

185. Historical and Philosophical Foundations of Music Education. Three hours weekly. Prerequisite: completion of the undergraduate specialization in music education. The development of music education in the United States according to established schools of thought. Mr. Schwadron

187. Problems in Musical Aesthetics. Three hours weekly. Prerequisites: courses 17A-17F, 26A-26B-26C. Critical approach to musical problems of aesthetic analysis, description, values, theories; including both Western and non-Western considerations. Recommended for students in all specializations of music. Mr. Schwadron

188A-188Z. The Master Composer. Four hours weekly, including one laboratory hour. A survey of the works of an outstanding composer in Western art music, considered within the context of his age. **188A.** Josquin; **188B.** Palestrina; **188C.** Monteverdi; **188D.** Purcell; **188E.** A. Scarlatti; **188F.** Vivaldi; **188G.** Handel; **188H.** Haydn; **188J.** Mozart; **188K.** Schubert; **188L.** Schumann; **188M.** Berlioz; **188N.** Chopin; **188P.** Brahms; **188Q.** Wagner; **188R.** Verdi; **188S.** Mahler; **188T.** Debussy; **188U.** Schoenberg; **188V.** Stravinsky; **188W.** Bartok; **188X.** Copland, **188Y.** Webern; **188Z.** Ives.

189. The Symphony. Four hours weekly, including one laboratory hour. A survey of symphonic literature from Haydn through the 20th century with special emphasis upon the current symphonic programs of the Los Angeles Philharmonic Orchestra and other performing groups in the Los Angeles area.

Proseminars

190A-190B. Proseminar in Ethnomusicology. Three hours weekly. Prerequisites: courses 140A-140B-140C. Mr. Nketia, Mr. Racy

193. Proseminar in Music Education (½ course). Two hours weekly. Prerequisites: course 17A and sophomore standing. Course 17A may be taken concurrently with 193. A historical and philosophical introduction to the field. Mr. Schwadron

195. Field Studies in Music Education (½ course). Four hours weekly, including two laboratory hours. Prerequisite: course 193. Discussion and observation of current practices. Miss Hooper

199. Special Studies in Music. Prerequisites: senior standing, consent of instructor and advisor and a 3.0 grade-point average. Individual studies in music resulting in a research project. May be repeated to a maximum of eight units.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Related Upper Division Courses in Other Departments

Dance C154. Music as Dance Accompaniment.

Folklore M106. Anglo-American Folk Song.

M123B. Finnish Folksong and Ballad.

Naval Science

(Office: 123 Men's Gym)

William G. Carson, M.S., *Captain, U.S. Navy, Professor of Naval Science (Chair).*
Albert W. Schmidt, B.S., *Lieutenant, U.S. Navy, Adjunct Professor of Naval Science.*
Thomas K. Farrell, M.A., *Captain, U.S. Marine Corps, Assistant Professor of Naval Science.*
Ronald F. Melampy, M.S., *Commander, U.S. Navy, Assistant Professor of Naval Science (Vice-Chair).*
Edward P. Messmer, M.A., *Lieutenant, U.S. Navy, Assistant Professor of Naval Science.*

In June 1938, by action of the Secretary of the Navy and the Regents of the University of California, a Naval Reserve Officers' Training Corps (NROTC) was established on the Los Angeles campus. The primary objective of the NROTC is to provide an education at civil institutions which will qualify selected students for regular or reserve commissions in the U.S. Navy or Marine Corps.

The Department of Naval Science offers several programs:

(1) Naval ROTC College Program: This is a four-year, nonscholarship program open to physically qualified men and women between the ages of 17 and 21 who are U.S. citizens. Students receive a $100 per month stipend in their junior and senior years and complete one summer training cruise after their third year. Upon graduation, the student will be commissioned as Ensign, U.S. Naval Reserve or Second Lieutenant, U.S. Marine Corps Reserve. A three-year active duty obligation is incurred. This program offers a great deal of flexibility to suit individual needs. Scholarships may be offered to highly qualified College Program students.

(2) NROTC Two-Year Program: This program is open to men and women who will be entering their junior year of undergraduate study. Applications are sought from UCLA students as well as incoming junior college transfers. After a six-week summer training period at the Naval Science Institute, students enroll in the NROTC Unit as juniors, with the same obligations and privileges as in the College Program described above. U.S. citizenship is required and the age limit is 27½ years at the time of graduation. Applicants should contact the Department of Naval Science no later than April 1st of their sophomore year of study.

(3) Two-Year Scholarships: This program is open to academically and physically qualified students in their second year of undergraduate study, who have had some background in college physics and calculus. U.S. citizenship is required. As with the Two-Year Program described above, candidates will attend a summer Naval Science Institute before their junior year. They will receive full tuition, fees, book expense and $100 per month during their last two years. Upon graduation, they will receive Regular Navy commissions and will enter the Navy as Ensigns or the Marine Corps as Second Lieutenants. Applications should be made by April 1st, usually in the sophomore year.

(4) NROTC Scholarship Program: This is a nationwide competition open to physically qualified men and women between the ages of 17 and 21. U.S. citizenship is required. High school seniors and students enrolled in the NROTC College Program are eligible to apply. Successful applicants receive $100 per month for four years, plus full payment for tuition, fees and book expenses. Three summer training cruises are required. Upon graduation, the student receives a commission in the Regular Navy or Marine Corps, with a four-year active duty obligation. December 1st is the application deadline for Fall admissions.

Naval science courses may be taken as free elective courses and applied toward the total course requirements of the student's major department. It is important to contact the Naval Science Department and the cognizant College or department to determine the number of free elective courses for which naval science courses may be substituted.

For further information on program requirements, etc., contact the Professor of Naval Science, 123 Men's Gym (825-9075).

Freshman Year

1A. Introduction to Naval Science (¼ course). An introduction to the structure of the Department of the Navy and its legal framework. Relationships in the Department of Defense. Components of the Naval Service. Shipboard organization. Lt. Schmidt

1B. Naval Ship Systems I. An introduction to the principles of ship hull and superstructure design. The concepts of ship structural integrity, stability and buoyancy are examined in detail. Basic thermodynamic principles inherent in ship power generation(s) propulsion and salt water distillation systems are analyzed. Lt. Schmidt

Sophomore Year

20A. Seapower and Maritime Affairs (½ course). A conceptual study of seapower, emphasizing the historical development of naval and commercial power. Seapower is examined in relation to economic, political and cultural strengths, focusing on current abilities of specific nations to utilize the oceans to attain national objectives. Cdr. Melampy

20B. Naval Ship Systems II. A study of naval weapons systems with emphasis on target designation and acquisition, methods of solving fire control problem and target detection systems. Analysis of transfer and feedback functions inherent in weapon systems. Infra-red, radar and sonar principles. Lt. Schmidt

Junior Year

101A. Navigation I. A study of principles of piloting, rules of the road, shiphandling and basic concepts of multiple ship formations in ocean transit. Course includes in-depth discussion of problems associated with high seas and inland water, applying to small craft and supertankers alike. Lt. Messmer

101B. Navigation II. Prerequisite: course 101A or consent of instructor. A continuation of Navigation I to include a detailed study of electronic and celestial navigation employed in the determination of a ship's position at sea. The course includes spherical trigonometry, mathematical analysis, sextant sights and the use of navigational aids. Lt. Messmer

***103. Evolution of Warfare.** A study of the evolution of warfare including historical and comparative consideration of the influence that leadership, political, economic, and sociological and technological development factors have had on warfare, and the influence they will continue to exert in the age of limited warfare. Capt. Farrell

*Course to be taken by candidates for commissions in the Marine Corps or Marine Corps Reserve in lieu of courses 101A, 101B, 102B, 102C.

Senior Year

102B. Naval Leadership and Management I. An examination of both current and classical leadership and management theories and their application to the military environment. Various aspects of the leadership process are examined in detail including interpersonal communication, counseling theory, moral and professional ethics, conflict resolution, and management of change. The unique leadership problems created by racism, sexism, alcoholism, and drug abuse are also discussed. Capt. Farrell

102C. Naval Leadership and Management II. Prerequisite: course 102B. A continuation of course 102B which examines current leadership and management utilized by the U.S. Navy. Areas covered include human resources management, personnel management, material management, and performance and career evaluation. Capt. Farrell

***104. Amphibious Operations.** A study of the art of amphibious operations including the historical development of techniques used to project military power from sea to land. The evolution of amphibious doctrine and techniques is examined through study of the U.S. landings during World War II, the Korean Conflict and the Vietnam War. Capt. Farrell

*Course to be taken by candidates for commissions in the Marine Corps or Marine Corps Reserve in lieu of courses 101A, 101B, 102B, 102C.

Near Eastern Languages and Cultures

(Office: 376 Kinsey Hall)

Amin Banani, Ph.D., *Professor of Persian and History.*
Arnold Band, Ph.D., *Professor of Hebrew.*
Andras Bodrogligeti, Ph.D., *Professor of Turkic and Iranian (Chair).*
Seeger 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.*
Ismail Poonawala, Ph.D., *Professor of Arabic.*
Avedis K. Sanjian, Ph.D., *Professor of Armenian.*
Hanns-Peter Schmidt, Ph.D., *Professor of Indo-Iranian.*
Stanislav Segert, Ph.D., *Professor of Biblical Studies and Northwest Semitics.*
Wolf Leslau, Docteur-ès-Lettres, *Emeritus Professor of Hebrew and Semitic Linguistics.*
Moshe Perlmann, Ph.D., *Emeritus Professor of Arabic.*
Claude-France 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 Sabar, Ph.D., *Associate Professor of Hebrew.*
Deborah Lipstadt, Ph.D., *Assistant Professor of Jewish Studies.*
Steven West, Ph.D., *Assistant Professor of Turkish.*

•

Shimeon Brisman, *Lecturer in Hebrew.*
David L. Lieber, D.H.L., *Lecturer in Hebrew.*
Stanford Shaw, Ph.D., *Professor of History.*

Bachelor of Arts Degree

Department Programs: The department offers the Bachelor of Arts degree in four fields: (1) Ancient Near Eastern Civilizations, (2) Arabic, (3) Hebrew and (4) Jewish Studies. In each of these fields the student must meet the prerequisites and take the courses prescribed for majors. Each student is assigned an advisor who will assist the student in devising a plan of study developed around his interests.

The Major in Ancient Near Eastern Civilizations

There are four options for a major in Ancient Near Eastern Civilizations: (1) Mesopotamia, (2) Egypt, (3) Syria-Palestine and (4) Biblical Studies. The prerequisites for options 1 and 2 (Mesopotamia and Egypt) are German 1, 2; the prerequisites for options 3 and 4 (Syria-Palestine and Biblical Studies) are Greek 1, 2, Hebrew 1A-1B-1C, 102A-102B-102C. Majors in all four fields will be expected to continue their study of German or Greek beyond the prerequisite levels. Also, majors in all four options are required to take 14 quarter courses selected in consultation with the program advisor.

Majors selecting options 1, 2 and 3 are required to take four language courses as follows: option 1 (Mesopotamia): Semitics 140A-140B, 141, 142; option 2 (Egypt): Ancient Near East 120A-120B-120C, 121A; option 3 (Syria-Palestine): Semitics 130 and three quarters of Hebrew 120. The remaining 10 courses for all three options are to be selected from the following: three literature courses from Ancient Near East 150A, 150B, 150C, Jewish Studies 150A; three courses in history and religion from Ancient Near East 130, 170, 171, History M104A, M104B, 105, M191A, 193D, 203, Iranian 169, 170; three courses in archaeology and art from Ancient Near East 160A, 160B, 161A, 161B, 161C, 162, Art 102; one course in research methodology (such as Anthropology 115Q, 115R, 116P or M116Q or Linguistics 120A or 120B) to be taken preferably in another department with the consent of the advisor.

Majors selecting option 4 (Biblical Studies) in Ancient Near Eastern Civilizations are required to take 14 quarter courses as follows: three quarters of Hebrew 120; Ancient Near East 150C, 162, 170; English 108B; Greek 130; Jewish studies 150A; History M191A; Semitics 130. The remaining three courses may be selected from the following: Ancient Near East 130, 150A, 150B, 160A, 160B, 171, Art 102, 105A, Classics 166B, Greek 200C, History M104A, M104B, 105, 193D, Iranian 169, 170.

The Major in Arabic

Prerequisites are Arabic 1A-1B-1C, 150A-150B. The student is required to take 14 quarter courses as follows: Arabic 102A-102B-102C, 103A-103B-103C, 130A-130B-130C; three courses of Arabic 111A-111B-111C or 140A-140B-140C; History 106A, 106B, 106C.

The Major in Hebrew

Prerequisites are Hebrew 1A-1B-1C, 102A-102B-102C, Jewish Studies 150A-150B or their equivalents. The student is required to take 16 quarter courses as follows: Hebrew 103A-103B-103C; three quarters of Hebrew 120; two courses from Hebrew 130, 135; two courses from Hebrew 140, 160; Hebrew 190A-190B; two additional courses in Hebrew or Aramaic to be approved by the advisor; two quarter courses from History M191A, M191B, 192A, 192B.

The Major in Jewish Studies

Prerequisites are Hebrew 1A-1B-1C, History M191A-M191B or their equivalents. The student is required to take 16 quarter courses including: Hebrew 102A-102B-102C, 103A-103B-103C, Jewish Studies 150A-150B, 151A-151B, 199 (undergraduate thesis) and five other upper division courses. At least two of the five must be courses in the areas of Hebrew, Jewish history or Yiddish. The remaining three may be chosen either from those areas or from courses with Jewish content given in other departments and approved by the Jewish Studies advisor.

In addition to courses offered at UCLA a number of courses in Jewish studies offered at the University of Judaism are accepted by UCLA for concurrent enrollment credit. Additionally, an agreement between UCLA and the University of Judaism establishes a Joint Undergraduate Program of concurrent enrollment leading to an award of two degrees: Bachelor of Arts in Jewish Studies by the University of Judaism and Bachelor of Arts or Bachelor of Science by UCLA. A list of University of Judaism courses accepted for concurrent enrollment at UCLA, as well as general information concerning the Joint Program is available from the office of Admissions of the University of Judaism and the Division of Honors Office in UCLA's College of Letters and Science.

Ancient Near East

(Akkadian, Aramaic, Phoenician and Ugaritic are listed under Semitics.)

Upper Division Courses

M104A-M104B. Ancient Egyptian Civilization. (Same as History M104A-M104B.) Course M104A is not prerequisite to M104B. The course will study the political and cultural institutions of ancient Egypt and the ideas upon which they were based. Discussion will proceed chronologically and cover Prehistory, the Old and Middle Kingdom in **M104A. M104B** will cover the New Kingdom and the Late Period until 332 B.C. Mr. Callender

*2**120A-120B-120C. Elementary Ancient Egyptian.** Lecture, three hours; laboratory, two hours. Prerequisite: consent of instructor. Grammar and texts. Mr. Callender

*2**121A-121B-121C. Intermediate Ancient Egyptian.** Three hours. Prerequisites: courses 120A-120B-120C. Readings in Ancient Egyptian literature. Mr. Callender

*3**123A-123B. Coptic.** Three hours. Prerequisite: consent of instructor. An introduction to Coptic grammar and reading of Coptic texts. The quarters this course is offered vary from year to year. Check with department. Mr. Callender

*3**124. Middle Egyptian Technical Literature.** Prerequisite: course 121C. Reading of Middle Egyptian technical literature in hieroglyphic transcription. Included are medical, veterinary, mathematical and astronomical texts. Mr. Callender

*3**130. Ancient Egyptian Religion.** Lecture, three hours. An introductory survey of various Ancient Egyptian religious beliefs and practices, their origin and development. Included will be discussions of religio-political institutions such as divine kingship and pious foundations. Mr. Callender

*5**140A-140B. Elementary Sumerian.** Lecture, three hours. Prerequisites: Semitics 140A-140B. Elementary grammar and reading of royal inscriptions, letters and administrative texts from the Ur III period.

*2**145. Sumerian Literary Texts.** Lecture, three hours. Prerequisites: courses 140A-140B or consent of instructor. Reading and interpretation of selected Sumerian literary texts.

***2150A-*2150B-**150C. Survey of Ancient Near Eastern Literatures in English.** Lecture, three hours. Each course may be taken independently for credit. **150A.** Mesopotamia; **150B.** Egypt; **150C.** Syria and Palestine, Asia Minor, Persia.
Mr. Buccellati, Mr. Callender, Mr. Segert

***3160A-*7160B. Introduction to Near Eastern Archaeology.** Lecture, three hours. Terminology, geography, principles, strategy of research, bibliography and a general survey of Near Eastern archaeology.
Ms. Carter

***3161A-161B-161C. Archaeology of Mesopotamia.** Prerequisite: consent of instructor. Survey of the main archaeological periods in Mesopotamia with special emphasis on late prehistoric and early historical periods and with reference to neighboring cultural areas. Each course may be taken independently for credit.
Ms. Carter

162. Archaeology of Palestine. Lecture, three hours. A survey of the archaeology of Palestine and the Sinai Peninsula from the Paleolithic to the destruction of Jerusalem in 586 B.C. with emphasis on the geographic setting and relationships to the other cultures of the Near East.

***2163A-163B. Archaeology of Iran.** (Formerly numbered 163.) Lecture, three hours. A lecture course designed to introduce students to Iranian archaeology from prehistoric through Achaemenid times. **163A** will focus on the prehistoric and protohistoric phases of Iranian Archaeology; **163B** will cover the Archaeology of Elam, the Iron Age and the Achaemenid Empire.
Ms. Carter

164A-164B-164C. The Archaeology of the Historic Periods in Mesopotamia.** Prerequisites: History 105, Ancient Near East 161A-161B-161C or consent of instructor. Survey of the main archaeological periods in Mesopotamia with special emphasis on the historic periods and with reference to neighboring cultural areas. Each course may be taken independently for credit.

****170. Introduction to Biblical Studies.** Lecture, two hours. The Bible (Old and New Testaments) as a book. Canon, text and versions. Linguistic, literary, historical and religious approaches to Bible study. Survey of history of interpretation from antiquity to the present. Knowledge of original languages not required.
Mr. Segert

****171. Old Testament: Hebrew and Septuagint Texts.** Lecture, two hours. Prerequisites: Hebrew 102A-102B-102C, Greek 1, 2 or consent of instructor. Study of the Hebrew original and of the Greek version of the Old Testament books.
Mr. Segert

199. Special Studies in the Ancient Near East (½ to 2 courses). Prerequisite: consent of instructor.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Related Upper Division Courses in Other Departments

Art 101A. Egyptian Art and Archaeology.

History M104A-M104B. Ancient Egyptian Civilization.

105. History of Ancient Mesopotamia and Syria.

193D. Religions of the Ancient Near East.

Arabic

Lower Division Courses

***121A-1B-1C. Elementary Arabic.** Lecture, four hours; laboratory, two hours. Basic structure.
Miss Audebert

Upper Division Courses

***12102A-102B-102C. Intermediate Arabic.** Prerequisites: courses 1A-1B-1C or consent of instructor. Readings in both classical and modern Arabic, composition, conversation.
Miss Audebert

***12103A-103B-103C. Advanced Arabic.** Prerequisites: courses 102A-102B-102C or consent of instructor. Review of grammar, continued reading of literary works. Composition, conversation and a weekly lecture in Arabic.
Mr. Poonawala

***12111A-111B-111C. Spoken Arabic.** Lecture, three hours; laboratory, three hours. Prerequisites: courses 102A-102B-102C. Introduction to one Arabic dialect with some comparison of the other dialects. May be repeated for credit with consent of instructor.

112. Spoken Egyptian Arabic. Lecture, three hours; laboratory, two hours. Prerequisites: courses 111A-111B-111C or consent of instructor. This course will treat the syntactic and morphological structures of Spoken Egyptian Arabic in a more elaborate and in-depth fashion than first year spoken Arabic, which is on an elementary level. Excerpts of literary texts in colloquial Arabic (plays, short stories, poetry) and folk literature will constitute the basic material for the course. Emphasis will be put on conversation, laboratory exercises. But this will not exclude the study of dialectology. Oral and written tests will be administered.
Miss Audebert

****113A-113B-113C. Spoken Iraqi Arabic.** Three hours. Prerequisites: courses 102A-102B-102C. Introduction to the contemporary Arabic dialect of Iraq. Phonology, morphology and syntax will be presented with emphasis on oral practice.

***1,*12114A-114B-114C. Spoken Moroccan Arabic.** Lecture, three hours; laboratory, one hour. Introduction to the Spoken Arabic dialect of Morocco. Phonology, morphology and syntax will be presented. Emphasis will be on developing oral skills.
Mr. Penchoen

****130A-130B-130C. Classical Arabic Texts.** Lecture, three hours. Prerequisites: courses 102A-102B-102C. Reading and interpretation of texts from classical Arabic literature: Koran, historiography, geography and poetry.
Mr. Bonebakker

132A-132B-132C. Philosophical Texts. Three hours. Prerequisites: courses 102A-102B-102C or consent of instructor. A study of excerpts from the major works of medieval Arab philosophy.

****140A-140B-140C. Modern Arabic Texts.** Lecture, three hours. Prerequisites: courses 102A-102B-102C. Readings and interpretation of modern Arabic texts.
Miss Audebert

***2141. Modern Arabic Literature.** Prerequisites: courses 140A-140B-140C or equivalent. Readings of selected texts representing the most important modern styles and trends. May be repeated for credit with consent of instructor.
Miss Audebert

***2150A-150B. Survey of Arabic Literature in English.** Lecture, three hours. Knowledge of Arabic is not required. Each course may be taken independently for credit.
Mr. Bonebakker

199. Special Studies in Arabic (½ to 2 courses). Prerequisite: consent of instructor.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Related Upper Division Courses in Another Department

History 106A-106B-106C. Survey of the Middle East from 500 to the Present.

Armenian

Upper Division Courses

***12101A-101B-101C. Elementary Modern Armenian.** Armenian grammar, conversation and exercises.

***12102A-102B-102C. Intermediate Modern Armenian.** Prerequisites: courses 101A-101B-101C or equivalent. Reading of selected texts, composition and conversation.

103A-103B-103C. Advanced Modern Armenian. Three hours. Prerequisites: courses 102A-102B-102C or equivalent. Readings in advanced modern Armenian texts.
Mr. Sanjian

***2130A-130B. Elementary Classical Armenian.** Three hours. Grammar of the Classical Armenian language and readings of selected texts.
Mr. Sanjian

***2131A-**131B. Intermediate Classical Armenian.** Three hours. Prerequisites: courses 130A-130B or equivalent. Reading of selected texts.
Mr. Sanjian

***7132A-**132B. Advanced Classical Armenian.** Three hours. Prerequisites: courses 131A-131B or equivalent. Readings in advanced Classical Armenian texts.
Mr. Sanjian

****150A-150B. Survey of Armenian Literature in English.** Three hours. Knowledge of Armenian is not required. Each course may be taken independently for credit.
Mr. Sanjian

****160A-160B. Armenian Literature of the 19th and 20th Centuries.** Three hours. Prerequisites: courses 102A-102B-102C or equivalent. Reading of texts and discussion of various genres of modern Armenian literature, within the context of the Armenian Cultural Renaissance.
Mr. Sanjian

199. Special Studies in Armenian Language and Literature (½ to 2 courses). Prerequisite: consent of instructor.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Related Upper Division Courses in Other Departments

History 112A-112B-112C. Armenian History.

C112D. Introduction to Armenian Oral History.

113. The Caucasus under Russian and Soviet Rule.

Indo-European Studies M150. Introduction to Indo-European Linguistics.

Berber

Upper Division Courses

***12,**101A-101B-101C. Elementary Berber.** Lecture, three hours; laboratory, two hours. Development of oral proficiency and analysis of basic grammatical structure.
Mr. Penchoen

***12,**102A-102B-102C. Advanced Berber.** Prerequisites: courses 101A-101B-101C or consent of instructor. Advanced study of Berber. Regional and stylistic variants in folk literature.
Mr. Penchoen

***12,**120A-120B-120C. Introduction to Berber Literature.** Three hours. Prerequisites: courses 102A-102B-102C or consent of instructor. The development of Berber literary forms: systematic analysis of texts and a study of Berber writing systems.
Mr. Penchoen

****130. The Berbers.** Examination of the main features of Berber societies and cultures with particular attention being given to social structures and institutions on the one hand, and to customs, values and beliefs on the other. The course will present a broad framework within which the study of particular aspects of Berber cultures may be fruitfully pursued.
Mr. Penchoen

****199. Special Studies in Berber Languages (½ to 2 courses).** Prerequisite: consent of instructor. Study based on the requirements of the individual student. Mr. Penchoen

Related Upper Division Courses in Another Department

History 109A-109B. History of North Africa from the Moslem Conquest.

Caucasian Languages

Upper Division Courses

***[1]111A-111B-111C. Elementary Georgian.** Three hours. Prerequisite: consent of instructor. Script, grammar, simple reading in this main Caucasian language.

***[1]199. Special Studies in Caucasian Languages (½ to 2 courses).** Prerequisite: consent of instructor.

Hebrew

Lower Division Courses

***[12]1A-1B-1C. Elementary Hebrew.** Lecture, three hours; laboratory, two hours. Structural principles of grammar. Students who have previous knowledge of reading and some vocabulary are advised to take courses 10A-10B-10C. Students with credit for course 10A will not receive credit for 1A. Students with credit for course 10B will not receive credit for 1B or 1C.

***[12]10A-10B-10C. Accelerated Elementary Hebrew.** Open to students who wish to cover the equivalent of two years of college Hebrew in one academic year; for students who have previously studied the rudiments of Hebrew. Students with credit for course 1A will not receive credit for 10A. Students with credit for course 1B and/or 1C will not receive credit for 10B.

Upper Division Courses

***[12]102A-102B-102C. Intermediate Hebrew.** Lecture, five hours. Prerequisites: courses 1A-1B-1C or equivalent. Amplification of grammar; reading of vocalized texts from modern, Biblical, and Medieval/Rabbinic literature. Section I: for students with strong grammatical background. Section II: for students with strong conversational background. The two sections should be equal in both language skills by the end of Winter Quarter. Mr. Sabar

***[12]103A-103B-103C. Advanced Hebrew.** Lecture, three hours, discussion, two hours. Prerequisites: courses 102A-102B-102C or equivalent. Introduction to modern Hebrew literary texts. Mr. Hakak

***[12]120. Biblical Texts.** Three hours. Prerequisites: courses 102A-102B-102C or equivalent. Translations and analysis of Old Testament texts with special attention given to texts of primary literary and historical importance. May be repeated for credit. Mr. Lieber

130. Rabbinic Texts. Lecture, three hours. Prerequisites: courses 103A-103B-103C or consent of instructor. Readings in Mishnah, Talmud, and/or Midrash. May be repeated for credit. Mr. Davidson

135. Medieval Hebrew Texts. Lecture, three hours. Prerequisites: courses 103A-103B-103C or consent of instructor. Readings in Medieval Hebrew Prose and Poetry. May be repeated for credit up to four times. Mr. Davidson

****140. Modern Hebrew Poetry and Prose.** Lecture, three hours. Prerequisites: courses 103A-103B-103C and consent of instructor. A study of the major Hebrew writers of the past one hundred years: prose — Mendele, Ahad Ha'am, Agnon, Yizhar; poetry — Bialik, Tchernichovsky, Greenberg, Shlonsky, Alterman, Amihai. May be repeated for credit. Mr. Hakak

****160. The Hebrew Essay.** Three hours. Prerequisites: courses 103A-103B-103C or consent of instructor. The Hebrew essay from its rise in Europe in the late eighteenth century to the contemporary Israeli essay; the literary, political, philosophical, and scholarly essay will be studied. May be repeated for credit. Mr. Hakak

****190A-190B. Survey of Hebrew Grammar.** Three hours. Prerequisites: courses 102A-102B-102C or consent of instructor. Descriptive and comparative study of Hebrew grammar: phonology and morphology. The course includes topics such as the development of the Hebrew language from Biblical times to the present day, its relation to Arabic and other Semitic languages, methods of language expansion in Israeli Hebrew, traditional pronunciation of Hebrew by various Jewish communities, Hebrew contribution to other Jewish languages (Yiddish, Ladino, Judeo-Arabic). Courses are offered alternate years. Mr. Sabar

199. Special Studies in Hebrew (½ to 2 courses). Prerequisite: consent of instructor.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Iranian

Lower Division Courses

10A-10B-10C. Persian Conversation (½ course each). Three hours. Prerequisite: consent of instructor. Systematic and structured conversation Persian.

Upper Division Courses

***[12]101A-101B-101C. Elementary Persian.** Lecture, four hours; laboratory, two hours.

***[12]102A-102B-102C. Intermediate Persian.** Lecture, three hours; laboratory, three hours. Prerequisites: courses 101A-101B-101C or equivalent.

***[12]103A-103B-103C. Advanced Persian.** Lecture, three hours. Prerequisites: courses 102A-102B-102C or equivalent. Mr. Banani

****140. Contemporary Persian Belle Lettres.** Three hours. Prerequisites: courses 103A-103B-103C or equivalent and consent of instructor. A study of the major Persian poets and prose writers of the twentieth century: prose — Jamalzadeh, Hedayat, Chubuk, Al Ahmad, Sa'edi, Golestan; poetry — Nima, Shamlu, Farrokhzad, Akhavan. Mr. Banani

****141. Contemporary Persian Analytical Prose.** Three hours. Prerequisites: courses 102A-102B-102C or equivalent and consent of instructor. A study of selected modern Persian analytical and expository prose texts with emphasis on social sciences, literary criticism and history. Mr. Banani

150A-150B. Survey of Persian Literature in English. Three hours. Knowledge of Persian not required. Each course may be taken independently for credit. Mr. Banani

***[1]169. Civilization of Pre-Islamic Iran.** (Formerly Indo-European Studies 169.) A survey of Iranian culture from the beginnings through the Sasanian period. Mr. Schmidt

***[1]170. Religion in Ancient Iran.** History of religion in Iran from the beginnings to the Mohammedan conquest; Indo-Iranian background, Zoroastrianism, Manichaeism, Mazdakism. Mr. Schmidt

***[2]190A-190B. Introduction to Modern Iranian Studies.** Three hours. Prerequisites: courses 101A-101B-101C or equivalent. Survey of the Iranian languages. Comparative and historical grammar. Mr. Bodrogligeti

199. Special Studies in Iranian (½ to 2 courses). Prerequisite: consent of instructor.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Related Courses in Other Departments

History 110A-110B. Iranian History.

Music 81L. Music of Persia.

91L. Music of Persia.

Oriental Languages 160. Elementary Sanskrit.

161. Intermediate Sanskrit.

162. Advanced Sanskrit.

Islamics

Upper Division Course

***[5]110. Introduction to Islam.** (Formerly numbered Arabic 210.) Lecture, three hours. The course will treat the genesis of Islam, its doctrines and practices with readings from the Qur'an; forms of Islam: tensions and schism; reform and modernism. Mr. Poonawala

Related Upper Division Courses in Another Department

History 107A-107B. Islamic Civilization.

Jewish Studies

Upper Division Courses

110. Social, Cultural and Religious Institutions of Judaism. This course will examine Judaism's basic beliefs, institutions and practices. Topics to be covered include: the development of Biblical and Rabbinic Judaism; the concepts of god, sin, repentence, prayer and the messiah; the history of the Talmud and the synagogue; the evolution of folk beliefs and yearcycle and lifecycle practices. Ms. Lipstadt

130. Modern Jewish National Movements. Lecture, three hours. Study of the evolution of modern Jewish national movements with particular emphasis on the history of Zionism and Diaspora Nationalism. Covers the period up to 1948. Ms. Lipstadt

***[3]140A-140B. American Jewish History.** Lecture, three hours. An examination of the social and cultural history of the American Jewish community from its inception to the present, with emphasis upon the integration of successive immigrants and the development of institutions. **140A** covers from 1654 to 1914; **140B** covers from 1914 to the present. Ms. Lipstadt

****141. Modern Anti-Semitism.** Lecture, three hours. An examination of modern anti-Semitism from the 18th century to the present; a comparison of modern racist ideologies with pre-modern theories; case studies, e.g., The Dreyfus affair, the Beiliss Trail, the Holocaust; Jewish reactions to these phenomena. Ms. Lipstadt

***[3]142. The History and Institutions of the State of Israel.** Lecture, three hours. A study of the social and cultural development of the State of Israel from its pre-state institutional structures to the present with emphasis upon major trends, personalities, and ideologies, and the state's position in the wider framework of modern Jewish history. Ms. Lipstadt

M143. Introduction to Jewish Folklore. (Same as Folklore M142.) The nature of Jewish folklore; narrative, folksong, folk art, folk religion and the methods and perspectives used in their analysis. Mr. Stern

***[2]150A-150B. Hebrew Literature in English.** Lecture, three hours. Each course may be taken independently for credit. **150A.** Biblical and Apocryphal literature. **150B.** Rabbinic and Medieval literature. Mr. Band, Mr. Davidson

[2]151A-[2]151B. Modern Jewish Literature in English. Lecture, three hours. 151A. Diaspora literature; 151B. Israeli literature. Each course may be taken independently for credit. Mr. Band

190. Undergraduate Seminar in Jewish Studies. This course will examine a single topic in depth with the object of encouraging and guiding students' research in the area of Jewish studies. Literary, cultural and historical subjects will be taken up. Ms. Lipstadt

M191A-M191B. Survey of Jewish History. (Same as History M191A-M191B.) A survey of social, political and religious developments. M191A. From biblical times to the end of the Middle Ages. M191B. From the end of the Middle Ages to the present. Mr. Funkenstein

199. Special Studies (Jewish Studies) (½ to 2 courses). Prerequisite: Jewish Studies majors only.

Related Upper Division Courses in Another Department

History 191C-191D. Focal Themes in Jewish History. 192A-192B. Jewish Intellectual History.

Near Eastern Languages

Upper Division Course

130. Archaeology in Armenia and in the Caucasus. Lecture, three hours. A survey of the cultures of Armenia and the Caucasus from late prehistoric to medieval times, from the viewpoint of artifactual evidence. Major recent excavations and finds will be especially highlighted. Mr. Arakelian

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Semitics

Upper Division Courses

110. Neo-Aramaic. Lecture, three hours. Grammar and reading of selected texts (folktales, homilies, songs) in the modern Aramaic dialects of the Jews and Christians of Kurdistan. Mr. Sabar

*[6]130. Biblical Aramaic. Lecture, three hours. Prerequisites: Hebrew 102A-102B-102C or consent of instructor. Grammar of Biblical Aramaic and reading of texts. Mr. Segert

*[6]140A-140B. Elementary Akkadian. Lecture, three hours. Elementary grammar and reading of texts in standard Babylonian. Mr. Buccellati

*[6]141. Advanced Akkadian. Three hours. Prerequisite: consent of instructor. Old Babylonian syntax; reading of basic Old Babylonian texts. Mr. Buccellati

142. Akkadian Literary Texts. Three hours. Prerequisite: consent of instructor. Selected readings from Akkadian myths and epics, with an introduction to the historical tradition of the works and their literary structure. Mr. Buccellati

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Turkic Languages

Upper Division Courses

*[12]101A-101B. Elementary Turkish. Five hours. Grammar, reading, conversation and elementary composition drills. Mr. West

*[12]102A-102B. Intermediate Turkish. Five hours. Prerequisites: courses 101A-101B or equivalent. Continuing study of grammar, reading, conversation and composition drills. Mr. West

*[12]103A-103B. Advanced Turkish. Five hours. Prerequisites: courses 102A-102B or equivalent. Reading in modern literature and social science texts; conversation and composition. Mr. West

*[2]112A-112B-112C. Uzbek. Three hours. Prerequisite: course 102A or consent of instructor. Grammar, composition drills, reading of literary and folkloric texts. Mr. Bodrogligeti

*[6]114A-114B-114C. Bashkir. Three hours. Prerequisite: course 102A or consent of instructor. Grammar, reading of literary and folkloric texts. Mr. Bodrogligeti

*[6]160A-160B. Cultural History of the Turks. Lecture, three hours. A survey of the cultural history of the Turks, as seen primarily through their literature, from their early history to the present. Mr. West

*[2]180A-180B-180C. Introduction to Turkic Studies. Three hours. Prerequisite: consent of instructor. Obligatory for everyone in the Turkish program. Introduction to Turkic Philology and an ethnic and cultural survey of the Turkic people. Mr. Bodrogligeti

199. Special Studies in Turkic Languages (½ to 2 courses). Prerequisite: consent of instructor.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Urdu

Upper Division Courses

*[1]101A-101B-101C. Elementary Urdu. Three hours. Prerequisite: consent of instructor. Elements of Urdu, the language of Pakistan.

*[1]199. Special Studies in Urdu. Prerequisite: consent of instructor.

Near Eastern Studies (Interdepartmental)

(Office: 10286 Bunche Hall)

Major in Near Eastern Studies

This major is designed primarily for the following students: (1) those seeking a general education and desiring a special emphasis in this particular area, (2) those who plan to live and work in the Near East whose careers will be aided by a knowledge of its peoples, languages and institutions and (3) students preparing for academic study in the various disciplines pertaining to the Near East. Selection of courses should be decided partly by the student's own special objectives, except that the same Near Eastern language must be maintained in both lower and upper division.

Preparation for the Major

The first-year course in Arabic, Armenian, Hebrew, Persian or Turkish; candidates must also obtain a reading proficiency in French, German, Italian, Russian or Spanish as demonstrated by the completion of six quarter courses or their equivalent in the language of their choice. Candidates may substitute for the European language requirement Engineering 10S and one of Mathematics 50A, Psychology 41, Sociology 18, Political Science 6 or Economics 40, plus one of Psychology 142, Sociology 116, Political Science C102, Economics 141 or Geography 171. Also required are History 9D and four courses chosen from History 1A, 1B, 1C, Anthropology 5, 6, Economics 1, 2, Geography 3, Political Science 2, 3, Sociology 1.

The Major

Required: Sixteen courses as follows: (1) completion of the advanced level or its equivalent in Arabic, Armenian, Hebrew, Persian or Turkish; (2) History 106A-106B-106C and three additional courses in the history of the Near East, two of which are related to the major language; (3) four courses (two of which must be in the same discipline) from: Anthropology 110, 176, Art 102, 104B, 104C, 104D, Economics 110, 111, 112, 190, Geography 187, 188, Political Science 132A, 132B, 164, 165, Sociology 132, 133. This program may be modified in exceptional cases with the consent of the advisor.

For further information, contact the Von Grunebaum Center for Near Eastern Studies, 10286 Bunche Hall (825-1181) or Professor Michael Morony, History, 6242 Bunche Hall (825-1962).

Neuroscience (Interdepartmental)

(Office: 73-346 Center for Health Sciences)

The Neuroscience Program does not offer an undergraduate degree. For detailed information on graduate degrees offered by this program, please refer to the *UCLA Graduate Catalog*.

Nursing

(Office: 2-137 Louis Factor Building, Center for Health Sciences)

Mary E. Reres, 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.*
Maria W. Seraydarian, Ph.D., *Professor of Nursing.*
Donna L. Vredevoe, Ph.D., *Professor of Nursing.*
Beatrice M. Dambacher, R.N., D.N.Sc., *Emeritus Professor of Nursing.*
Lulu Wolf Hassenplug, R.N., M.P.H., Sc.D., *Emeritus Professor of Nursing.*
Dorothy E. Johnson, R.N., M.P.H., *Emeritus Professor of Nursing.*
Harriet C. Moidel, 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.*
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 Steeg, R.N., Ph.D., *Associate Professor of Nursing.*
Irma D'Antonio, R.N., Ph.D., *Acting Associate Professor of Nursing.*
Arleen B. Canfield, R.N., Ed.D., *Assistant Professor of Nursing.*
Barbara H. Davis, R.N., Ed.D., *Assistant Professor of Nursing.*
Jacquelyn Flaskerud, R.N., Ph.D., *Assistant Professor of Nursing.*
Joy Graves, R.N., Ph.D., *Assistant Professor of Nursing.*
Bonnie Holaday, R.N., D.N.Sc., *Assistant Professor of Nursing.*
Maryalice Jordan-Marsh, 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 Ludington, R.N., Ph.D., *Assistant Professor of Nursing.*
Elizabeth Poster, R.N., Ph.D., *Assistant Professor of Nursing.*
Juliet Tien, R.N., D.N.Sc., *Assistant Professor of Nursing.*
Kathleen Dracup, R.N., D.N.Sc., *Acting 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 Brazal, 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 Derdiarian, R.N., M.N., *Assistant Clinical Professor of Nursing.*
Marilyn Elaz, R.N., M.N., *Assistant Clinical Professor of Nursing.*
Margaret Galler, R.N., M.S.N., *Assistant Clinical Professor of Nursing.*
Roberta Gerds, R.N., M.N., *Assistant Clinical Professor of Nursing.*
Susan Griffith, R.N., M.S., *Assistant Clinical Professor of Nursing.*
Gerrie Kilburn, R.N., M.S.N., *Assistant Clinical Professor of Nursing.*
Jackline C. Knable, R.N., M.S., *Assistant Clinical Professor of Nursing.*
Ann Lewis, R.N., M.N., *Assistant Clinical Professor of Nursing.*
Ellen M. Meier, R.N., M.N., *Assistant Clinical Professor of Nursing.*
Jo Ellen Murata, R.N., M.P.H., *Assistant Clinical Professor of Nursing.*
Agnes F. Padernal, R.N., M.A., M.Ed., *Assistant Clinical Professor of Nursing.*
Christine Petze, R.N., M.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 Bahu, R.N., M.N., *Visiting Lecturer in Nursing.*
William Crawford, Ed.D., *Visiting Lecturer in Nursing.*
Terri Forshee, R.N., M.S.N., *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 Randell, 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 Sobel, R.N., Ph.D., *Visiting Lecturer in Nursing.*
Jo Ann Wegmann, R.N., M.S.N., *Visiting Lecturer in Nursing.*

The School of Nursing accepts students of junior or higher standing and offers curricula leading to the degrees of Bachelor of Science and Master of Nursing. See the "School of Nursing" section in the chapter on "Undergraduate Schools and Colleges" earlier in this catalog for further information.

Preparation for the Major

Completion of 21 courses (84 quarter units) of college work including the courses listed under the "Prenursing Curriculum" in the "College of Letters and Science" section of this catalog.

The Major

At least 25 required upper division nursing and elective courses (100 quarter units) designed to prepare University students for professional nursing responsibilities in the care of the patient and his family, including courses 101, 104A, 104B, 104C, 109, 120A, 120B, 120C, 120D, 120E, 120F, 184, 190A, 190B, 193, 195, four electives, Public Health 100A, 180, Physiology 105N.

Upper Division Courses

101. Introduction to Art and Science of Nursing (2 courses). Lecture, four hours; discussion, two hours; laboratory, twelve hours; autotutorial laboratory, variable; seminars, variable. An introduction to nursing theory and practice. The content will include the following modules: nursing process, pharmacology, interpersonal and technical skills. Methodology will include laboratory, lectures, discussion, seminars, autotutorial laboratory and clinical application.
Ms. Caine

104A. Behavior of Man in Health and Illness. An examination of the health-illness continuum from the framework of social and biological sciences. Content includes role theory, developmental theory, transcultural communication theory and other theories relevant to nursing practice.

104B. Behavior of Man in Health and Illness. Prerequisite: course 104A. An examination of the health-illness continuum from the framework of illness as a stressor and the possible responses to such stress. Content includes anxiety, pain, cognitive disturbances, loss and other responses relevant to nursing practice.

104C. Behavior of Man in Health and Illness. Prerequisites: courses 104A, 104B. Continuation of the examination of the health-illness continuum from the framework of illness as a stressor and the possible responses to such stress. Content includes anxiety, pain, cognitive disturbances, loss and other responses relevant to nursing practice.

109. Communication in Health Care. Lecture, two hours; laboratory, six hours. Study of basic communication and group process theory and its application to practice. Laboratory experience emphasizes development of each individual's ability to communicate effectively in a dyad and in a small group. Ms. Topf

120A. Clinical Nursing. Five weeks. Lecture, four hours; laboratory, 24 hours. Prerequisites: courses 101, 109, Physiology 105N. Clinical application of nursing theory in community situations: acute care, convalescent and ambulatory. Theoretical content will include pathophysiology, pharmacology and treatment modalities. Application of the theoretical concepts related to the nursing care of the child and his family. Ms. Betz

120B. Clinical Nursing. Five weeks. Lecture, four hours; laboratory, 24 hours. Prerequisites: courses 101, 109, Physiology 105N. Clinical application of nursing theory in community situations: acute care, convalescent and ambulatory. Theoretical content will include pathophysiology, pharmacology and treatment modalities. Application of the theoretical concepts of reproduction to the nursing care of the family. Ms. Gerds

120C. Clinical Nursing. Five weeks. Lecture, four hours; laboratory, 24 hours. Prerequisites: courses 101, 109, Physiology 105N. Clinical application of nursing theory in community situations: acute care, convalescent and ambulatory. Theoretical content will include pathophysiology, pharmacology and treatment modalities. Application of the theoretical content related to the nursing care of the patient undergoing medical interventions. Ms. Padernal

120D. Clinical Nursing. Five weeks. Lecture, four hours; laboratory, 24 hours. Prerequisites: courses 101, 109, Physiology 105N. Clinical application of nursing theory in community situations: acute care, convalescent and ambulatory. Theoretical content will include pathophysiology, pharmacology and treatment modalities. Application of the theoretical content related to the patient undergoing surgical intervention. Ms. Bahu

120E. Clinical Nursing. Five weeks. Lecture, four hours; laboratory, 24 hours. Prerequisites: courses 101, 109, Physiology 105N. Clinical application of nursing theory in community situations: acute care, convalescent and ambulatory. Theoretical content will include pathophysiology, pharmacology and treatment modalities. Application of mental health content related to the nursing care of individuals, groups or communities. Ms. Poster

120F. Clinical Nursing. Five weeks. Lecture, four hours; laboratory, 24 hours. Prerequisites: courses 101, 109, Physiology 105N. Clinical application of nursing theory in community situations: acute care, convalescent and ambulatory. Theoretical content will include pathophysiology, pharmacology and treatment modalities. Application of community health concepts to nursing care in public health agencies. Ms. Sobol

M158. Health in Culture and Society. (Same as Anthropology M168.) Prerequisite: upper division standing. An examination of the theories and methods of medical anthropology in relation to cross-cultural health systems, role networks, attitude and belief systems of the participants. Emphasis will be placed upon interaction networks in health care systems. Ms. Brink

184. Evolution and Dynamics of the Nursing Profession. A study of the evolution of nursing focusing on historical, ethical, moral, legal, and institutional ramifications of nursing practice. In addition, consideration will be given to the rights, obligations, societal, and institutional expectations of the professional nurse. Ms. Ver Steeg

188. Seminar in Physiology (½ course). Discussion, two hours. Prerequisite: Physiology 105N or equivalent. Student presentation of selected topics in physiology based on recent monographs, review articles and original research papers. Topics selected each quarter designed to amplify and extend information presented in lectures in Physiology 105N. May be repeated for credit. Ms. Seraydarian

189. Human Sexuality. Lecture, three hours; discussion, one hour. Prerequisite: consent of instructor. Lectures, discussions and case presentations considering human sexuality, its joys and pleasures, pitfalls and problems. An interdisciplinary approach encompassing anatomic, physiologic, psychologic and social aspects of heterosexual and homosexual relationships, including development of gender identity, intercourse, pregnancy, abortion, contraception and venereal disease. Ms. Reeder

190A. Selected Area of Clinical Concentration. Lecture, two hours; laboratory, 20 hours. Prerequisites: successful completion of courses 101, 104 series, 120 series. Beginning concentration in a clinical area of student's choice. Ms. Griffith and the Staff

190B. Selected Area of Clinical Concentration. Lecture, two hours; laboratory, 20 hours. Prerequisites: successful completion of courses 101, 104 series, 120 series, 190A. Beginning concentration in a clinical area of student's choice. Ms. Griffith and the Staff

193. Introduction to Research. An introduction to planning a research project based upon a simple question. Includes rules for definition of terms, alternative methods of writing purposes, selecting a sample, choosing a data collection instrument, planning for data analysis, protection of human rights, reading research reports, and writing a research proposal. Ms. Brink

195. Principles of Change and Change Agent Roles. Lecture, two hours; discussion, two hours. Theories and methods of change and their application to nursing. Principles of leadership, teaching-learning, health delivery systems, organization of nursing care and patient advocacy.

196. Health Care Problems of Minority Group Members. Prerequisite: Sociology 1A or 101. Description and discussion of the special health care problems which members of minority groups face. These problems may be related to socioeconomic status as well as ethnic background and subcultural differences.

199. Special Studies in Nursing (½ to 4 courses). Prerequisites: senior standing and/or consent of instructor. Individual study of a problem in the field of nursing. May be repeated for credit but only one quarter course (4 quarter units) may be applied toward the Bachelor of Science degree. Grading basis (Passed/Not Passed or letter grade) is to be determined by the student and instructor.

Graduate Courses

For complete descriptions of graduate-level courses offered by this School, please consult the *UCLA Graduate Catalog.*

Oral Biology

(Office: 63-090 Dentistry)

The Oral Biology Program (Dentistry) does not offer an undergraduate degree. For detailed information on graduate degrees offered by this program, please refer to the *UCLA Graduate Catalog.*

Oriental Languages

(Office: 222 Royce Hall)

Hartmut E. F. Scharfe, Ph.D., *Professor of Indic Studies (Chair).*
Ensho Ashikaga, M. Litt., Giko, *Emeritus Professor of Oriental Languages.*
Kenneth K. S. Chen, Ph.D., *Emeritus Professor of Oriental Languages.*
Kan Lao, B.A., Academician, *Emeritus Professor of Oriental Languages.*
Richard C. Rudolph, Ph.D., *Emeritus Professor of Oriental Languages.*
Ben Befu, 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. Plutschow, Ph.D., *Associate Professor of Oriental Languages.*
Shirleen S. Wong, Ph.D., *Associate Professor of Oriental Languages.*
Richard E. Strassberg, Ph.D., *Assistant Professor of Oriental Languages.*

•

Y. C. Chu, M.A., *Lecturer in Chinese.*
Kuo-yi Pao (Unensecen), M.A., M.S., *Lecturer in Oriental Languages.*
Hanns-Peter Schmidt, Ph.D., *Professor of Indo-Iranian Studies.*

Department undergraduate advisors: Kuo-yi Pao, Chinese; Robert Epp, Japanese.

Advising: At the beginning of each academic year all majors in the department should see the advisor concerning their program of studies. New students entering the department should consult immediately with the appropriate advisor concerning their proposed study program.

Aim: The Department of Oriental Languages aims to provide the general undergraduate student with an exposure to the cultural heritage of China and Japan. This is accomplished through courses in civilization, religion, archaeology and literature in translation. For those undergraduates who wish to major in Oriental Languages, the department offers a program leading to the B.A. degree in Chinese or Japanese, in which the emphasis is on a more specialized knowledge of the language and literature of the area of major interest. In the language program, the emphasis proceeds from an acquaintance with the spoken language (either Chinese or Japanese) to a reading knowledge of the modern and classical forms of the language.

No credit will be allowed for completing a less advanced course after satisfactory completion of a more advanced course in grammar and/or composition.

Preparation for the Major

For the major in Chinese: Courses 1A-1B-1C, 11A-11B-11C, 13A-13B and 40A or 46, History 9B-9C. *For the major in Japanese:* Courses 9A-9B-9C, 19A-19B-19C, 40B, History 9B-9C. Recommended for Chinese majors: course 13C. Recommended for both majors: Anthropology 6, 22 and English 4.

The Major

Required for the major in Chinese: Seven upper division language courses which must include:

(1) Two courses to be chosen from 121A, 121B, 121C, 122A, 122B, 124A, 124B, 124C, 126.

(2) Two courses to be chosen from 113A, 113B, 151A, 151B, 152A, 152B, 163A, 163B, 163C. Also, 140A or 140B or 140C; one course chosen from 170A, 170B, 173 or 183; 199 (at least ½ course); Art 114B and either History 182A, 182B, 182C or 183.

Required for the major in Japanese: Seven upper division courses chosen from 119A, 119B, 129, 134A, 134B, 137, 139, 142A, 142B, 153A, 153B, 175, 179A, 179B. The seven courses must include 119B, 129 and 134A or 134B or 153A or 153B. Also, 141A or 141B; one course chosen from 174, 184; 199 (at least ½ course); Art 114C and either History 187A, 187B or 187C.

Recommended for both majors: English 100A, 100B, 100C and additional courses in history. Those planning to undertake graduate study are urged to include in their undergraduate program three courses in classical Chinese or Japanese at the upper division level. Those planning to undertake advanced graduate study are urged to include five quarters of French or German.

Lower Division Courses

1A-1B-1C. Elementary Modern Chinese. Lecture, five hours. Not open to students with previous training. An introduction to standard spoken Chinese and Chinese characters with emphasis on conversation. Mr. Chu, Mr. Pao

3A-3B-3C. Basic Cantonese. An introduction to a major dialect of the Chinese language. Basic grammar and culture of the dialect will be given with emphasis on conversational patterns. Basic Chinese characters will also be introduced.

9A-9B-9C. Elementary Modern Japanese. Lecture, five hours. Not open to students with previous training. Introduction to modern Japanese with attention to conversation, grammar and the written forms. Conversation drill to be based on material covered in class.

10A-10B-10C. Intermediate Spoken Chinese (½ course each). Prerequisite: course 1C. To be taken in conjunction with second year Chinese to enhance command of spoken Mandarin at the intermediate level and above. Consent of department required. Mr. Link, Mr. Pao, Mr. Strassberg

11A-11B-11C. Intermediate Modern Chinese. Lecture, three hours; laboratory, one hour. A continuation of courses 1A-1B-1C, with balanced instruction in reading, writing and conversation. Mr. Pao

13A-13B-13C. Introduction to Classical Chinese. Lecture, three hours; reading or discussion, one hour. Prerequisite: course 1C or consent of instructor. Study of the development of the writing system and introduction to literary Chinese. Mr. Chou

15A-15B-15C. Intermediate Spoken Japanese (½ course each). Prerequisite: course 9C. Enrollment limited; consent of department required; priority to be given Japanese majors.

19A-19B-19C. Intermediate Modern Japanese. Lecture, three hours; laboratory, two hours. Prerequisite: course 9C or equivalent. A continuation of courses 9A-9B-9C. Readings in modern Japanese with emphasis on comprehension and structural analysis. Mr. Epp

40A. Chinese Civilization. No knowledge of Chinese is required. A survey of the development of the outstanding aspects of Chinese culture from prehistoric to modern times. Mr. Chou

40B. Japanese Civilization. No knowledge of Japanese is required. A survey of the development of Japanese culture and its relationship to the Asiatic mainland. Mr. Plutschow

42. The Tea Ceremony — An Introduction to the History of Japanese Culture in Theory and Practice. Lecture, three hours; demonstration. This course will treat the history and culture of Japan as revealed through study and practice of the Tea Ceremony. It will invite investigation of a number of topics: Buddhism, aesthetics, Calligraphy, painting, architecture, gardens, ceramics and politics. Mr. Plutschow

46. Chinese Civilization in Modern Times. No knowledge of Chinese is required. A survey of developments in Chinese culture from the late 19th century to the present. Mr. Link

Upper Division Courses

113A-113B. Intermediate Classical Chinese. Lecture, three hours; reading or discussion, one hour. Prerequisites: courses 13A-13B. Further readings in the classics. Ms. Wong

115A-115B-115C. Advanced Spoken Japanese (½ course each). Prerequisite: course 19C. Enrollment limited; consent of department required; priority to be given Japanese majors.

119A-119B. Advanced Modern Japanese. Lecture, three hours; laboratory, one hour. A continuation of courses 19A-19B-19C. Emphasis on comprehension, grammar and proficiency in reading, composition and conversation in modern Japanese.

121A-121B-121C. Advanced Modern Chinese. Prerequisite: course 11C. Readings in modern prose and newspaper style. Mr. Chu

122A-122B. Readings in Modern Chinese Literature. Lecture, three hours. Prerequisite: course 121B or consent of instructor. Readings and discussion of masterpieces of modern Chinese literature. **122A.** Poetry and prose; **122B.** Drama and fiction. Mr. Link

124A-124B-124C. Readings in Modern Expository Chinese. Lecture, three hours. Prerequisite: course 121B or consent of instructor. Readings in the social sciences, including Chinese Communist materials: **124A.** Nationalist Chinese materials including the May 4th Movement; **124B.** Political and military materials of Communist China; **124C.** Economic and educational materials of Communist China. Mr. Chu

126. Post-1949 Chinese Literature. Prerequisite: course 121B or consent of instructor. Reading and discussion of selected works in contemporary poetry, drama and fiction with emphasis on the People's Republic of China. Mr. Link

129. Introduction to Classical Japanese. Lecture, three hours. Prerequisite: course 119B or consent of instructor. Introduction to literary Japanese, with readings and discussions in the prose and poetry of the Heian Period. Mr. Befu

***[13]134A. Introduction to Kawabata Yasunari.** Lecture, three hours. Prerequisite: course 19C. Reading and analysis of the Nobel Laureate's short stories with particular emphasis on their emotional structure. Mr. Epp

***[13]134B. Introduction to Mushakoji Saneatsu.** Lecture, three hours. Prerequisite: course 19C. Reading and discussion of Mushakoji's prose, fiction and poetry. Mr. Epp

135. Buddhist Themes in Asian Literature. No knowledge of Asian languages is required. A survey of selected works of Buddhist literature of India, China and Japan. Includes canonical works like the *Lotus Sutra* and noncanonical works of poetry, prose and drama containing Buddhist themes. Mr. LaFleur

137. Introduction to Kambun and Other Literary Styles. Lecture, three hours. Prerequisite: course 119B or consent of instructor. Introduction to Kambun, the Japanese literary rendering of Classical Chinese, and Sorobun, the epistolary style. Mr. Befu, Mr. Plutschow

139. Introduction to Buddhist Texts. Lecture, three hours. Prerequisite: course 13C, 121A or 119A. Studies in Buddhist terminology.

140A-140B-140C. Chinese Literature in Translation. No knowledge of Chinese is required. Lectures and collateral reading of representative works in English translation. **140A.** Poetry from earliest times to the 19th century; **140B.** Drama and fiction from the 13th century to the end of the Ch'ing period; **140C.** 20th-century poetry, drama, fiction. Mr. Link, Ms. Wong

141A-141B. Japanese Literature in Translation. No knowledge of Japanese is required. A survey of Japanese literature from the beginning to modern times, emphasizing Chinese, Buddhist and Western influences. **141A.** Beginning to 1600, **141B.** 1600 to modern times. Mr. Plutschow

***[13]142A. Readings in the Japanese Family System.** Lecture, three hours. Prerequisite: course 119B. Analysis and discussion of articles describing and criticizing the family-system mindset, how this mindset permeates interpersonal relationships, and the way the system has functioned in the past. Mr. Epp

***[13]142B. Human Problems in the Modernization of Japan.** Lecture, three hours. Prerequisite: course 119B. Analysis and discussion of articles that deal with the definition of modernization, with its relation to traditional values and self-awareness, and with the role of the intellectual. Mr. Epp

145. Readings in Modern Expository Japanese. Prerequisite: course 119A. Readings in contemporary affairs, including politics, economics, trade and social issues. The reading material will be taken from current Japanese newspapers and journals. Mr. Plutschow

151A-151B. Readings in Traditional Chinese Fiction. Prerequisite: course 11C, the equivalent or consent of instructor. Selected readings from the classic Chinese novels. Designed primarily as a language course; emphasis will be on translation, obtaining a command of the various literary styles, as well as on critical interpretation of the texts. Mr. Strassberg

***[13]152A-152B. Readings in Classical Chinese Poetry.** Lecture, three hours. Prerequisite: course 113A or consent of instructor. Discussion and collateral reading of representative works selected on the basis of such critical concerns as thematic patterns, image clusters, genres, and the characteristics of major poets. Ms. Wong

***[13]153A. Kawabata's Contemporaries.** Lecture, three hours. Prerequisite: course 119A or 134A or 134B. Readings in the fiction and poetry of Ibuse Masuji, Maruyama Kaoru, Ozaki Kazuo, Tsuboi Sakae and Yokomitsu Riichi. Mr. Epp

***[13]153B. Introduction to Shiga Naoya.** Lecture, three hours. Prerequisite: course 119A or 134A or 134B. Reading and discussion of Shiga's short stories with special emphasis on his I-novel technique. Mr. Epp

154A-154B. Mongolian. Lecture, three hours; laboratory, one hour. To be offered when requested by a sufficient number of students. Mr. Pao

160. Elementary Sanskrit. Introduction to script and grammar, with reading exercises and attention to the significance of Sanskrit for the understanding of other Indo-European languages. Mr. Scharfe

161. Intermediate Sanskrit. Prerequisite: course 160 or equivalent. Advanced aspects of grammar and the reading of literary texts. Mr. Scharfe

162. Advanced Sanskrit. Prerequisite: course 161 or equivalent. In this course the entire Bhagavadgita or a comparable amount of other Sanskrit literature is read. Mr. Scharfe

163A-163B-163C. Readings in Chinese Literary Texts. Lecture, three hours. Prerequisite: course 113B. **163A-163B.** Literary texts. **163C.** Historical texts.

165. Readings in Sanskrit. Prerequisite: course 162 or equivalent. Extensive reading in such texts as best serve the students' needs. Mr. Scharfe

167. Introduction to Indic Philosophy. A survey of the main trends in Indian philosophy from ancient to modern times. Mr. Scharfe

170A-170B. Archaeology in Early and Modern China:

170A. Introduction to Chinese archaeology: early Chinese study of their own past, types of artifacts, antiquarianism, and the beginnings of scientific archaeology in China before 1949.

170B. Archaeology in the People's Republic of China: survey of major excavations of sites of all periods carried out under the intensive archaeological program of the PRC, and the interpretation of the archaeological findings. Mr. Chou

172. Introduction to Buddhism. No language requirement. Not open to students with credit for former course 172A or 172B. Life of the Buddha and fundamental doctrines of Buddhism; Buddhist writings; the monastic order; early sects. The popular cult. The rise and development of Mahayana Buddhism: writings and doctrines. The Tantric doctrines and the end of Indian Buddhism.

173. Chinese Buddhism. No language requirement. The introduction and development of Buddhism in China, interaction between Buddhism and Chinese culture, rise of the Chinese schools of Buddhism such as Pure Land and Zen, contributions to Chinese culture.

174. Japanese Buddhism. No language requirement. The development of Buddhism in Japan and its influence on Japanese culture with emphasis on the arts.

175. The Structure of the Japanese Language. Lecture, three hours; reading or discussion, one hour. Prerequisite: consent of instructor. Phonology, morphology and syntax of Japanese.

179A. Readings in Medieval Japanese Literature. Lecture, three hours. Prerequisite: course 129 or consent of instructor. Readings and discussion in the prose, poetry and drama up till 1600. Mr. Plutschow

179B. Readings in Edo Literature. Lecture, three hours. Prerequisite: course 129. Readings and discussion in the prose, poetry and drama from 1600 to 1868. Mr. Befu

183. Introduction to Chinese Thought. No language requirement. A general survey of indigenous Chinese thought from the Chou period to circa 1800, covers Confucianism, Taoism, Mo-tzu, the Legalists, the study of the Classics, pseudo-scientific thoughts, the rise of the skeptical tradition, the penetration of Buddhism, the development of neo-Taoism and neo-Confucianism. Buddhism will be touched on only in the general context of Chinese thought.

184. Introduction to Japanese Thought. No language requirement. A general survey of Japanese thought from the earliest records to the Tokugawa period with primary emphasis on indigenous elements. Deals with the religious ideas that shaped Shinto, the encounter of Shinto with Buddhism, the formation of "syntheses" such as Ryobu Shinto, the rise of pessimistic attitudes (mappo), philosophies of history and the growth of Japanese self-consciousness, the rise of new Shinto sects in the medieval period, Confucianism in the Tokugawa period and the "National Learning" movement.

188. Chinese Etymology and Calligraphy. Prerequisite: one year of Classical Chinese or consent of instructor. Covering (1) the development of the Chinese writing system starting from the "Pottery Inscriptions" 6,000 years ago down to the modern "Simplified Forms," and the studies of the Six Scripts principles which were used to form Chinese characters, and (2) the aesthetic training of calligraphic art and its appreciation, with focus on the ways of recognizing and interpreting the "Cursive Style," a common form of handwriting. Mr. Chou

189. Chinese Brush Painting. A combination studio-lecture course surveying the aesthetics and techniques of Chinese literati painting. Emphasis will be on realizing the philosophical ideals of critical treatises through mastery of the traditional materials and elements of landscape. Mr. Strassberg

199. Special Studies in Oriental Languages (½ to 1 course). Prerequisites: senior standing in department or advanced reading knowledge of Chinese or Japanese and consent of instructor. Required of incoming senior majors transferred from other institutions. Special individual study. May be repeated only once with consent of instructor.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Related Courses in Other Departments

Anthropology 166. Comparative Minority Relations.
175S. Japan.
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.
English 100A. Introduction to Poetry.
140A. Criticism: History and Theory.
140B. Criticism: Special Topics.
Geography 186. Contemporary China.
History 182A-182B-182C. History of China.
183. Modern China, 1840-1920.
184. The Chinese Revolution.
185. The Mongols in East Asian History.
186. Diplomatic History of the Far East.
187A-187B-187C. Japanese History.
188A. Early History of India.
Linguistics 103. Introduction to General Phonetics.
120A. Linguistic Analysis: Phonology.
120B. Linguistic Analysis: Grammar.
Music 81. Ethnomusicology Performance Organizations: D. Music and Dance of China. G. Music and Dance of Japan. J. Music of Korea.
141. Survey of Music in Japan.
145. History of Chinese Opera.
146A-146B-146C. Studies in Chinese Instrumental Music.
147A-147B. Music of China.
Political Science 135. International Relations of China.
136. International Relations of Japan.
159. Chinese Government and Politics.
160. Japanese Government and Politics.
Sociology 134. Comparative Social Institutions of East Asia.

Pathology

(Office: 13-327 Center for Health Sciences)

The Department of Pathology does not offer an undergraduate degree. For detailed information on graduate degrees offered by this department, please refer to the *UCLA Graduate Catalog.*

Pharmacology

(Office: 23-278 Center for Health Sciences)

The Department of Pharmacology does not offer an undergraduate degree. The following upper division courses are offered with enrollment restrictions as indicated:

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. Lecture, four hours for seven weeks; discussion, four hours for three weeks. Prerequisites: Biology 5, 6, 7, Chemistry 21, 23, 25 or equivalent. An introduction to pharmacology for undergraduate students, emphasizing the principles underlying the mechanism of action of drugs, their development, control, rational use and misuse. Mr. Jenden

199. Special Studies (½ to 2 courses). Prerequisites: consent of instructor and departmental Chair. Special studies in pharmacology, including either reading assignments or laboratory work or both, designed for appropriate training of each student who registers in this course.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Philosophy

(Office: 321 Dodd Hall)

Marilyn Adams, Ph.D., *Professor of Philosophy.*
Robert Merrihew Adams, Ph.D., *Professor of Philosophy.*
Rogers 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.*
Philippa Foot, M.A., *Professor of Philosophy.*
Montgomery Furth, Ph.D., *Professor of Philosophy.*
Donald Kalish, Ph.D., *Professor of Philosophy.*
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.*
Wesley 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 Healey, Ph.D., *Assistant Professor of Philosophy.*

Preparation for the Major

Philosophy 21, 22, 31 and one other lower division course in philosophy.

The Major

Twelve upper division or graduate philosophy courses (48 units). Seven of the twelve courses must be distributed among the groups into which the undergraduate and graduate courses are divided, in the following manner: two courses (8 units) in each of three of the groups and one course (4 units) in the remaining group.

Courses listed under "Ungrouped" may apply toward the major, but not toward a group requirement. A maximum of eight units of course 199 may apply toward the major but not toward a group requirement. No course employed to satisfy the major or preparation requirements may be taken on a P/NP basis.

Upon the recommendation of the Philosophy Department faculty, Honors in Philosophy will be awarded at graduation to a major whose grade-point average in upper division philosophy courses is 3.3 and who has completed two graduate courses (8 units) in philosophy with an average GPA of 3.5.

Students intending to do graduate work in philosophy should consult with the graduate advisor, as well as with the undergraduate advisor.

Lower Division Courses

All lower division courses are introductory and without prerequisites except as otherwise stated.

1. The Beginnings of Western Philosophy. Lecture, three hours; discussion, one hour. The views of Plato, Aristotle, and other thinkers from before Socrates to St. Augustine on such topics as: the nature of the physical universe, the nature of knowledge, the concept of God, soul and body, the foundations of morality, the Greek and Christian ideas of love.
Mr. Albritton, Mr. Furth

2. Introduction to the Philosophy of Religion. Lecture, three hours; discussion, one hour. An introductory study of such topics as the nature and grounds of religious belief, the relation between religion and ethics, the nature and existence of God, the problem of evil, and what can be learned from religious experience. Mr. Adams, Mrs. Adams

3. Personal and Social Ideals. Lecture, three hours; discussion, one hour. A study of various conceptions of human perfection and social utopias. Readings will be chosen from such authors as Freud, Thomas More, Marx, B.F. Skinner and Sartre. Mr. Hill

4. Philosophical Analysis of Contemporary Moral Issues. Lecture, three hours; discussion, one hour. A critical study of principles and arguments advanced in discussion of current moral issues. Possible topics: revolutionary violence, rules of warfare, sexual morality, the right of privacy, punishment, nuclear warfare and deterrence, abortion and mercykilling, experimentation with human subjects, rights of women, the drug culture. Ms. Hampton, Mr. Quinn

5A. Philosophy in Literature. Lecture, three hours; discussion, one hour. A philosophical inquiry into such themes as freedom, responsibility, guilt, love, self-knowledge and self-deception, death and the meaning of life, by examination of great literary works in the Western tradition. Mr. Morris

5B. Recurring Philosophical Themes in Black Literature. Lecture, three hours; discussion, one hour. Analysis of some main themes in Afro-American political writings; for example, assimilation, cultural nationalism, and separatism in the writings of Booker T. Washington, Frederick Douglass, W.E.B. du Bois, and others.

6. Historical Introduction to Moral and Political Philosophy. Lecture, three hours; discussion, one hour. A study of some classic works in moral and political philosophy. Questions that may be discussed include: What is justice? Why be moral? Why obey the law? Which form of government is best? How much personal freedom should be allowed in society? Ms. Hampton, Mr. Hill

7. Introduction to the Philosophy of Mind. Lecture, three hours; discussion, one hour. An introductory study of philosophical issues about the nature of the mind and its relation to the body, including some of the following: materialism, functionalism, behaviorism, determinism and free will, the nature of psychological knowledge. Mr. Burge, Mr. Healey

8. Introduction to the Philosophy of Science. Lecture, three hours; discussion, one hour. An introduction to philosophical questions about the nature of science, drawing examples from specific scientific theories and controversies that can be understood without much mathematical or technical background. What role do observation and explanation play in building and evaluating scientific theories? How should we view the relation between science and common sense?

9. Principles of Critical Reasoning. The course concerns the nature of arguments: how to analyze them and assess the soundness of the reasoning they represent. Common fallacies that often occur in arguments will be discussed in light of what counts as a good deductive or inductive inference. Other topics to be discussed include the use of language in argumentation to arouse emotions as contrasted with conveying thoughts, the logic of scientific experiments and hypothesis-testing in general, and some general ideas about probability and its application in making normative decisions, e.g., betting. Mr. Kaplan

10. Virtues and Vices. Lecture, three hours; discussion, one hour. A study of the traditional theory of the virtues and vices, and an inquiry into its truth. Readings in Aristotle, Aquinas, and contemporary authors; and the discussion of concepts such as courage, wisdom and justice. Should we accept the traditional list of the virtues and vices, or should it be revised?
Mrs. Foot

21. Skepticism and Rationality. Lecture, three hours; discussion, one hour. Can we know anything with certainty? How can we justify any of our beliefs? An introduction to the study of these and related questions, through the works of some great philosophers of the modern period, such as Descartes, Leibniz, Berkeley, or Hume.
Mr. Donnellan, Mr. Furth, Mr. Yost

22. Introduction to Ethical Theory. Lecture, three hours; discussion, one hour. A systematic introduction to ethical theory, including discussion of egoism, utilitarianism, justice, responsibility, the meaning of ethical terms, relativism, etc. Recommended or required for many upper division courses in Group III.
Mr. Hill, Mr. Quinn

31. Logic, First Course. Lecture, three hours; discussion, one hour. Recommended for students who plan to pursue more advanced studies in logic. The elements of symbolic logic, sentential and quantificational; forms of reasoning and structure of language. Mr. Burge, Mr. Kalish, Mr. Kaplan

32. Logic, Second Course. Lecture, three hours; discussion, one hour. Prerequisite: course 31, preferably in the preceding quarter. Symbolic logic: extension of the systematic development of course 31. Quantifiers, identity, definite descriptions.
Mr. Burge, Mr. Kalish, Mr. Kaplan

*Upper Division Courses

GROUP I: HISTORY OF PHILOSOPHY

100A. History of Greek Philosophy. Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor. Survey of Greek philosophy with emphasis on the metaphysics and epistemology of Plato and Aristotle.
Mr. Albritton, Mr. Furth

100B. Medieval and Early Modern Philosophy. Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor; course 100A strongly recommended. Survey of the development and transformation of Greek metaphysics and epistemology within the context of philosophical theology, and the transition from the medieval to the early modern period. Special emphasis on Augustine, Anselm, Aquinas and Descartes.
Mrs. Adams

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

100C. History of Modern Philosophy, 1650-1800. Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy; course 100B strongly recommended. Courses 100A, 100B and 100C should be taken in immediately successive quarters if possible. Survey of the development of metaphysics and the theory of knowledge from 1650 to 1800, including Leibniz, Locke and/or Berkeley, and culminating in Hume and Kant. The views of these (and perhaps other) philosophers of the period on mind and body, causality, the existence of God, skepticism, empiricism, the limits of human knowledge and the philosophical foundations of modern science are among the topics that may be studied. Mr. Adams

101A. Plato — Earlier Dialogues. (Formerly numbered M101A.) Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor. A study of selected topics in the early and middle dialogues of Plato. Mr. Furth

101B. Plato — Later Dialogues. (Formerly numbered M101B.) Lecture, three hours; discussion, one hour. Prerequisite: course 101A. A study of selected topics in the middle and later dialogues of Plato.
Mr. Furth, Mr. Quinn

102. Aristotle. Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor. A study of selected works of Aristotle. Mr. Furth

104. Topics in Islamic Philosophy. Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor. The development of Muslim philosophy in its great age (from Kindo to Averroes, 850 to 1200), considered in connection with Muslim theology and Mysticism.

105. Medieval Philosophy from Augustine to Maimonides. Prerequisite: one course in philosophy or consent of instructor. The development of early medieval philosophy within the framework of Judeo-Christian theology and its assimilation and criticism of the Greek philosophical heritage. Focus on the problem of universals, the existence and nature of God, the problem of evil, and the doctrines of the Trinity and atonement. Selected writings from Augustine through Maimonides, read in English translation. Mrs. Adams

106. Later Medieval Philosophy. Prerequisite: one course in philosophy or consent of instructor (course 105 is not required). Metaphysics, theory of knowledge, and theology of Aquinas, Duns Scotus, and Ockham, with less full discussion of other authors from the 13th through early 15th centuries. Selected texts read in English translation. Mrs. Adams

107. Topics in Medieval Philosophy. Prerequisite: one course in philosophy; course 105 or 106 recommended. The study of the philosophy and theology of one medieval philosopher such as Augustine, Anselm, Abelard, Aquinas, Scotus, or Ockham; or the study of a single area such as logic or theory of knowledge in several medieval philosophers. Consult the department for topic to be treated in a given quarter. May be repeated for credit with consent of instructor.
Mrs. Adams

C109. Descartes. Prerequisites: course 21 or two courses in philosophy or consent of instructor. A study of the works of Descartes with emphasis on the *Meditations.* Such issues as the problems of scepticism, the foundations of knowledge, the existence of God, the relation between mind and body will be discussed. Enrollment will be limited to 30 students when concurrently scheduled with course C209.
Mr. Burge, Mr. Yost

C110. Spinoza. Lecture, three hours; discussion, one hour. Prerequisite: course 21 or consent of instructor. A study of the philosophy of Spinoza. May be concurrently scheduled with course C210, in which case there will be a weekly discussion meeting for undergraduates only, and fewer readings and shorter papers will be required of undergraduates than of graduates. Enrollment is limited to 30 students when concurrently scheduled. Mr. Adams

C111. Leibniz. Lecture, three hours; discussion, one hour. Prerequisite: course 21 or consent of instructor. A study of the philosophy of Leibniz. May be concurrently scheduled with course C211, in which case there will be a weekly discussion meeting for undergraduates only, and fewer readings and shorter papers will be required of undergraduates than of graduates. Enrollment is limited to 30 students when concurrently scheduled. Mr. Adams

C112. Locke and Berkeley. Prerequisite: one course in philosophy or consent of instructor. A study of the philosophies of Locke and Berkeley; the emphasis may sometimes vary from one figure to the other. May be concurrently scheduled with course C212. Mr. Donnellan

C114. Hume. Prerequisite: one course in philosophy or consent of instructor. Selected topics from the metaphysical, epistemological and ethical writings of Hume. May be concurrently scheduled with course C214, in which case enrollment will be limited to 40. Mr. Donnellan

115. Kant. Lecture, three hours; discussion, one hour. Prerequisite: course 21 or 22 or consent of instructor. A study of Kant's views on related topics in theory of knowledge, ethics, and politics. May be repeated for credit with consent of instructor. Ms. Hampton, Mr. Hill

116. Nineteenth-Century Philosophy. Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor. Selected topics in nineteenth-century thought.

117. Late 19th- and Early 20th-Century Philosophy. Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor. Selected topics in the work of one or more of the following philosophers: Bolzano, Frege, Husserl, Meinong, the early Russell and Wittgenstein. Mr. Burge

GROUP II: LOGIC, SEMANTICS AND PHILOSOPHY OF SCIENCE

126A. Philosophy of Science. Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor. A historical introduction to the philosophy of science. Several general topics will be discussed in the context of actual episodes in the development of the natural sciences. Mr. Healey

126B. Philosophy of Science. Lecture, three hours; discussion, one hour. Prerequisite: course 31, 126A or consent of instructor. An introduction to contemporary philosophy of science, focusing on problems of central importance. Mr. Healey

126C. Philosophy of Science: Social Sciences. Lecture, three hours; discussion, one hour. Prerequisites: two courses in philosophy or consent of instructor. A discussion of topics in the philosophy of social science; e.g., the methods of the social sciences in relation to the physical sciences; value-bias in social inquiry; concept formation; theory construction; explanation and prediction; the nature of social laws.

127A. Philosophy of Language. Prerequisite: course 31 or consent of instructor. Syntax, semantics, pragmatics. The semantical concept of truth, sense and denotation, synonymy and analyticity, modalities and tenses, indirect discourse, indexical terms, semantical paradoxes. May be repeated for credit with consent of instructor. Mr. Burge, Mr. Church, Mr. Kaplan

127B. Philosophy of Language. Prerequisite: course 32 or consent of instructor. Course 127A is not prerequisite to 127B. Selected topics similar to those considered in course 127A will be discussed but at a more advanced and technical level. Mr. Church, Mr. Kaplan

128A. Philosophy of Mathematics. Prerequisites: courses 31, 32 and preferably one additional course in logic. The philosophy of mathematics; logicism of Frege and Russell, arithmetic reduced to logic; ramified type theory and impredicative definition (Russell, Poincare, the early Weyl). Mr. Church

128B. Philosophy of Mathematics. Prerequisite: course 128A or consent of instructor. Intuitionism of Brouwer, Heyting, and the later Weyl; proof theory of Hilbert. Mr. Church

129. Philosophy of Psychology. Lecture, three hours; discussion, one hour. Prerequisites: one 4-unit course in psychology, one course in philosophy. Selected philosophical issues arising from psychological theories. Relevance of computer simulation to accounts of thinking and meaning; relations between semantical theory and learning theory; psychological aspects of the theory of syntax; behaviorism, functionalism and alternatives; physiology and psychology. Mr. Burge

130. Philosophy of Space and Time. (Formerly numbered 185.) Lecture, three hours; discussion, one hour. Prerequisites: two courses in philosophy or one course in philosophy and one course in physics or consent of instructor. Selected philosophical problems concerning the nature of space and time. The philosophical implications of spacetime theories, such as those of Newton and Einstein. Topics may include the nature of geometry, conventionalism, absolutist versus relationist views of space and time, philosophical impact of relativity theory. Mr. Healey

131. Science and Metaphysics. Lecture, three hours; discussion, one hour. Prerequisites: two courses in philosophy or consent of instructor. An intensive study of one or two metaphysical topics on which the results of modern science have been thought to bear. Topics may include the nature of causation, the reality and direction of time, time-travel, backwards causation, realism, etc. May be repeated for credit with consent of instructor. Mr. Healey

133. Topics in Logic and Semantics. Prerequisite: course 32. Among possible topics: formal theories, definitions, alternative theories of descriptions, many-valued logics, deviant logics. Mr. Kalish, Mr. Kaplan

134. Introduction to Set Theory. Prerequisites: course 32 or upper division standing in mathematics and consent of instructor. Introduction to axiomatic set theory; sets, natural numbers, relations, functions, cardinality, infinity. Mr. Kalish

135. Introduction to Metamathematics. Prerequisite: course 32; course 134 or equivalent recommended. Models, satisfaction, truth, definability; logical truth and logical consequence; consistency and completeness. Mr. Church, Mr. Kalish, Mr. Kaplan

136. Modal Logic. Prerequisite: course 32; course 133 or 135 recommended. The logic of necessity and possibility. Various formulations of the syntax and semantics of such logics. The problem of interpreting quantified modal logic, deontic, and other non-extensional logics. Mr. Kaplan

GROUP III: ETHICS AND VALUE THEORY

150. Society and Morals. Lecture, three hours; discussion, one hour. Prerequisite: course 22 or consent of instructor. A critical study of principles and arguments advanced in discussion of current moral and social issues. The topics will be similar to those of course 4, but familiarity with some basic philosophical concepts and methods will be presupposed. May be repeated for credit with consent of instructor. Mr. Hill

151A-151B. History of Ethics. Lecture, three hours; discussion, one hour. Prerequisites: two courses in philosophy or consent of instructor. Course 151A is not prerequisite to 151B. **151A.** Selected classics in earlier ethical theories. **151B.** Selected classics in later ethical theories. Mr. Hill, Mr. Quinn

153A. Topics in Ethical Theory: Normative Ethics. Prerequisite: course 22 or consent of instructor. A study of selected topics in normative ethical theory. Topics may include various conceptions of the criteria of right action, human rights, virtues and vices, principles of culpability and praise-worthiness. Mr. Hill

153B. Topics in Ethical Theory: Metaethics. Lecture, three hours. Prerequisite: course 22 or consent of instructor. A study of selected problems in metaethics ethical theory. Topics may include the analysis of moral language and the justification of moral beliefs. Mrs. Foot, Mr. Quinn

155. Medical Ethics. An examination of the philosophical issues raised by problems of medical ethics such as abortion, euthanasia, and medical experimentation. Mrs. Foot

156. Topics in Political Philosophy. Lecture, three hours; discussion, one hour. Prerequisites: two courses in philosophy or consent of instructor; course 22 is advised. Analysis of some basic concepts in political theory. May be repeated for credit with consent of instructor. Ms. Hampton, Mr. Hill

157A-157B. History of Political Philosophy. (Formerly numbered 157.) Lecture, three hours; discussion, one hour. Prerequisites: two courses in philosophy or consent of instructor. **157A:** Reading and discussion of classic works in earlier political theory, especially those by Hobbes, Locke, Hume and Rousseau. **157B:** Reading and discussion of classic works in later political theory, especially those by Kant, Hegel and Marx. Courses may be repeated with consent of instructor. Ms. Hampton, Mr. Hill

161. Topics in Aesthetic Theory. Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor. Philosophical theories about the nature and importance of art and art criticism, aesthetic experience, and aesthetic values. May be repeated for credit with consent of instructor. Mr. Quinn

166. Introduction to Legal Philosophy. Prerequisite: one course in philosophy or consent of instructor. An examination, through the study of recent philosophical writings, of such topics as: the nature of law, the relationship of law and morals, legal reasoning, punishment, and the obligation to obey the law. Ms. Hampton, Mr. Morris

GROUP IV: METAPHYSICS AND EPISTEMOLOGY

170. Philosophy of Mind. Lecture, three hours; discussion, one hour. Prerequisites: two relevant courses in philosophy or consent of instructor. An analysis of various problems concerning the nature of mind and mental phenomena, such as the relation between the mind and the body, and our knowledge of other minds. Mr. Donnellan

172. Philosophy of Language and Communication. Prerequisites: two relevant courses in philosophy or linguistics or consent of instructor. Theories of meaning and communication; how words refer to things; limits of meaningfulness; analysis of speech acts; relation of everyday language to scientific discoveries. Mr. Donnellan

175. Topics in Philosophy of Religion. Lecture, three hours; discussion, one hour. Prerequisite: course 21 or 22 or consent of instructor. An intensive investigation of one or two topics or works in the philosophy of religion, such as the attributes of God, arguments for or against the existence of God, or the relation between religion and ethics. Consult the department for topic to be treated in a given quarter. May be repeated for credit with consent of instructor. Mr. Adams, Mrs. Adams, Mr. Albritton

177A, Existentialism. Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor. Analysis of the methods, problems and views of some of the following: Kierkegaard, Nietzsche, Heidegger, Jaspers, Sartre, Marcel, and Camus. Possible topics: metaphysical foundations, nature of mind, freedom, problem of the self, other people, ethics, existential psychoanalysis.

177B. Historical Studies in Existentialism. Prerequisite: one course in philosophy or consent of instructor. A study of the central philosophical texts of one of the following: Kierkegaard, Nietzsche, Heidegger, Jaspers, Buber, Sartre, or Camus. The course will focus primarily on explication and interpretation of the texts. May be repeated for credit with consent of instructor. Mr. Adams

178. Phenomenology. Lecture, three hours; discussion, one hour. Prerequisites: two courses in philosophy or consent of instructor. Introduction to the phenomenological method of approaching philosophical problems via the works of some of the following: Brentano, Husserl, Heidegger, Scheler, Sartre, Merleau-Ponty, Ricoeur. Topics fall in the areas of ontology, epistemology, and particularly philosophy of mind.

182. Elements of Metaphysics. Lecture, three hours; discussion, one hour. Prerequisite: course 21 or consent of instructor. Study of basic metaphysical questions; nature of the physical world, of minds, and of universals; and the answers provided by alternative systems, e.g., phenomenalism; materialism, dualism. Mr. Adams, Mr. Yost

183. Theory of Knowledge. Prerequisite: course 21 or consent of instructor. An analysis of the concept of empirical knowledge. Mr. Yost

184. Topics in Metaphysics. Prerequisite: course 21 or consent of instructor. An intensive investigation of one or two topics or works in metaphysics, such as: personal identity, the nature of dispositions, possibility and necessity, universals and particulars, causality. Consult the department for topics to be treated in a given quarter. May be repeated for credit with consent of instructor.
Mr. Adams, Mr. Albritton, Mr. Donnellan, Mr. Healey

186. Topics in the Theory of Knowledge. Prerequisite: course 182 or 183 or consent of instructor. An intensive investigation of one or two selected topics or works in the theory of knowledge, such as: a priori knowledge, the problem of induction, memory, knowledge as justified true belief. Consult the department for topics to be treated in a given quarter. May be repeated for credit with consent of instructor.
Mr. Albritton, Mr. Yost

187. Philosophy of Action. Prerequisites: two courses in philosophy or consent of instructor. A study of various concepts employed in the understanding of human action. Topics may include rational choice, desire, intention, weakness of will, and self-deception. Mr. Albritton, Mr. Burge, Mr. Donnellan

188. Philosophy of Perception. Prerequisites: two courses in philosophy or consent of instructor. A critical study of the main philosophical theories of perception and the arguments used to establish them.
Mr. Yost

189. Major Philosophers of the 20th Century. Prerequisites: two courses in philosophy or consent of instructor. A study of the writings of one or more major modern philosophers: for example, Russell, Moore, Wittgenstein, Carnap, Quine. May be repeated for credit with consent of instructor.
Mr. Albritton, Mr. Burge, Mr. Donnellan

UNGROUPED

190. Third World Political Thought. Lecture, three hours; discussion, one hour. The political philosophy of various third world thinkers. The topics chosen may vary from year to year, but typically will be chosen from the following: Franz Fanon, Senghor and Cesaire's "Negritude," W.E.B. du Bois' Pan-Africanism, Che and Mao.

192. Philosophical Analysis of Issues in Women's Liberation. Prerequisite: one course in philosophy or consent of instructor. A critical study of concepts and principles which arise in the discussion of women's rights and liberation. Topics may include economic and educational equality, preferential treatment, abortion, sex roles, sexual morality, marriage, love, friendship.

193. Christian Ethical Thought. Lecture, three hours; discussion, one hour. Reading of selected classic and contemporary authors in the Christian ethical tradition, with philosophical analysis and assessment of their views on morality and the religious life. Mr. Adams

195. 19th- and 20th-Century Religious Thought. Lecture, three hours; discussion, one hour. Modern Religious Thought. A philosophical approach to Western religious thought of the last two hundred years, through study of selected works by such authors as Kant, Schleiermacher, Kierkegaard, Buber, Camus, and Tillich. Mr. Adams

196. Undergraduate Seminar in Philosophy. Lecture, three hours; discussion, one hour. Prerequisite: consent of instructor. Variable Topics; consult *Schedule of Classes* or "Department Announcements" for current topic. May be repeated for credit with consent of instructor.

197. Reading and Writing Philosophy. Lecture, three hours; discussion, one hour. Prerequisites: two lower or upper division courses in philosophy. The course is designed to help philosophy students who wish to improve their ability to read philosophical texts and to write philosophical essays. Selected texts will be used to illustrate problems of reading and writing, and students will be required to do and redo many written exercises. Mr. Quinn

199. Special Studies (½ to 2 courses). Prerequisite: consent of instructor. As many as eight units of this course can be used for the Philosophy major, but the course cannot be substituted for a course in one of the four groups on the basis of similarity of subject matter.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Physics

(Office: 3-174 Knudsen Hall)

Ernest S. Abers, Ph.D., *Professor of Physics (Chair).*
Rubin Braunstein, Ph.D., *Professor of Physics.*
Nina Byers, Ph.D., *Professor of Physics.*
Paul M. Chaikin, Ph.D., *Professor of Physics.*
Marvin Chester, Ph.D., *Professor of Physics.*
W. Gilbert Clark, Ph.D., *Professor of Physics.*
John M. Cornwall, Ph.D., *Professor of Physics.*
Ferdinand V. Coroniti, Ph.D., *Professor of Physics and Astronomy.*
John M. 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 D. Fried, Ph.D., *Professor of Physics.*
Christian Fronsdal, Ph.D., *Professor of Physics.*
George Gruner, 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.*
[17]Charles F. Kennel, Ph.D., *Professor of Physics.*
[17]Leon Knopoff, Ph.D., *Professor of Physics and Geophysics and Earth and Space Sciences.*
Steven A. Moszkowski, Ph.D., *Professor of Physics.*
Bernard M. K. Nefkens, Ph.D., *Professor of Physics.*
Richard E. Norton, Ph.D., *Professor of Physics.*
Raymond L. Orbach, Ph.D., *Professor of Physics.*
Philip A. Pincus, Ph.D., *Professor of Physics.*
J. Reginald Richardson, Ph.D., *Professor of Physics in Residence.*
Isadore Rudnick, Ph.D., *Professor of Physics.*
J. J. Sakurai, Ph.D., *Professor of Physics.*
Robert A. Satten, Ph.D., *Professor of Physics.*
David S. Saxon, Ph.D., *Professor of Physics and President of the University.*
Peter E. Schlein, Ph.D., *Professor of Physics.*
Julian Schwinger, Ph.D., *Professor of Physics (University Professor).*
William E. Slater, Ph.D., *Professor of Physics.*
Reiner Stenzel, Ph.D., *Professor of Physics.*
Donald H. Stork, Ph.D., *Professor of Physics.*
Harold K. Ticho, Ph.D., *Professor of Physics.*
Charles A. Whitten, Jr., Ph.D., *Professor of Physics.*
Alfred Y. Wong, Ph.D., *Professor of Physics.*
Chun Wa Wong, Ph.D., *Professor of Physics.*
Eugene Y. Wong, Ph.D., *Professor of Physics.*
Alfredo Baños, 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.*
Byron T. Wright, Ph.D., *Emeritus Professor of Physics.*
Charles D. Buchanan, Ph.D., *Associate Professor of Physics.*
Seth J. Putterman, Ph.D., *Associate Professor of Physics.*
Gary A. Williams, Ph.D., *Associate Professor of Physics.*
Claude Bernard, Ph.D., *Assistant Professor of Physics.*
Robert Cousins, Ph.D., *Assistant Professor of Physics.*

•

S. Merton Burkhard, M.S., *Lecturer in Physics.*
Jesusa Kinderman, Ph.D., *Lecturer in Physics.*

Preparation for the Major in Physics

Required: Physics 8A, 8B, 8C, 8D, 8E; Chemistry 11A, 11B, 11BL, 11C required (Chemistry 11CL is recommended but not required); Mathematics 31A, 31B, 32A-32B, 33A, 33B.

*The Major in Physics

*A mimeographed brochure giving more detailed information than is contained in this catalog may be obtained from the Undergraduate Office, Department of Physics.

Required: Physics 105A, 105B, 110A, 110B, 112A, 115A, 115B, 131A, three courses from the Physics 180 series; three additional upper division physics lecture courses selected from Physics 108, 114, 122, 123, 124, 126, 131B, 140. An upper division course in mathematics may be substituted for Physics 131B *upon approval of an advisor.* A "C" average is required in the above courses. A reading knowledge of Russian, German or French is recommended. This major leads to the Bachelor of Science degree. Junior transfer students should preferably have completed (1) a two-year calculus-analytic geometry sequence or equivalent and (2) the calculus-based physics course at their previous college, but in no case should less than three semesters or four quarters of the mathematics and one year of the physics sequence be completed before transferring to UCLA. At least "C" grades in all mathematics and physics courses taken are required.

Students preparing for graduate school should take additional courses in physics and mathematics. Physics 122, 123, 124, 126, 131B and 140 are recommended.

The Major in General Physics

This major leads to the Bachelor of Arts degree in General Physics. It is intended to provide the necessary flexibility for those students who are interested in fields which can benefit from a strong background of knowledge of physics. Those students who intend to continue work toward the Ph.D. in Physics are advised to work for the B.S. in Physics as described under the "Major in Physics." The course requirements for the B.A. in General Physics are as follows: Physics 105A, 110A, 110B, 112A, 115A, 131A, one course from the 180 series, two upper division physics electives (excluding 185 and 199) and five upper division courses in no more than two departments other than physics. A "C" average in the upper division physics courses is required.

Teaching Credentials

Students may earn credentials for teaching physical sciences and other subjects in California elementary and secondary schools. Some majors are more advantageous than others for professional preparation. Completion of the Teacher Credential Program in the Teacher Education Laboratory is required. Consult with the Graduate School of Education (201 Moore Hall) for information.

Lower Division Courses

Physics 1Q, Contemporary Physics, is intended for entering freshmen Physics majors and will normally be taken in the first quarter of residence. There are no course prerequisites. Although it is not a required course or a part of or prerequisite to any general physics sequence of courses, it serves a purpose which general introductory courses do not fulfill adequately, if at all, namely to indicate the nature of current research problems in physics.

Physics 8A, 8B, 8C, 8D, 8E form a sequence of courses in general physics for majors in Physics. All or part of the sequence is also required or recommended as first choice for major students in: astronomy, atmospheric sciences, chemistry, engineering, geology, mathematics and certain interdepartmental fields of concentration.

Physics 8HB, 8HC, 8HD is an honors sequence intended for students with an outstanding record in high school science courses and a deep interest in physics. This sequence covers the same material as the Physics 8B, 8C, 8D and 8BL, 8CL, 8DL sequences but in greater depth.

The department desires to take into account prior preparation in physics. Students who feel their background would permit acceleration may be exempted from courses 8A-8E by taking the final examination with a class at the end of any quarter. These will serve as placement examinations. Qualified students are urged to discuss such possibilities with their advisors.

Physics 3A, 3B, 3C form a one-year sequence of courses in general physics (with laboratory) primarily for students in the biological and health sciences but open to any student who meets the prerequisites. In this sequence only algebra and trigonometry are used in providing a mathematical description of physical phenomena; calculus is not used.

Physics 6A, 6B, 6C form a one-year sequence of courses in basic physics for students in the biological and health sciences. However, unlike Physics 3A, 3B, 3C, calculus is used throughout and satisfactory completion of basic calculus courses is a prerequisite for admission to this sequence. Individual departments will, on an individual basis, advise students as to which physics sequence is required for each major. After an interim period, it is expected that all Biology and Microbiology majors will be required to complete the Physics 6A, 6B, 6C sequence.

Physics 10 is a one-quarter, non-laboratory course which surveys the whole field of physics. It is designed for the liberal arts student and satisfies in part the College of Letters and Science **"A"** requirement in the physical sciences for nonphysical science majors. Any two or more courses from Physics 10, 3A, 6A and 8A shall be limited to six units credit.

1Q. Contemporary Physics (½ course). Prerequisite: a major in Physics. A review of current problems in physics with emphasis on those being studied in our research laboratories at UCLA. The significance of the problems and their historical context. (F)

3A. General Physics: Mechanics of Solids and Fluids. Lecture and demonstration, three hours; discussion, one hour; laboratory, two hours. Prerequisites: three years of high school mathematics including trigonometry or two years of high school mathematics and a one-term college course in mathematics with trigonometry included in the group of courses or equivalent courses. Course 3A is not open for credit to students with credit for course 8A or equivalent. The fundamentals of classical mechanics: Newton's Laws; conservation of momentum, angular momentum, energy; Kepler's Laws; dynamics of systems of particles; fluid mechanics. (F,W)

3B. General Physics: Heat, Sound and Electricity and Magnetism. Lecture and demonstration, three hours; discussion, one hour; laboratory, two hours. Prerequisite: course 3A or equivalent. Temperature, heat and the laws of thermodynamics. Introduction to wave motion, resonance. Sound and acoustics. Electric and magnetic fields. Electric power. Elements of DC and AC circuits. (W,Sp)

3C. General Physics: Light, Relativity, and Modern Physics. Lecture and demonstration, three hours; discussion, one hour; laboratory, two hours. Prerequisite: course 3B or equivalent. Light, optical instruments. Introduction to relativity. The electron and the atom. Matter waves. Nuclear and particle physics. (F,Sp)

6A. Physics for Life Science Majors: Mechanics and Wave Motion. Lecture and demonstration, three hours; discussion, one hour; laboratory, two hours. Prerequisites: Mathematics 3A, 3B, 3C or equivalent. Mathematics 3C may be taken concurrently. (F,W)

6B. Physics for Life Science Majors: Electricity and Magnetism. Lecture and demonstration, three hours; discussion, one hour; laboratory, two hours. Prerequisite: course 6A. (W,Sp)

6C. Physics for Life Science Majors: Light and Modern Physics. Lecture and demonstration, three hours; discussion, one hour; laboratory, two hours. Prerequisite: course 6B. (F,Sp)

8A. Physics for Scientists and Engineers: Mechanics. Lecture and demonstration, three hours; discussion, two hours. Prerequisite: Mathematics 31A or equivalent; high school physics and chemistry are desirable. Mathematics 31B and Physics 8AL must be taken concurrently. Motion, Newton's Laws, work, energy, linear and angular momentum, rotation, equilibrium, gravitation. (F,W,Sp)

8AL. Physics Laboratory for Scientists and Engineers: Mechanics (¼ course). Lecture, one hour; laboratory, one and one-half hours. Prerequisite: enrollment in course 8A or consent of instructor. (F,W,Sp)

8B. Physics for Scientists and Engineers: Waves, Sound, Heat. Lecture and demonstration, three hours; discussion, two hours. Prerequisites: course 8A, Mathematics 31B. Mathematics 32A or equivalent and Physics 8BL must be taken concurrently. Harmonic oscillators, standing and traveling waves, fluid dynamics, sound, kinetic theory of gases, laws of thermodynamics. (F,W,Sp)

8BL. Physics Laboratory for Scientists and Engineers: Waves, Sound, Heat (¼ course). Lecture, one hour; laboratory, one and one-half hours. Prerequisite: enrollment in course 8B or consent of instructor. (F,W,Sp)

8BH. General Physics: Vibration, Wave Motion, Sound, Fluids, Heat, and Kinetic Theory—Honors Sequence. Lecture and demonstration, three hours; discussion, one hour; laboratory, two hours. This course covers the same material as course 8B but in greater depth. Prerequisites: course 8A with a grade of "A" or recommendation of 8A instructor, Mathematics 31B (or preferably 31BH) completed and 32A (or preferably 32AH) concurrent with Physics 8BH or equivalent courses. (Sp)

8HB. Physics for Scientists and Engineers—Honors Sequence (1¼ courses). Lecture, four hours; discussion, two hours; laboratory, one and one-half hours. Prerequisite: same as for the Physics 8 and 8L series. This course is intended for outstanding students with a deep interest in physics. Honor students participate in the lectures and examinations of the regular Physics 8 series. Discussions and laboratories are given by an honors instructor who discusses challenging problems in depth. Enrollment is limited to the top 20 students (determined by previous Physics 8 grades) and consent of instructor. (F,W,Sp)

8C. Physics for Scientists and Engineers: Electricity and Magnetism. Lecture and demonstration, three hours; discussion, two hours. Prerequisites: course 8B, Mathematics 32A. Mathematics 32B and Physics 8CL must be taken concurrently. Electrostatics, electric fields and potentials, capacitors and dielectrics, currents and DC circuits, magnetism, inductors and magnetic materials, RLC circuits. (F,W,Sp)

8CL. Physics Laboratory for Scientists and Engineers: Electricity and Magnetism (¼ course). Lecture, one hour; laboratory, one and one-half hours. Prerequisite: enrollment in course 8C or consent of instructor. (F,W,Sp)

8CH. General Physics: Electricity and Magnetism — Honors Sequence. Lecture and demonstration, three hours; discussion, one hour; laboratory, two hours. This course covers the same material as course 8C but in greater depth. Prerequisites: course 8BH or 8B with a grade of "A" or recommendation of 8B instructor, Mathematics 32A (or preferably 32AH) completed and 32B (or preferably 32BH) concurrent with Physics 8CH or consent of instructor. (F)

8HC. Physics for Scientists and Engineers—Honors Sequence (1¼ courses). Lecture, four hours; discussion, two hours; laboratory, one and one-half hours. Prerequisite: same as for the Physics 8 and 8L series. This course is intended for outstanding students with a deep interest in physics. Honor students participate in the lectures and examinations of the regular Physics 8 series. Discussions and laboratories are given by an honors instructor who discusses challenging problems in depth. Enrollment is limited to the top 20 students (determined by previous Physics 8 grades) and consent of instructor. (F,W,Sp)

8D. Physics for Scientists and Engineers: Electromagnetic Waves, Light and Relativity. Lecture and demonstration, three hours; discussion, two hours. Prerequisites: course 8C, Mathematics 32B. Mathematics 33A and Physics 8DL must be taken concurrently. Maxwell's equations, electromagnetic waves, light, reflections and refraction, interference, diffraction, polarization and the special theory of relativity. (F,W,Sp)

8DL. Physics Laboratory for Scientists and Engineers: Electromagnetic Waves, Light and Relativity (¼ course). Lecture, one hour; laboratory, one and one-half hours. Prerequisite: enrollment in course 8D or consent of instructor. (F,W,Sp)

8DH. General Physics: Electromagnetic Waves, Light, and Relativity—Honors Sequence. Lecture and demonstration, three hours; discussion, one hour; laboratory, two hours. This course covers the same material as course 8D but in greater depth. Prerequisites: course 8CH or 8C with a grade of "A" or recommendation of 8C instructor, Mathematics 32B (or preferably 32BH) completed and 33A (or preferably 33AH) concurrent with Physics 8DH or consent of instructor. (W)

8HD. Physics for Scientists and Engineers—Honors Sequence (1¼ courses). Lecture, four hours; discussion, two hours; laboratory, one and one-half hours. Prerequisite: same as for the Physics 8 and 8L series. This course is intended for outstanding students with a deep interest in physics. Honor students participate in the lectures and examinations of the regular Physics 8 series. Discussions and laboratories are given by an honors instructor who discusses challenging problems in depth. Enrollment is limited to the top 20 students (determined by previous Physics 8 grades) and consent of instructor. (F,W,Sp)

8E. Physics for Scientists and Engineers: Modern Physics. Lecture and demonstration, three hours; discussion, one hour; laboratory, two hours. Prerequisites: course 8D, Mathematics 33A. Mathematics 33B or equivalent must be taken concurrently. Wave-particles duality, quantum theory, Schroedinger equation, hydrogen atom, exclusion principle. (W,Sp)

10. Physics. Lecture and demonstration, three hours; quiz and discussion, one hour. No special mathematical preparation is required beyond that necessary for admission to the University with freshman standing. This course satisfies in part the College of Letters and Science requirements in the physical sciences for nonphysical science majors. Topics will be selected from: Planetary motion, Newton's Laws, gravitation, electricity and magnetism, wave motion, light, sound and heat, relativity, quantum mechanics, atoms, and subatomic particles. As time permits, the development of physical ideas will be placed in their cultural and historical perspective. (W,Sp)

11. Modern Physics for Nonscience Majors. Prerequisite: course 10. A sequel to course 10. Lecture and demonstration, three hours; quiz and discussion, one hour. Topics will be selected from: the concept of energy, quantum theory, nuclear physics, relativity.

Upper Division Courses

Prerequisites for all upper division courses: Physics 8A-8E, Mathematics 31A, 31B, 32A-32B, 33A and (except for Physics 105A, 116) 33B or consent of instructor. Students must complete one quarter of upper division physics before enrolling in the 180 laboratory series.

105A. Analytic Mechanics. Newtonian mechanics and conservation laws, gravitational potentials, calculus of variations, Lagrangian and Hamiltonian mechanics, central force motion, linear oscillations.

105B. Analytic Mechanics. Prerequisite: course 105A. Relativity with four-vectors, non-inertial reference frames, dynamics of rigid bodies, coupled oscillators, normal modes of oscillation, vibrating strings, and wave propagation.

106. Optical Physics. Prerequisite: course 110B. Interaction of light with matter; dispersion theory, oscillator strength, line widths, molecular scattering. Coherence theory, Kirchhoff formulation of diffraction theory, crystal optics, optical rotation, electro and magneto optical effects. Additional topics of fundamental or current interest.

110A. Electricity and Magnetism. Prerequisite: course 131A. Electrostatics and magnetostatics.

110B. Electricity and Magnetism. Prerequisite: course 110A. Faraday's law and Maxwell's equations. Propagation of electromagnetic radiation. Multipole radiation and radiation from an accelerated charge. The special theory of relativity.

112A. Thermodynamics. Fundamentals of thermodynamics including the first, second, and third laws. The statistical mechanical point of view and its relation to thermodynamics. Some simple applications of the foregoing.

114. Mechanics of Wave Motion and Sound. Vibrating systems and wave propagation in gases, liquids and solids including elements of hydrodynamics and elasticity. Applications in ultrasonics, low temperature physics, solid state physics, architectural acoustics.

115A. Elementary Quantum Mechanics. Prerequisites: courses 131A, 105B (the latter may be taken concurrently). The classical background, basic ideas and methods of quantum mechanics.

115B. Elementary Quantum Mechanics. Prerequisite: course 115A. Development of the methods and concepts of quantum mechanics.

115C. Elementary Quantum Mechanics. Prerequisite: course 115B. Further development in the methods and concepts of quantum mechanics.

116. Electronics. Lecture, three hours; laboratory, three hours. Alternating current circuits, vacuum tube characteristics and parameters, transistor characteristics and parameters, amplifiers, oscillators, nonlinear tube and transistor circuits.

M122. Plasma Physics. (Same as Engineering M118.) Prerequisite: Engineering 100B or Physics 110A. Senior-level introductory course to physics of plasmas and ionized gases and fundamentals of controlled fusion. Particle motion in magnetic fields; fluid behavior, plasma waves; resistivity and transport; equilibrium and stability; kinetic effects. Illustrative laboratory experiments will be discussed. (F,Sp)

123. Atomic Structure. (Formerly numbered 113.) Prerequisite: course 115B. The theory of atomic structure. Interaction of radiation with matter.

124. Nuclear Physics. Prerequisite: course 115A. Nuclear charge, mass, radius, spin, and moments; nuclear models; nuclear forces; alpha, beta, and gamma emission.

126. Elementary Particle Physics. Prerequisite: course 115B. Experimental determination of the properties of elementary particle states. Relativistic kinematics and phase space; angular momentum and isotopic spin formalism; elastic and inelastic scattering; invariance principles and conservation laws; strong, electromagnetic, and weak interactions. Survey of important experiments.

131A. Mathematical Methods of Physics. Matrix algebra and eigenvalue problems, vector differential operators and curvilinear coordinates, ordinary and partial differential equations, special functions, Sturm-Liouville Problem, Fourier series and integrals.

131B. Mathematical Methods of Physics. Prerequisite: course 131A. Green's functions and boundary value problems, complex variables and selected topics from: Tensors, Laplace transforms, probability theory, perturbation theory, approximation techniques.

140. Introduction to Solid State Physics. Prerequisite: course 115B or equivalent. Introduction to the basic theoretical concepts of solid state physics with applications. Crystal symmetry; cohesive energy; diffraction of electron, neutron, and electromagnetic waves in a lattice; the reciprocal lattice; phonons and their interactions; free electron theory of metals; energy bands.

****140A. Nuclear Physics Laboratory.**

****140B. Physical Optics and Spectroscopy Laboratory.**

****140C. Solid State Physics Laboratory.**

****140D. Acoustics Laboratory.**

****140E. Plasma Physics Laboratory.**

****140F. Elementary Particle Physics Laboratory.**

****185. Foundations of Physics.** Prerequisite: senior standing in physics or consent of instructor. The historical development and philosophical sources of classical and modern physics.

199. Special Studies in Physics (½ to 1 course). May be repeated, but not more than three courses may be applied toward the bachelor's degree.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Physiology

(Office: 53-251 Center for Health Sciences)

The Department of Physiology does not offer an undergraduate degree. The following upper division courses are offered with enrollment restrictions as indicated:

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. Mr. Hornsher and the Staff

101. Neuromuscular and Cardiovascular Physiology (1¾ 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 other students 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. Tormey, Ms. Wenzel

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, Ms. Wenzel

103A-103B. Basic Neurology (¼ course, ¾ course). Two four-hour sessions and one three-hour session per week in the last three weeks of Winter Quarter; two two-hour sessions and two three-hour sessions per week in Spring Quarter. Prerequisite: Medical School status or consent of instructor. Lectures, conferences, demonstrations and laboratory procedures necessary for an understanding of the functions of the human nervous system. In Progress grading. Must be taken concurrently with Anatomy 103A-103B. Mr. Chase and the 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

199. Special Studies (¼ to 2 courses). Prerequisite: consent of instructor. Special studies in physiology, including either reading assignments or laboratory work or both, designed for appropriate training of each student who registers in this course.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Political Science

(Office: 4289 Bunche Hall)

Richard E. Ashcraft, Ph.D., *Professor of Political Science.*
Hans H. Baerwald, Ph.D., *Professor of Political Science.*
Richard D. Baum, Ph.D., *Professor of Political Science.*
Irving Bernstein, 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.*
Mattei Dogan, Docteur ès Lettres, *Professor of Political Science.*
Ernest 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.*
Robert S. Gerstein, LL.B., Ph.D., *Professor of Political Science.*
Edward Gonzalez, Ph.D., *Professor of Political Science.*
Michael Intriligator, Ph.D., *Professor of Political Science and Economics.*
Malcolm H. Kerr, Ph.D., *Professor of Political Science.*
Roman Kolkowicz, Ph.D., *Professor of Political Science.*
Andrzej Korbonski, Ph.D., *Professor of Political Science.*
Stephen D. Krasner, Ph.D., *Professor of Political Science.*
Michael F. Lofchie, Ph.D., *Professor of Political Science.*
Dwaine Marvick, Ph.D., *Professor of Political Science.*
Charles R. Nixon, Ph.D., *Professor of Political Science.*
David C. Rapoport, Ph.D., *Professor of Political Science.*
John C. Ries, Ph.D., *Professor of Political Science.*
Ronald L. Rogowski, Ph.D., *Professor of Political Science.*
David O. Sears, Ph.D., *Professor of Political Science and Psychology.*
Richard Sisson, Ph.D., *Professor of Political Science (Chair).*
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.*
Winston W. Crouch, Ph.D., *Emeritus Professor of Political Science.*
David G. Farrelly, 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. Hobbs, 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. Petrocik, Ph.D., *Associate Professor of Political Science.*
Raymond A. Rocco, Ph.D., *Associate Professor of Political Science.*
Duane E. Smith, Ph.D., *Associate Professor of Political Science.*
Leo M. Snowiss, 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.*
Ciro Zoppo, Ph.D., *Associate Professor of Political Science.*
Thad A. Brown, Ph.D., *Assistant Professor of Political Science.*
P. Brett Hammond, Ph.D., *Assistant Professor of Political Science.*
Stephen L. Skowronek, Ph.D., *Assistant Professor of Political Science.*
Robert C. Welsh, Ph.D., *Assistant Professor of 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.*

Goals of the Undergraduate Program in Political Science

The undergraduate program aims to provide an understanding of basic political processes and institutions as these operate in different national and cultural contexts, of the interaction between national states, of the changing character of the relations between citizens and governments, and of the values and criteria by which the quality of political life is judged. This program may be individually focused to serve the needs of the liberal arts major, the student seeking preparation for graduate work in political science, public administration, law and other professional fields, and the student preparing for specialized roles in political and public organizations.

Inquiries about the program and any possible recent changes should be addressed to the Undergraduate Counselor, Department of Political Science.

Preparation for the Major

Two lower division courses (8 units): Political Science 1 and 2, 3, 4 or 6. These courses must be taken for a letter grade.

The Major

Requirements I: For those students *who had less than 84 quarter units at the beginning of Fall Quarter 1975* the following requirements apply (all other students see Requirements II below):

Ten upper division political science courses (for a total of 40 units) numbered from 102 to 199 must be taken for a letter grade. The student is also required to complete four upper division courses (for a total of 16 units) in one or more of the following social sciences: anthropology, communication studies (only 160), economics, geography, history, management (only 150, 190), psychology (except 115, 116, 117), sociology. These courses must also be taken for a letter grade. In addition to requirements for graduation prescribed by the College of Letters and Science, the student is expected to maintain a 2.0 overall grade-point average in all upper division political science courses. Upper division political science courses are organized into six fields: (I) Political Theory, (II) International Relations, (III) Politics, (IV) Comparative Government, (V) Public Law and (VI) Public Administration and Local Government.

In fulfilling the requirement of ten upper division political science courses, the student must satisfy the following:

(a) A **concentration** in one field by completing at least four upper division courses in that field. It is recommended that one of these courses be an Undergraduate Seminar, C197A-C197F (see field concentration requirements below).

(b) A **distribution** of two courses in each of two other fields (4 courses).

(c) Course 110 (Introduction to Political Theory) is required of all Political Science majors and must be taken no later than the junior year. The Political Science 110 requirement may be met by taking two quarters of the Political Science 111 series. Course 110 may count for either the concentration or the distribution requirement.

(d) One additional elective course in political science to comprise the total of ten.

Field Concentration Requirements: Specific requirements for field concentration are as follows:

(I) *Political Theory:* Course 110 and three additional courses in Field I.

(II) *International Relations:* Course 2 and any four upper division courses in Field II. Four units from courses 175A-175B may be counted as one of the four courses in Field II. Only one of the defense studies courses — 138A, 138B, 138C — may be counted toward the field concentration requirement.

(III) *Politics:* Any four courses in Field III. Course 182A may also be counted toward concentration in this field.

(IV) *Comparative Government:* Course 168 and any three additional courses in Field IV. Course 115, 188A or 188B—but not more than one of them — may also be counted toward concentration in this field. Course 3 is recommended as the second lower division course.

(V) *Public Law:* Course 170 or 171 and any three additional courses in Field V. Course 171 is prerequisite to 172A or 172B. Course 117 or 187 — but not more than one of them — may also be counted toward concentration in this field.

(VI) *Public Administration and Local Government:* Any four courses in Field VI. Course 138C, 173 or 174 — but not more than one of them — may also be counted toward concentration in this field.

Note: No course may be counted toward both concentration *and* distribution requirements.

Also, courses 119, 139, 149, M169, 179 and 189 may be applied no more than twice toward the field concentration requirement. No more than three of these courses may be applied toward the major.

Courses 198 and 199 may not apply to fulfill either the concentration or distribution requirement.

Requirements II: Those students *who had more than 84 quarter units at the beginning of Fall Quarter 1975* should see the undergraduate counselor for applicable requirements.

Undergraduate Seminars

Each quarter the department will offer a series of seminars, limited to 20 students, in each field. The prerequisites will be two upper division courses in the field in which the seminar is offered, a 3.25 average at the upper division level in political science or discretion of the instructor.

The courses will be numbered: C197A-Theory, C197B-International Relations, C197C-Politics, C197D-Comparative Government, C197E-Public Law and C197F-Public Administration and Local Government.

These courses may count for either the concentration or distribution requirement, and students who qualify are encouraged to take them.

The Honors Program

Qualifications: Completion of an undergraduate seminar; a 3.5 grade-point average at the upper division level in political science; eligibility for College of Letters and Science honors status.

The Program: Students wishing to qualify for graduation with Departmental Honors must maintain a 3.5 grade-point average in upper division political science and complete the following: (1) a one-year seminar (Political Science 195A-195B-195C). The first quarter of the seminar, course 195A, is a general seminar on political science and involves research. The second and third quarters, courses 195B and 195C, are devoted to writing a senior thesis under the direction of a faculty member. The honors thesis will be read by the respective field committees and judged for its quality and graded as to high honors, honors or no honors; (2) eight upper division courses, excluding courses 119, 139, 149, M169, 179 and 189, distributed as follows: course 110, three courses in one field and four additional courses, two in each of two other fields. These eight courses plus the one-year seminar will comprise the eleven upper division courses required for Honors in Political Science; (3) four upper division courses in the social sciences other than political science.

Related Curricula

For the curricula in international relations and public service, see "International Relations" and "Urban Studies or Organizational Studies" in this section of the catalog.

Lower Division Courses

1. Introduction to American Government. Lecture, three hours; discussion, one hour. An introduction to the principles and problems of government with particular emphasis on national government in the United States. This course fulfills the requirement of American History and Institutions and is required of all students majoring in Political Science.

2A-2B. World Politics. Lecture, three hours; discussion, one hour. Either course 2A or 2B is required of all students concentrating in Field II and may be used to fulfill one of the two requirements for the "Preparation for the Major." An introduction to problems of world politics. **2A.** Problems of Power Politics. **2B.** Problems of World Order. Mr. Wilkinson

3. Introduction to Comparative Government. Lecture, three hours; discussion, one hour. Prerequisite: course 1. A comparative study of constitutional principles, governmental institutions, and political processes in selected contemporary states, with emphasis on the major European governments. This course may be used to fulfill one of the two course requirements for the "Preparation for the Major."

4A-4Z. Current Problems in Political Science. Prerequisites: successful completion of or concurrent enrollment in course 1 and consent of instructor. Proseminars will be offered each quarter dealing with selected political problems. Topics will be announced during the preceding quarter. Enrollment will be limited. Preference will be given to declared freshman majors. This course may be used to fulfill one of the two course requirements for the "Preparation for the Major."

6. Introduction to Quantitative Research. Prerequisite: one previous course in political science, e.g., course 1, 2 or 3. An introduction to the collection and analysis of political data. The course emphasizes the application of statistical reasoning to the study of relationships among political variables. Students use the computer as an aid in analyzing data from various fields of political science, among them comparative politics, international relations, American politics, and public administration. Will serve as a prerequisite for courses C102, M103 and 104A. This course may be used to fulfill one of the two course requirements for the "Preparation for the Major."

*Upper Division Courses

Prerequisite for all upper division courses: upper division standing or consent of instructor.

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

UNGROUPED

C102. The Statistical Analysis of Political Data. Prerequisite: course 6. An introduction to statistical inference. Topics will include measures of central tendency, elementary probability theory, common probability distributions, least-squares and maximum likelihood estimation, confidence intervals and statistical tests, comparison of means, the analysis of variance, and multiple regression and correlation. Statistical techniques and topics will be illustrated with applications to a variety of political data. May be concurrently scheduled with course C204.

M103. Economic Models of the Political Process. (Formerly numbered 103.) (Same as Economics M135.) Prerequisites: Economics 101A, a basic course in political science and junior/senior status. This seminar is jointly offered by the Economics and Political Science Departments, and consent of instructor is required. The course examines conceptions and applications of two different processes of political interaction, the cooperative (as in public choice) and the conflictual (as in warfare) making use of economic models of choice and equilibrium. Mr. Hirshleifer

104A-104B. Introduction to Survey Research. Prerequisite: course 6 for undergraduates or course 203C for graduates. Course 104A is prerequisite to 104B. A two-quarter course in the fundamentals of survey research as a method. The first quarter will cover sampling theory and methods, the writing of questions, questionnaire construction, and interviewing. In addition, students will be introduced to attitudes, attitude measurement, and attitude change. Students will participate in the formulation of a research problem. The second quarter will involve conducting a survey. Students will be responsible for developing a survey questionnaire, designing a sample, collecting interviews, maintaining quality control, and coding the interviews for machine tabulation. The final requirement for the course is that the student perform a computer-aided analysis of some part of the data and submit a written report of that research. Both quarters must be taken to receive credit.

FIELD I: POLITICAL THEORY

110. Introduction to Political Theory. (Formerly numbered 101.) Lecture, three hours; discussion, one hour. An exposition and analysis of selected political theorists and concepts from Plato to the present. This course is required of all majors and *must be taken no later than the junior year.*

111A. History of Political Thought: Ancient and Medieval Political Theory. An exposition and critical analysis of the major political philosophers and schools from Plato to Machiavelli.

111B. History of Political Thought: Early Modern Political Theory. An exposition and critical analysis of the major political philosophers and schools from Hobbes to Bentham. Mr. Ashcraft

111C. History of Political Thought: Late Modern and Contemporary Political Theory. An exposition and critical analysis of the major political philosophers and schools from Hegel to the present. Mr. Ashcraft, Mr. Nixon, Mr. Wolfenstein

112. Nature of the State. A systematic analysis of modern concepts and problems of political association. Mr. Nixon

113. Problems in Twentieth-Century Political Theory. A study and interpretation of theorists who have focused their analyses on the social and political problems of the twentieth century. Mr. Rocco

114A-114B. American Political Thought. Course 114A or consent of instructor is prerequisite to 114B:

114A. An exposition and critical analysis of American political thinkers from the Puritan period to 1865.

114B. An exposition and critical analysis of American political thinkers from 1865 to the present. Mr. Smith

115. Theories of Political Change. Prerequisite: course 110 or consent of instructor. A critical examination of theories of political change, the relation of political change to changes in economic and social systems, and the relevance of such theories for the experience of both western and nonwestern societies. This course may be counted in either Field I or IV. Mr. Coleman, Mr. Lofchie

116. Marxism. A critical analysis of the origins, nature, and development of Marxist political theory. Mr. Ashcraft, Mr. Wolfenstein

117. Jurisprudence. Development of law and legal systems; consideration of fundamental legal concepts; contributions and influence of modern schools of legal philosophy in relation to law and government. This course may be counted in either Field I or V. Mr. Gerstein

119A-119Z. Special Studies in Political Theory. Prerequisites: course 110, one additional course in Field I and consent of instructor. Intensive examination of one or more special problems appropriate to political theory. Sections will be offered on a regular basis with topics announced in the preceding quarter. Courses 119, 139, 149, M169, 179 and 189 may be applied no more than twice toward the field concentration requirement. No more than three of these courses may be applied toward the major.

FIELD II: INTERNATIONAL RELATIONS

120. Foreign Relations of the United States. Lecture, three hours; discussion, one hour. A survey of the factors and forces entering into the formation and implementation of American foreign policy, with special emphasis on contemporary problems. Mr. Jabber, Mr. Spiegel, Mr. Stein

121. Studies in Formulation of American Foreign Policy. A study of the formation of American foreign policy with respect to individual cases. Specific topics will be announced in the *Schedule of Classes* each quarter.

123. International Organization and Administration. A general survey of the institutions, political and administrative, of international organization, with emphasis on the United Nations.

124. International Political Economy. A study of the political aspects of international economic issues. Mr. Krasner

125. Arms Control and International Security. Survey of contemporary arms control issues, with emphasis on efforts to limit nuclear weapons proliferation and the international arms trade. Mr. Jabber

126. Peace and War. Theory and research on the causes of war and the conditions of peace. Mr. Wilkinson

127. The Atlantic Area in World Politics. A contemporary survey of the foreign policies of the North Atlantic countries and of cooperative efforts to attain political, economic, and military coordination on a regional basis. Mr. Zoppo

128A-128B. The Soviet Sphere in World Politics. Course 128A or consent of instructor is prerequisite to 128B. A contemporary survey of the foreign policies and aspirations of the Soviet Union and other states in the Soviet bloc; analysis of content and effects of Communist doctrine affecting relations between the Soviet and democratic spheres. Mr. Cattell, Mr. Kolkowicz, Mr. Korbonski

131. Latin American International Relations. The major problems of Latin American international relations and organization in recent decades. Mr. Gonzalez

132A-132B. International Relations of the Middle East. Course 132A or consent of instructor is prerequisite to 132B:

132A. Contemporary regional issues and conflicts, with particular attention to inter-Arab politics, the Arab-Israeli problem, and the Persian Gulf area.

132B. Role of the Great Powers in the Middle East, with emphasis on American, Soviet and West European policies since 1945. Mr. Jabber

135. International Relations of China. The relations of China with its neighbors and the other powers, with emphasis on contemporary interests and policies of China vis-a-vis the United States and the Soviet Union. Mr. Baum

136. International Relations of Japan. The foreign policies of Japan, and the interests and policies of other countries, particularly the United States, as they relate to Japan. Mr. Baerwald

137. International Relations Theory. An examination of various theoretical approaches to international relations and their application to a number of historical cases and contemporary problems. Mr. Krasner, Mr. Stein

138A-138B-138C. Defense Studies:

138A. Defense Strategy and Policies. Analysis of national and international security problems in the nuclear era, with special emphasis on the United States.

138B. The Conduct of Modern War. A study of recent and contemporary wars with special emphasis on political and strategic problems.

138C. Military Policy and Organization. A study of the institutional and policy framework in the national military field. This course may be counted in either Field II or IV. Mr. Ries

139A-139Z. Special Studies in International Relations. Prerequisites: two courses in Field II or course 2 and one course in Field II and consent of instructor. Intensive examination of one or more special problems appropriate to international relations. Sections will be offered on a regular basis with topics announced in the preceding quarter. Courses 119, 139, 149, M169, 179 and 189 may be applied no more than twice toward the field concentration requirement. No more than three of these courses may be applied toward the major.

M139. Political and Economic Issues in the Proliferation of Nuclear Weapons. (Same as Economics M103A.) The course provides an interdisciplinary approach to the problem of nuclear proliferation. It will also deal with the economic aspects of the acquisition of nuclear weapons and economic aspects of nuclear energy treating technological, bargaining and stability issues. Offered alternate years. Mr. Intriligator

FIELD III: POLITICS

M140. Political Psychology. (Same as Psychology M138.) Prerequisite: Psychology 10. Examination of political behavior, political socialization, personality and politics, racial conflict, and the psychological analysis of public opinion on these issues. Mr. Sears

141. Public Opinion and Voting Behavior. Lecture, three hours; discussion, one hour. A study of the character and formation of political attitudes and public opinion. The role of public opinion in elections, the relationship of political attitudes to the vote decision, and the influence of public opinion on public policy formulation will be emphasized. Mr. Brown, Mr. Petrocik

142. The Politics of Interest Groups. A systematic investigation of the role of political interest groups in the governmental process, with attention directed to the internal organization, leadership, and politics of such groups to the goals and functions of various types of groups, and to the strategy and tactics of influence. Ms. Orren, Mr. Skowronek

143. Legislative Politics. A study of those factors which affect the character of the legislative process and the capacity of representative institutions to govern in contemporary society. Mr. Marvick, Mr. Snowiss

144. The American Presidency. A study of the nature and problems of presidential leadership, emphasizing the impact of the bureaucracy, congress, public opinion, interest groups, and the party system upon the presidency and national policy-making. Ms. Orren, Mr. Skowronek, Mr. Snowiss

145. Political Parties. The organization and activities of political parties in the United States. Attention is focused upon the historical development of the parties, the nature of party change, campaign functions and the electoral role of the parties, membership problems and party activists, political finance, and policy formulation practices. Mr. Brown, Mr. Marvick, Mr. Petrocik

146. Political Behavior Analysis. Prerequisite: course 141. The use of quantitative methods in the study of political behavior, especially in relation to voting patterns, political participation, and techniques of political action. Mr. Brown, Mr. Marvick, Mr. Petrocik

147. Minority Group Politics. Lecture, three hours; discussion, one hour. Prerequisites: course 1 plus one of the following: one additional 140-level course or one upper division course on race or ethnicity from history, psychology or sociology or consent of instructor. A systematic evaluation of the functioning of the American polity, related to problems of race and ethnicity. Topics include: leadership, organization, ideology, conventional versus unconventional political behavior, inter-minority relations, co-optation, symbolism, and repression. Mr. Rocco

149A-149Z. Special Studies in Politics. Prerequisites: two courses in Field III and consent of instructor. Intensive examination of one or more special problems appropriate to politics. Sections will be offered on a regular basis with topics announced in the preceding quarter. Courses 119, 139, 149, M169, 179 and 189 may be applied no more than twice toward the field concentration requirement. No more than three of these courses may be applied toward the major.

Also see course 182A

FIELD IV: COMPARATIVE GOVERNMENT

152. British Government. The government and politics of the United Kingdom; the British constitution, parliament, parties and elections, foreign policies, administrative problems, and local governments. Mr. Freedman

153. Governments of Western Europe. The constitutional and political structure and development of France and other states of continental Western Europe, with particular attention to contemporary problems. Mr. Dogan, Mr. Rogowski

154. Governments of Central Europe. The constitutional and political structure and development of Germany and other Central European states, with particular attention to contemporary problems. Mr. Rogowski

156. The Government of the Soviet Union. An intensive study of the political and institutional organization of the Soviet Union and its component parts, with special attention to contemporary political issues, as well as party and governmental structures. Mr. Cattell, Mr. Kolkowicz, Mr. Korbonski

157. Governments of Eastern Europe. A study of the political and governmental organization of the Communist countries of Eastern and Central Europe (exclusive of the U.S.S.R.) with special reference to the institutions, practices and ideologies including interregional relations. Mr. Korbonski

159. Chinese Government and Politics. Organization and structure of Chinese government with particular attention to the policies, doctrines, and institutions of Chinese Communism; political problems of contemporary China. Mr. Baum

160. Japanese Government and Politics. The structure and operation of the contemporary Japanese political system, with special attention to domestic political forces and problems. Mr. Baerwald

161. Government and Politics in Southeast Asia. The institutional and political processes and problems of states in Southeast Asia (Burma, Thailand, Malaya, Laos, Cambodia, Vietnam, Indonesia, and the Philippines).

162. Government and Politics in South Asia. A comparative study of political change and the development and performance of public institutions in Southern Asia, with special emphasis on India, Pakistan, and Bangladesh. Mr. Sisson

163A. Government and Politics in Latin America. (Formerly numbered 168A.) A comparative study of governmental and political development, organization and practices in the states of Middle America. Mr. Gonzalez

163B. Government and Politics in Latin America. (Formerly numbered 168B.) A comparative study of governmental and political development, organization and practices in the states of South America. Mr. Gonzalez

164. Government and Politics in the Middle East. A comparative study of government in the Arab States, Turkey, Israel and Iran. Mr. Jabber, Mr. Kerr

165. Government and Politics in North Africa. A comparative study of the government and politics of the North African states, including the relationship between political development, political organization and social structure. Mr. Kerr

166A-166B-166C. Government and Politics in Sub-Saharan Africa. Patterns of political change in Africa south of the Sahara with special reference to nationalism, nation-building and the problems of development (course is offered in three parts):

166A. Western Africa.

166B. Eastern Africa.

166C. Southern Africa.

Mr. Coleman, Mr. Lofchie, Mr. Sklar

167. Ideology and Development in World Politics. A comparative study of the major modes of political and economic development in the world today. Relations between industrial and nonindustrial societies are examined in light of the current debate about imperialism. Mr. Sklar

168L. Comparative Political Analysis. Lecture. Prerequisites: two courses in Field IV or course 3 and one course in Field IV. Major approaches to the study of comparative politics. Concepts and methodology of comparative analysis. Course 168L or 168S is required of all students concentrating in Field IV. This course will be conducted as a lecture course. *Either* course 168L *or* 168S can be taken for credit; credit will not be given for both.

168S. Comparative Political Analysis. Seminar. Prerequisites: two courses in Field IV or course 3 and one course in Field IV. Consent of instructor. Major approaches to the study of comparative politics. Concepts and methodology of comparative analysis. Course 168L or 168S is required of all students concentrating in Field IV. This course will be conducted as a seminar. *Either* course 168L *or* 168S can be taken for credit; credit will not be given for both.

M169A-M169Z. Special Studies in Comparative Government. (Formerly numbered 169A-169Z.) (Same as Afro-American Studies M100A.) Prerequisites: two courses in Field IV or course 3 and one course in Field IV and consent of instructor. Intensive examination of one or more special problems appropriate to comparative government. Sections will be offered on a regular basis with topics announced in the preceding quarter. Courses 119, 139, 149, M169, 179 and 189 may be applied no more than twice toward the field concentration requirement. No more than three of these courses may be applied toward the major.

Also see courses 115, 188A, 188B

FIELD V: PUBLIC LAW

170. The Anglo-American Legal System. Lecture, four hours; discussion, one hour. Evolution of the English common law courts and their legal system, with emphasis on the development of the basic concepts of law which were received from that system in the United States, and remain relevant today. Either this course or 171 is required of all students concentrating in Field V. Mr. Gerstein

171. The Supreme Court. Lecture, four hours; discussion, one hour. The history, procedures, and role of the Supreme Court in its legal-constitutional and political aspects. Emphasis will be given to the current and recent activities of the Court. Decisions of the Court, historical and current commentaries, and judicial biography will be utilized. Either this course or 170 is required of all students concentrating in Field V. Mr. Gerstein, Mr. Hobbs

172A. American Constitutional Law. Prerequisite: course 171. Constitutional questions concerning the separation of powers, federalism, and the relationship between government and property. Mr. Gerstein, Mr. Hobbs

172B. American Constitutional Law. Prerequisite: course 171. The protection of civil and political rights and liberties under the Constitution. Mr. Gerstein, Mr. Hobbs

173. Government and Business. The nature of the corporation; the regulation of competition; government promotion of economic interests; regulation of industries clothed with a public interest; government ownership and operation. This course may be counted in either Field V or VI. Mr. Bernstein, Ms. Orren

174. Government and Labor. The labor force and the nature of the trade union; regulation of labor relations; programs to encourage full employment and to mitigate unemployment; protective labor legislation. This course may be counted in either Field V or VI. Mr. Bernstein

175A-175B. International Law. A study of the nature and place of international law in the conduct of international relations. Courses 175A and 175B may be offered in consecutive terms or simultaneously. If offered consecutively, course 175A is prerequisite to 175B, and a student may take 175A alone for four units credit. If they are offered simultaneously, a student must take both courses for 8 units. A maximum of 4 units (1 course) may be counted in Field II.

179A-179Z. Special Studies in Public Law. Prerequisites: course 170 or 171, one additional course in Field V, any special requirements and consent of instructor. Intensive examination of one or more special problems appropriate to public law. Sections will be offered on a regular basis with topics announced in the preceding quarter. Courses 119, 139, 149, M169, 179 and 189 may be applied no more than twice toward the field concentration requirement. No more than three of these courses may be applied toward the major.

Also see courses 117, 187

FIELD VI: PUBLIC ADMINISTRATION AND LOCAL GOVERNMENT

180. State and Local Government. A study of state political systems, including their administrative and local sub-systems; intergovernmental relationships; and their policy outputs, with specific attention being given to California. Mr. Bollens, Mr. Hammond

181. Introduction to Public Administration. An introduction to the study of the processes and structures designed to convert citizen demands and public decisions into collective action and achievement. Particular attention is devoted to the capacity of American administrative systems to respond effectively to citizen expectations within the restraints of due process. Mr. Fried

182A. Metropolitan Area Government and Politics. An overview of the political and social organization, decision-making processes, policy problems, and conflicts of metropolitan areas and their central cities and suburbs. Attention is also given to the impact on these areas of the national and state political systems and racial, ethnic, and protest movements. This course may be counted in either Field III or VI. Mr. Bollens

182B. City Government and Politics. Prerequisite: course 182A or consent of instructor. Intensive analysis of contemporary urban governance in the United States. Emphasis is given to such student participatory activities as field-work, research, and gaming of urban politics and policy problems. Mr. Bollens

183. Administration of International Agencies and Programs. An examination of the administrative patterns and practices of the United Nations agencies and overseas development programs, including distinctive characteristics of organization and management selection of personnel, and methods of financing.

185. Public Personnel Administration. The process of formulating and administering public personnel policies; concepts and principles utilized in selected governmental personnel systems. Focus will be primarily upon governmental systems in the United States (national, state, local, foreign service, military) but also comparisons will be made with selected other governmental systems.

186. National Policy and Administration. A study of the major policies and programs of the national government and their administration as illustrated in such areas as national defense, social welfare, agriculture, etc. Particular attention will be paid to the role of the President and other administrators in formulating public policy and in maintaining a responsible bureaucracy. Mr. Engelbert, Mr. Fried

187. Law and Administration. Legal controls of administration action. Substantive and procedural limits on administrative discretion imposed by legislation, executive and judicial agencies and the sources of legal powers of administrative bodies within these limits. This course may be counted in either Field V or VI.

188A. Comparative Public Administration. An analysis of bureaucratic structures and function in the United States, other industrialized, and less developed countries, primarily at the national level. Special attention is paid to methods of comparative analysis and the utility of various models. This course may be counted in either Field IV or VI. Mr. Fried

188B. Comparative Urban Government. A cross-cultural examination of the forms and processes of urban government. Particular attention will be paid to the role of urbanization in political development. This course may be counted in either Field IV or VI. Mr. Fried

189A-189Z. Special Studies in Public Administration. Prerequisites: two courses in Field VI and consent of instructor. Intensive examination of one or more special problems appropriate to public administration. Sections will be offered on a regular basis with topics announced in the preceding quarter. Courses 119, 139, 149, M169, 179 and 189 may be applied no more than twice toward the field concentration requirement. No more than three of these courses may be applied toward the major.

190. Theories of Organization. An examination of the theoretical frameworks for studying public and private bureaucracies, with emphasis upon ideologies, values, behavioral patterns, and concepts of organization. Mr. Engelbert, Mr. Hammond, Mr. Hoffenberg

191. Urban and Regional Planning and Development. A comparative study of governmental policies, procedures, and agencies involved in the planning and development of urban and regional communities and areas. Mr. Engelbert, Mr. Hoffenberg

Also see courses 138C, 173, 174

195A-195B-195C. Honors Seminar and Thesis. Prerequisites: one course in the C197 series, a 3.4 grade-point average at the upper division level in political science courses, eligibility for College of Letters and Science Honors status. Course 195A is prerequisite to 195B; course 195B is prerequisite to 195C.

Political Science 195A-195B-195C is a one-year honors seminar and thesis-writing sequence. Students entering course 195A are expected to have some experience in writing research papers and to have in mind a research topic suitable for treatment at length and in depth.

During the first quarter (course 195A) students will define their research topic, select a suitable research method, determine appropriate sources of information, prepare a research proposal, find a thesis director, begin their research, and submit progress reports or preliminary drafts.

Class sessions in course 195A will emphasize critical and constructive discussions of students' topics, methods, and problems in research, as well as general consideration of political science research topics and methods of current or continuing interest. Students will also meet privately with the instructor to discuss the progress of their research. The second and third quarters (courses 195B-195C) are devoted to writing an honors thesis under the direction of a faculty member. The honors thesis will be read by the appropriate field committee and graded High Honors, Honors, or No Honors.

C197A-C197F. Seminars for Majors. Prerequisites: major in Political Science and upper division standing, a 3.25 grade-point average at the upper division level in political science courses, two upper division courses in the field in which the seminar is offered. These courses may count for distribution or concentration requirements. May be concurrently scheduled with various graduate courses.

199. Readings in Political Science (½ to 1 course). Prerequisites: upper division standing, overall grade-point average of 3.0, consent of instructor and approval by departmental Chair. May be repeated for a total of four full courses. Individual study. See additional information in statement of requirements for the major in Political Science.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Psychiatry and Biobehavioral Sciences

(Office: B7-349 NPI)

Program

The Department of Psychiatry and Biobehavioral Sciences offers interdisciplinary courses related to the mental health professions of the biobehavioral sciences in addition to its programs for psychiatry interns and residents and for medical students (courses for medical students are listed in the *Announcement of the UCLA School of Medicine* and the *School of Medicine Handbook of Clinical Courses*).

The Developmental Disabilities Immersion Program is cosponsored by the Departments of Psychology and Psychiatry and Biobehavioral Sciences and by the Office of Instructional Development — Field Studies Development. Each year two groups of nineteen juniors and seniors are selected for the program, which runs once during the Fall/Winter Quarters and again in the Spring/Summer Quarters. Students participate in courses and research at Lanterman State Hospital and Developmental Center, a facility for mentally retarded citizens in Pomona, and do related fieldwork while living together at the nearby UCLA Learning Center. During each quarter of the program up to twenty units of course work related to the theme of developmental disabilities are offered. Most of the courses are in the Psychiatry/Psychology M180-M181 series, but courses from other departments (such as biology) may supplement these offerings. Many of the courses fulfill Psychology undergraduate major requirements. Students interested in the program should contact the Office of Instructional Development—Field Studies Development or the Psychology Undergraduate Office.

Information on clinical practicums which are offered in conjunction with other educational institutions and UCLA departments may be obtained from the NPI Office of Education.

The department does not offer an undergraduate degree. The following upper division courses are offered with enrollment restrictions as indicated:

*Upper Division Courses

M112. A Laboratory for Naturalistic Observations: Developing Skills and Techniques. (Same as Anthropology M136Q and Psychology M155.) Prerequisite: consent of instructor. The skill of observing and recording behavior in natural settings will be taught, emphasizing field training and practice in observing behavior. Group and individual projects will be included. Some of the uses of observations and their implications for research in the social sciences will also be discussed.
Mr. Gallimore, Mr. Levine, Mr. Turner

CM135. Theoretical Issues in Disorders of Language Development. (Same as Linguistics CM135.) Lecture, two hours; discussion, two hours. Prerequisites: Linguistics 1 or 100 and 130 or 131 or consent of instructor. 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 each other will be examined. Such questions as the relationship of cognition to linguistic ability will be considered. Concurrently scheduled with Psychiatry CM237/Linguistics CM235. Graduate students will be expected to apply more sophisticated knowledge and produce a research paper of greater depth. Ms.Needleman

M180A. Contemporary Problems in Mental Retardation. (Same as Psychology M180A.) Prerequisites: Psychology 10, 41 and 127 or 130 and enrollment in Immersion Program. Presentation of the concepts, issues and research techniques in the area of mental retardation. Biological, psychological and community questions concerning the causes and treatment of developmental disabilities as well as systems for the care and training of retarded individuals will be explored. Lectures, directed reading and discussion. To be taken concurrently with Research in Contemporary Problems in Mental Retardation (M181A-M181B). Mr. Fluharty and the Staff

M180B. Contemporary Issues in Mental Retardation. (Same as Psychology M180B.) Prerequisites: course M180A and enrollment in Immersion Program. Psycho-educational issues in mental retardation, relating literature to ongoing field experiences through lectures, discussions, media and six student papers. Mr. Baker

M181A-M181B. Research in Contemporary Problems in Mental Retardation. (Same as Psychology M181A-M181B.) Prerequisites: concurrent enrollment in courses M180A-M180B. Research experience to be taken concurrently with Contemporary Problems in Mental Retardation (M180A). In Progress grading. Mr. Fluharty, Mr. Kihara

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

M182A. Advanced Statistical Methods in Mental Retardation. (Same as Psychology M182A.) Prerequisites: Psychology 41 and enrollment in Immersion Program. Introduction of statistical method and design in experimentation principles of statistical inference and appropriate testing methods. An introduction to the use of computers and various software packages is presented. Mr. Eyman, Mr. Silverstein

M182B. Advanced Design and Statistics. (Same as Psychology M182B.) Prerequisite: course M182A. Continuation of course M182A.
Mr. Eyman, Mr. Silverstein

M182C. Perception. (Same as Psychology M182C.) Prerequisite: enrollment in Immersion Program. Human information processing, both physical and psychological with special emphasis on pathologies in the mentally retarded. Mr. Galbraith

M182D. Current Issues in Mental Retardation. (Same as Psychology M182D.) Prerequisite: enrollment in Immersion Program. Advanced topics in mental retardation. May be repeated for credit with consent of instructor.

M190. Ethology: Physiology of Behavior and Learning in Animals. (Same as Psychology M118F.) Prerequisite: consent of instructor. Basic course for undergraduate students which integrates a systematic overview of common forms of behavioral plasticity and standard training procedures in laboratory animals (in behavioral, neurophysiological and pharmacological studies) with a broad biological, evolutionary perspective. Mr. Soltysik

199. Special Studies in Psychiatry (½ to 1 course). Prerequisite: consent of instructor and departmental Chair. Consent is based on a written proposal outlining the course of study. The proposal is to be structured by instructor and student at time of initial enrollment. Additional information and course proposal forms are available in the Office of Education, B7-349 NPI.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

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. Broen, Jr., Ph.D., *Professor of Psychology (Vice-Chair, Graduate Affairs).*
[16]Larry L. Butcher, Ph.D., *Professor of Psychology.*
[16]Edward C. Carterette, 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.*
[16]Gaylord D. Ellison, Ph.D., *Professor of Psychology.*
Seymour Feshbach, Ph.D., *Professor of Psychology (Chair).*
Morton P. Friedman, Ph.D., *Professor of Psychology (Vice-Chair, 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.*
Patricia M. 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.*
Wendell E. Jeffrey, Ph.D., *Professor of Psychology.*
Harold H. Kelley, Ph.D., *Professor of Psychology.*
[16]Franklin B. Krasne, Ph.D., *Professor of Psychology.*
[16]John C. Liebeskind, Ph.D., *Professor of Psychology.*
O. Ivar Lovaas, Ph.D., Litt.D., *Professor of Psychology.*
Millard C. Madsen, Ph.D., *Professor of Psychology.*
Irving Maltzman, Ph.D., *Professor of Psychology.*
Albert Mehrabian, Ph.D., *Professor of Psychology.*
Charles Y. Nakamura, Ph.D., *Professor of Psychology.*
[16]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 G. Sheehan, Ph.D., *Professor of Psychology.*
Gerald H. Shure, Ph.D., *Professor of Psychology and Sociology.*
Stanley Sue, Ph.D., *Professor of Psychology.*
James P. Thomas, Ph.D., *Professor of Psychology.*
Bernard Weiner, Ph.D., *Professor of Psychology.*
J. Arthur Woodward, Ph.D., *Professor of Psychology.*
S. Carolyn Fisher, Ph.D., *Emeritus Professor of Psychology.*
Joseph A. Gengerelli, Ph.D., *Emeritus Professor of Psychology.*
Milton E. Hahn, Ph.D., *Emeritus Professor of Psychology.*
F. Nowell Jones, Ph.D., *Emeritus Professor of Psychology.*
George F. J. Lehner, Ph.D., *Emeritus Professor of Psychology.*
Donald B. Lindsley, Ph.D., Sc.D., *Emeritus Professor of Psychology and Physiology.*
Jessie L. Rhulman, 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 R. Arnold, Ph.D., *Associate Professor of Psychology.*
Richard P. Barthol, Ph.D., *Associate Professor of Psychology.*
[16]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 D. Goodchilds, Ph.D., *Adjunct Associate Professor of Psychology and Associate Research Psychologist.*
Gerald M. Goodman, Ph.D., *Associate Professor of Psychology.*
Constance L. Hammen, 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 Anatomist.*
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.*
Shelley E. Taylor, Ph.D., *Associate Professor of Psychology.*
Thomas D. Wickens, Ph.D., *Associate Professor of Psychology.*
Eran Zaidel, Ph.D., *Associate Professor of Psychology.*
Paul R. Abramson, Ph.D., *Assistant Professor of Psychology.*
M. Douglas Anglin, Ph.D., *Adjunct Assistant Professor of Psychology.*
Felipe Castro, Ph.D., *Assistant Professor of Psychology.*
Andrew Christensen, Ph.D., *Assistant Professor of Psychology.*
Halford H. Fairchild, Ph.D., *Assistant Professor of Psychology.*
Ralph E. Geiselman, Ph.D., *Assistant Professor of Psychology.*
Vicki M. Mays, Ph.D., *Assistant Professor of Psychology.*
Sigrid R. McPherson, Ph.D., *Adjunct Assistant Professor of Psychology and Medical Psychology and Assistant Research Psychologist.*
Nancy L. Rader, Ph.D., *Assistant Professor of Psychology.*
D. Dean Richards, Ph.D., *Assistant Professor of Psychology.*
Perry W. Thorndyke, Ph.D., *Adjunct Assistant Professor of Psychology.*

• •

John Berg, Ph.D., *Visiting Lecturer in Psychology.*
Darrell C. Dearmore, M.A., *Lecturer in Psychology.*
Jeri A. Doane, Ph.D., *Assistant Research Psychologist and Adjunct Assistant Professor of Psychology.*
Ronald Fisher, Ph.D., *Visiting Lecturer in Psychology.*
Pamela C. Freundl, Ph.D., *Lecturer in Psychology.*
Rosslyn Gaines, Ph.D., *Professor of Medical Psychology and Psychology in Residence.*
William S. Hansen, Ph.D., *Assistant Professor of Psychology in Residence.*
Morris K. Holland, Ph.D., *Adjunct Lecturer in Psychology.*
Harry J. Jerison, Ph.D., *Professor of Medical Psychology and Psychology in Residence.*
Ronald Kendis, Ph.D., *Visiting Lecturer in Psychology.*
Tchia Litman-Adizes, Ph.D., *Visiting Lecturer in Psychology.*
John H. Lyman, Ph.D., *Professor of Engineering and Psychology.*
Jim Mintz, Ph.D., *Adjunct Lecturer in 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.*
Jack E. Sherman, Ph.D., *Adjunct Lecturer in Psychology.*
Edwin S. Shneidman, Ph.D., *Professor of Psychology, Sociology, and Thanatology in Residence.*
Linda L. Taylor, Ph.D., *Adjunct Lecturer in Psychology.*
Jill Waterman, Ph.D., *Adjunct Associate Professor of Psychology.*

Training in psychology at UCLA emphasizes the idea of psychology as a biosocial laboratory science. To meet the diverse needs of students, there are three different major curricula: the Psychology major, the Quantitative Psychology major and the Psychobiology major.

Students should note that all courses required for these majors (which include lower division courses and major courses) must be taken for a letter grade.

The Pre-Psychology Major

While students are completing the lower division preparation courses for one of the majors listed above, they should be enrolled as Pre-Psychology majors. Students may enroll in this premajor at the Psychology Undergraduate Office, 1531 Franz Hall. Students must complete the preparation courses according to the rules set down in the major before they can enroll in that major. When students have completed the preparation courses for the major, they must petition to enter that major at the Psychology Undergraduate Office.

The Psychology Major

PLEASE NOTE: Students must complete all premajor courses with a 2.0 grade-point average and petition for change of major by the time they attain 135 units. Students entering UCLA as freshmen can easily complete the nine preparation courses within 135 units. Transfer students who have a number of these preparation courses left to complete will have a more difficult time meeting this requirement. All transfer students must see a counselor in the Psychology Undergraduate Office.

Required Lower Division Courses for the Psychology Major: Broad training in general science is required for the major in Psychology. The required lower division courses are as follows: Anthropology 11, 1 or 2; Biology 2 or 5; Chemistry 2 (for those students who have completed one year of high school chemistry with a "C" or better, this requirement will be waived) or 11A; Mathematics 2; Physics 10 or 3A or 6A or 8A; Philosophy 1, 3, 4, 7, 8, 9, 10 or 21 (choose one); Psychology 10; Psychology 41 or Mathematics 50A or Economics 40 (Psychology 41 recommended); Psychology 42. Psychology 41 and 42 should be taken early in a student's career. (All current Psychology majors could take either Psychology 42 and ten upper division courses or Psychology 100 and nine additional upper division courses.) Contact the Psychology Undergraduate Office for further details. Students must complete all premajor courses with a 2.0 grade-point average and petition for change of major status by the time they attain 135 units.

It should be noted that the above are the minimum requirements in preparing for the major. More advanced courses in science and statistics would provide stronger preparation for the major.

Required Upper Division Major Courses (admission to the major and to certain of the courses listed below is limited to students who have completed all of the above preparation courses with a 2.0 grade-point average by the time they attain 135 units; see the section above entitled "The Pre-Psychology Major" for the procedures to follow to enroll in the Psychology major): (1) all of the following content core courses: 110, 115, 120, 125, 135; (2) one of the following laboratory and field research courses: 111, 116, 121, 132B, 136A, C136B, 143, M155, 170B, 173, 176, M181A-M181B; (3) an additional four upper division elective courses (16 units) in psychology.

The Quantitative Psychology Major

This major is an alternative to the Psychology major. It provides students with basic training in

both quantitative skills and in psychology. Quantitative and computer skills are important in all fields of psychology and are a very positive aspect in the student's preparation for a career in psychology or related fields.

Required Lower Division Courses for the Quantitative Psychology Major: The following courses must be completed with a 2.0 grade-point average: Biology 2 or 5; Chemistry 2 (for those students who have completed one year of high school chemistry with a "C" or better, this requirement will be waived) or 11A; Engineering 10S (recommended) or 10C or 10F; Mathematics 31A, 31B, 32A-32B, 33A, 33B; Physics 10 or 3A or 6A or 8A; Psychology 10.

It should be noted that the above are minimum requirements in preparing for the major. More advanced courses in science would provide stronger preparation for the major.

Required Upper Division Quantitative Psychology Major Courses (admission to the Quantitative Psychology major is limited to students who have completed the above preparation courses with a 2.0 grade-point average; see the section above entitled "The Pre-Psychology Major" for the procedures to follow to enroll in the Quantitative Psychology major): (1) one of the following sets of courses: Public Health 100A and 100B or Mathematics 150A-150B or Mathematics 152A-152B or Engineering 193A and 193B; (2) all of the following courses: Psychology 110, 115, 120, 125, 135; (3) seven additional upper division courses in quantitative psychology, mathematics, biostatistics, computer science and system science. Two of these courses must emphasize research methodology in psychology.

Particular courses for the last requirement will depend on a student's needs and interests. Students will consult their advisor for prior approval of courses to meet these requirements. See the Psychology Undergraduate Office for details.

The Psychobiology Major

This major is an alternative to the Psychology major and is designed for students who plan to go on to postgraduate work in psychobiology or the health sciences.

Required Lower Division Courses for the Psychobiology Major: The following courses must be completed with a 2.0 in EACH course: Biology 5, 7; Chemistry 11A, 11B/11BL, 11C/11CL, 21, 23, 25; Mathematics 3A, 3B, 3C or 31A, 31B, 32A; Philosophy 1, 3, 4, 7, 8, 9, 10 or 21 (choose one); Physics 6A, 6B, 6C or 3A, 3B, 3C or 8A, 8B, 8C; Psychology 10; Psychology 41 or Mathematics 50A or Economics 40 (Psychology 41 recommended); Psychology 42. Psychology 41 and 42 should be taken early in a student's career. (Currently declared Psychobiology majors can take either Psychology 42 or 100.)

Required Upper Division Psychobiology Major Courses (admission to the Psychobiology major is limited to students who have completed the above preparation courses with a 2.0 in *each* course; see the section above entitled "The Pre-Psychology Major" for the procedures to follow to enroll in the Psychobiology major): (1) all of the following courses: Biology 129 or Psychology 118A; Psychology 110, 115, 116, 120; (2) one of the following courses: Psychology 125, 127, 130, 135; (3) four courses from the following list with the noted conditions: Psychology 117 (only one section may be used); Biology 107, 112, 113, 114, 115 (no more than one from this group); Psychology 118B, 118C, 118D, 118E, M118F, 119, M153, Biology 105, 110, 111, 120, 122, 135, 137, 138, 139, 144, 145A, 145B, 145C, 153, 158, 166, 168, 169, 171, 172A, 172B, 173, 177, 179, Kinesiology 140 and Chemistry 152.

Preparation for Graduate Work in Psychology

Although requirements for admission to graduate programs in psychology in most universities will be satisfied by the above major requirements, students should realize that both admission to graduate work and progress toward the degree will be impeded in certain areas of psychology if additional preparation is not obtained at the undergraduate level. For this reason, students who plan to do graduate work in psychology are advised to take additional work in methodology and statistics, and to take advantage of the many advanced undergraduate courses in specific fields offered both by the Psychology Department and related departments.

Students should plan to give some time to the acquisition of a reading knowledge of one or two foreign languages which might be required for the Ph.D. The department no longer requires a foreign language except in the area of Measurement/Psychometrics, but at some other universities one or two foreign languages are required.

Consult the Psychology Undergraduate Office, 1531 Franz Hall, for information concerning graduate programs at other institutions; consult the Graduate Admissions Assistant, 3453 Franz Hall, for information concerning the graduate program at UCLA.

Honors Courses in Psychology

The Psychology Honors Program provides exceptional students the opportunity to study basic areas of psychology in small classes. These honors classes are designed to satisfy traditional objectives of liberal education at a high academic level. Corresponding to each of the five core courses, there is an honors course distinguished by a more demanding set of readings and by more extensive opportunities for discussion and expository writing. The honors-designated courses (110H, 115H, 120H, 125H, 135H) also offer credit toward College Honors. (For information on "College Honors," see the "College of Letters and Science" section of this catalog). Admission is by consent of instructor, and applicants need not be Psychology majors.

Departmental Honors requires at least two honors-designated courses or honors sections of standard course offerings. In addition, Psychology majors who are candidates for Departmental Honors engage in advanced research and study under the tutorial guidance of a member of the faculty while enrolled in the Honors Course (Psychology 190A-190B-190C). This culminates in a formal bachelor's thesis. Students whose theses are judged acceptable by the Honors Committee are awarded the degree with Honors or Highest Honors in Psychology. Interested students should consult the Psychology Undergraduate Office early in their educational planning for further information and application forms.

Developmental Disabilities Immersion Program

The Developmental Disabilities Immersion Program is cosponsored by the Departments of Psychology and Psychiatry and Biobehavioral Sciences and by the Office of Instructional Development—Field Studies Development. Each year two groups of nineteen juniors and seniors are selected for the program, which runs once during the Fall/Winter Quarters and again in the Spring/Summer Quarters. Students participate in courses and research at Lanterman State Hospital and Developmental Center, a facility for mentally retarded citizens in Pomona, and do related fieldwork while living together at the nearby UCLA Learning Center.

During each quarter of the program up to twenty units of course work related to the theme of developmental disabilities are offered. Most of the courses are in the Psychology/Psychiatry M180-M181 series, but courses from other departments (such as biology) may supplement these offerings. Many of the courses fulfill Psychology undergraduate major requirements.

Student individualized research projects are part of the immersion experience. Each student teams up with a research sponsor (one of the participating faculty or other Lanterman State staff members) and designs a project commensurate with the student's interests and level of research experience. Many research projects tie in to ongoing research activities at the hospital. Final project reports are published in *Pacific State Archives*, the annual journal of student research.

To supplement their academic activities, students spend ten hours a week working with the developmentally disabled by assisting teachers in the special education classes in nearby public schools or by helping supervise at sheltered workshops. They have the opportunity to lead classes, to produce lesson plans, to devise learning activities and to work individually with clients.

Group living intensifies the learning experience and presents increased opportunities for the development of interpersonal skills. The residential format accommodates the many

extra program activities (workshops, guest lectures, etc.) related to the organizational theme of mental retardation.

Students interested in the program should contact the Psychology Undergraduate Office or Field Studies Development, 50 Dodd Hall. Freshmen are not eligible, and sophomores will be admitted only under exceptional circumstances. Applicants need not be Psychology majors.

Fernald Clinic and Laboratory

Established in 1921, this research and training center is one of the oldest ongoing University-based facilities focusing on psychoeducational problems. In pursuing its research and training objectives, Fernald offers a variety of services, e.g., assessment, classroom instruction, psychotherapy and tutoring. The present population consists of children, adolescents and adults of average or better intelligence who are experiencing learning and related psychobehavioral problems.

Fernald offers observation, classroom participation and intervention, research and other training opportunities to undergraduates in psychology and related fields. Three courses focusing on learning disorders, Psychology 132A, 132B and 132C, are specifically associated with the Fernald School programs.

The research activities at Fernald are directed toward an analysis of the process-mediating learning difficulties and toward an evaluation of the effectiveness of various psychological and educational programs.

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 Center, 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 Center 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.

Lower Division Courses

10. Introductory Psychology. A general introduction including topics in cognitive, experimental, personality, developmental, social and clinical psychology. Students participate in six hours of psychological research or conduct three literature reviews culminating in written bibliographies and abstracts in lieu of research participation.

10H. Introductory Psychology (Honors). An honors course parallel to course 10. Mr. Collins

15. Introductory Psychobiology. A survey of genetic, evolutionary, physiological, pharmacological and experiential factors affecting behavior. Using the comparative approach where appropriate, the relevance of biological mechanisms to an understanding of man and his interaction with his environment will be emphasized. Not intended for Psychology majors.

41. Psychological Statistics. Prerequisite: Mathematics 2. Basic statistical procedures and their application to research and practice in various areas of psychology. Mr. Comrey, Mr. Mount, Mr. Woodward

42. Research Methods in Psychology. (Formerly numbered 100.) Prerequisites: courses 10, 41 with grades of "C" or better. Introduction to research methods and critical analysis in psychology. Lecture and lab topics will include: experimental and nonexperimental research methods, statistical design and analysis as applied to a broad range of basic and applied research issues. Students may not receive credit for this course and course 100.
Ms. Bjork and the Staff

95. Lower Division Seminars. Prerequisite: course 10. Open only to freshmen and sophomores. Intensive analysis in seminar situations of selected topics of current psychological interest. See the *Schedule of Classes* for current topics and instructors. May be repeated more than once for credit.

*Upper Division Courses

The following courses have only Psychology 10 as the prerequisite plus the prerequisites listed with each course: 127, 130, 132A, 132B, 134, 135, 137A, 137B, 137C, M138, 139, 148, 170A. For special topics courses such as 195, prerequisites will depend upon the nature of the course. The prerequisites to other upper division courses are all courses listed under the "Pre-Psychology Major."

100. Research Methods in Psychology. Prerequisites: courses 10, 41 with grades of "C" or better. Introduction to research methods and critical analysis in psychology. Lecture and lab topics will include: experimental and nonexperimental research methods, statistical design and analysis as applied to a broad range of basic and applied research issues. Students may not receive credit for this course and course 42. Mr. Thomas and the Staff

102. History and Systems of Psychology. Prerequisite: senior standing or consent of instructor. A historical and systematic analysis of psychological thought and points of view.
Mr. Maltzman, Mr. Parducci

110. Fundamentals of Learning. Prerequisite: course 41. Experimental findings on animal and human conditioning; retention and transfer of training; the relation of learning and motivation. The course is intended to provide an empirical basis for theory and research in this area.
Mr. Bjork, Mr. Holman, Mr. Houston

110H. Fundamentals of Learning (Honors). Prerequisite: course 41. An honors course parallel to course 110.

111. Learning Laboratory. Prerequisites: courses 41, 42 (or 100) and Psychology major standing. Prerequisite or concurrent: course 110. Laboratory experience with techniques in the study of learning especially with animals. Mr. Holman

***112A. Human Learning.** Prerequisite: course 110. Acquisition, retention, and transfer of verbal and nonverbal human learning.

112B. Theories of Learning. Prerequisite: course 110. Critical discussion of the major theories in the light of experimental evidence. Mr. Padilla

***112C. Thinking.** Prerequisite: course 110. An analysis of experimental studies of problem solving, reasoning, insight, concept formation, and related topics.
Mr. MacKay

***112E. Current Topics in Learning.** Prerequisite: course 110. A study of related issues in the psychology of learning. Topics will vary with the interests of the instructor and the class. May be repeated for credit with consent of instructor.

114. Alcoholism. Prerequisite: upper division standing. Theories and research on the impact, causes, characteristics, and treatment of alcoholism considered from a biobehavioral point of view. Mr. Maltzman

115. Physiological Psychology. Prerequisites: Biology 2, Psychology 41; for non-Psychology majors, Biology 5, 7 and consent of instructor. Integrative activities, receptor and effector processes in relation to neuromuscular structure and function. Facts, problems and methods.

115H. Physiological Psychology (Honors). Prerequisite: course 41. An honors course parallel to course 115.

116. Physiological Psychology Laboratory. Prerequisites: courses 41, 42 (or 100) and Psychology major standing. Prerequisite or concurrent: course 115. Laboratory experience with various topics in physiological psychology. Mr. Dearmore

117. Seminar in Psychobiology. Prerequisite: course 115. Advanced topics in brain and behavior. May be repeated for credit with consent of instructor. Only one section of course 117 may be applied as an elective on the Psychobiology major.

118A. Comparative Psychobiology. Prerequisite: course 115. A survey of the determinants of species-specific behavior including genetic influences and learning. Mr. Arnold, Mr. Krasne

118B. Behavioral Pharmacology. Prerequisite: course 115. Experimental and theoretical treatment of drug-behavior relationships. Particular emphasis on behavior and pharmacological mechanisms of drug action and drug interaction with neuronal function; drugs as tools to investigate various behavior processes such as mood, aggression, learning and motivation, experimental studies of addiction.
Mr. Butcher, Mr. Ellison

***118C. Psychophysiology of Motivation.** Prerequisite: course 115. The basic psychophysiology, including brain and endocrine mechanism, involved in the control of motivation. Discussion of homeostatic drives such as hunger and thirst and nonhomeostatic drives such as reproductive behavior will be emphasized. Mr. Novin

118D. Experimental Neuropsychology. Prerequisite: course 115. Studies the experimental analysis of higher brain functions. Special emphasis on attention, memory, perception and language. Mr. Beatty

118E. Current Topics in Physiological Psychology. Prerequisite: course 115 or consent of instructor. Advanced topics of current interest in physiological psychology will be presented in depth. The emphasis will be in bringing students to a point where they can appreciate and evaluate current research papers on the topics covered. The course may be repeated for credit.

M118F. Ethology: Physiology of Behavior and Learning in Animals. (Same as Psychiatry M190.) Prerequesite: consent of instructor. Basic course for undergraduate students which integrates a systematic overview of common forms of behavioral plasticity and standard training procedures in laboratory animals (in behavioral, neurophysiological and pharmacological studies) with a broad biological, evolutionary perspective. Mr. Soltysik

119. Evolution of Intelligence. Prerequisites: course 15 or 115, an introductory statistics course, junior or senior standing and consent of department. Intelligence is treated as neural information-processing capacity, and its evolution in vertebrates is correlated with the evolution of enlarged brains. Quantitative approaches in evolutionary biology and the neurosciences are emphasized. Mr. Jerison

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

120. Perception. Prerequisite: course 41. Methods and approaches to the study of perception. Experimental results, theoretical interpretations, and demonstrations. Ms. Rader, Mr. Thomas

120H. Perception (Honors). Prerequisite: course 41. An honors course parallel to course 120.

121. Perception Laboratory. Prerequisites: courses 41, 42 (or 100) and Psychology major standing. Prerequisite or concurrent: course 120. Laboratory experience with various topics in perception.
Mr. Carterette

***1122. Language and Communication.** Prerequisite: course 41 or consent of instructor. A survey of language behavior, communication and speech perception, including acquisition, sequential structure, and semantic aspects. Recent developments in linguistics, theory of information transfer, analysis and synthesis of speech. Social communication. Aphasia and speech pathology. Animal communication.
Mr. Carterette

123. Psycholinguistics. A survey of current theory and research in psycholinguistics: the description of language in generative grammars; the acquisition of language by children; experiments on speech recognition, production and comprehension; errors in speech perception and production; speech physiology and pathology.

124A. Current Topics in Perception. Prerequisite: course 120. Advanced consideration of special topics in perception. May be repeated for credit with consent of instructor. Mr. Parducci

124B. Current Topics in Psycholinguistics. Prerequisite: course 123. Advanced consideration of special topics in the psychology of language. May be repeated for credit with consent of instructor.
Mr. MacKay

125. Personality. Prerequisite: course 41. A survey of the major topics in the field of personality, including personality theory, personality assessment, and the physiological, behavioral and cultural role of perception, learning and motivation in personality.
Mr. Abramson, Mr. Mehrabian

125H. Personality (Honors). Prerequisite: course 41. An honors course parallel to course 125.

127. Abnormal Psychology. Study of the dynamics and prevention of abnormal behavior, including neuroses, psychoses, character disorders, psychosomatic reactions and other abnormal personality patterns. Mr. Baker, Mr. Goldstein, Ms. Henker

***1129A. Personality Measurement.** Prerequisite: course 125. The rationale, methods and content of studies dealing with the problems of describing persons in terms of a limited set of dimensions. Detailed consideration of research literature dealing with a few representative personality dimensions.
Mr. Mehrabian

129B. Personality Dynamics. Prerequisite: course 125. Detailed conceptual examination of one or two areas of personality in which the main and interactive effects of personality and situational variables have been investigated. Personality as related to the study of psychological processes, particularly motivation. Includes an examination of current research literature. Mr. Weiner

***1129C. Personality and Cognition.** Prerequisite: course 125. Theoretical and experimental analyses of cognitive processes such as imagery, attention, language and memory and their implication for theories of personality. Mr. Weiner

129D. Special Topics in Personality. Prerequisite: course 125. Study of selected topics in the psychology of personality. Topics will vary with the interests of instructor and class. May be repeated for credit by consent of instructor.

130. Developmental Psychology. An elaboration of the developmental aspects of physical, mental, social, and emotional growth from birth to adolescence.
Ms. Greenfield, Mr. Madsen, Mr. Padilla

132A. Learning Disabilities (1 to 1¼ courses). Prerequisite: upper division standing. Exploration of different orientations to persons with learning problems, emphasizing assessment and intervention approaches and the psychological impact of such approaches. Topics include the interaction of learner and environment, the sociopolitical nature of the classroom, the psychological impact of schooling, grades, and evaluations, process vs. goal focus in learning. The course may be taken for 4 or 5 units. The 5th unit is devoted to practicum experiences involving the Fernald School. All students planning to enroll subsequently in course 132B must take the 5th-unit option. Where possible, it is recommended that the course be taken on a Passed/Not Passed basis. Mr. Adelman

132B. Learning Disabilities Laboratory. Prerequisites: 5 units of course 132A, courses 41, 42 (or 100), Psychology major standing and consent of instructor. Participation in special activities at the Fernald School is made available to University students to further explore by means of a laboratory experience the topics and issues discussed in course 132A. The emphasis is on experiencing and evaluating the psychological and educational impact of research, training and service programs on learners, teachers, etc. Since a limited number of students can be accommodated, clarification of available alternatives and agreements regarding participation will be worked out during the fifth-unit experience in course 132A. A commitment of eight and a half hours per week is expected (1½-hour meeting plus 7 hours of activity). Where possible it is recommended that the course be taken on a Passed/Not Passed basis.
Mr. Adelman, Ms. Taylor

132C. Learning Disabilities Advanced Laboratory. Prerequisites: courses 132A, 132B and consent of instructor. A personalized laboratory participation experience designed to allow the advanced student to explore relevant topics in depth.

***1133B. Exceptional Children.** Prerequisite: course 130. Study of the issues and research problems in the areas of mental retardation, giftedness, learning disorders, emotional disorders and childhood psychosis.

133C. Psychological Development in the Adult Years. Prerequisite: course 130 or consent of instructor. Theory and research on changes in motivation, aptitudes and abilities as related to genetics, age, sex and sociocultural variables.

133E. Current Issues in Developmental Psychology. Prerequisites: course 130 and upper division psychology standing. A critical examination of current issues in developmental psychology. The specific issues of concern will vary depending on the interests of the class and instructor. May be repeated with consent of instructor.

***1134. Psychology and Education.** Prerequisite: course 130. Application of principles of cognitive development, learning and perception to educational problems; topics will include general instructional issues, psychology of reading and mathematics, exceptional children, early childhood education, and education of the disadvantaged. Mr. Jeffrey

135. Social Psychology. Prerequisite: course 41. The interrelationships between the individual and his social environment. Social influences upon motivation, perception and behavior. The development and change of attitudes and opinions. Psychological analysis of small groups, social stratification and mass phenomena. Ms. Peplau, Mr. Raven, Mr. Sears

135H. Social Psychology (Honors). Prerequisite: course 41. An honors course parallel to course 135.

136A. Social Psychology Laboratory. Prerequisites: courses 41, 42 (or 100) and Psychology major standing. Prerequisite or concurrent: course 135. Laboratory experience with such topics as small group behavior, attitude measurement, and interpersonal influence. Mr. Berg

C136B. Survey Methods in Psychology. Prerequisites: courses 41, 42 (or 100), 135 and Psychology major standing. The nature of attitudes and opinions, and their measurement by means of attitude scales and public opinion surveys. Class projects and fieldwork. Concurrently scheduled with course C223.
Mr. Shure

137A. Group Behavior. Prerequisite: course 135. Psychology of interdependence, group membership, leadership, and social influence. Mr. Kelley

137B. Attitude Formation and Change. Prerequisite: course 135. Effects of propaganda, personal influence, socialization and social structure on private attitudes and public opinion. Mr. Gerard

137C. Interpersonal Relations. Prerequisites: course 135, consent of instructor. A study of the psychological facts, principles, problems and theories concerned with interactions and relationships between persons. Focus is upon such phenomena as interpersonal attraction, exchange, aggression, conflict, control, power relations, and the initiation, development and dissolution of relationships. Ms. Peplau

137D. Introduction to Health Psychology. Prerequisite: course 10. The course determines what areas of health, illness, treatment, and delivery of treatment can be elucidated by an understanding of psychological concepts and research, explores the psychological perspective on these problems, and considers how the psychological perspective might be enlarged and extended in the medical area. Ms. Taylor

M137E. Work Behavior of Women and Men. (Same as Women's Studies M137E.) Prerequisites: course 10 or Women's Studies 100 and junior or senior standing. Examination of work behavior of men, and especially women. Covers such topics as antecedents of career choice, job finding, leadership, performance evaluation, discrimination and evaluation bias, job satisfaction and interdependence of work and family roles.

137F. Special Topics in Social Psychology. Prerequisite: course 135. Study of selected topics in social psychology. May be repeated for credit with consent of instructor. Ms. Peplau, Mr. Raven, Mr. Shure

M138. Political Psychology. (Same as Political Science M140.) Prerequisite: course 10. Examination of political behavior, political socialization, personality and politics, racial conflict, and the psychological analysis of public opinion on these issues. Mr. Sears

139. Psychology of Social Issues. Prerequisite: course 10. An analysis of the contribution of current psychological theory and research to the understanding of selected historical, social and political problems. Mr. Fairchild

142. Advanced Statistical Methods in Psychology. Prerequisite: course 41. Chi square, special correlation methods, multiple regression, nonparametric methods, analysis of variance, reliability and validity.
Mr. Nihira

143. Foundations of Psychological Investigation. Prerequisites: courses 41, 42 (or 100) and Psychology major standing. Outline and examination of concepts associated with psychological investigation and the interpretation of results. Readings, discussions and reports, individual and class projects.
Mr. Mount

144. Psychological Tests and Evaluation. Prerequisite: course 41. Further study of the principles of measurement, stressing basic concepts. Application to problems of test construction, administration and interpretation. Mr. Broen

147. Elements of Psychology of Sport. The application of psychological theories, principles and techniques to recreation, games and sport. Includes current theories of the role of the brain in learning and performance of skills and the utilization of Oriental Philosophies and the martial arts in Western sport.
Mr. Barthol

148. Industrial and Organizational Psychology. Introduction to the applications of psychology in industrial and other organizations. Mr. Barthol

***150. Mathematical Models in Psychology.** Prerequisites: Mathematics 3C or 31B, Engineering 10C, 10F, 10S or consent of instructor. Review of theoretical models and the experimental evidence for these models in various areas of psychology. Topics will include: mathematical computer models of learning, perception, cognition and personality. Recommended for Quantitative Psychology majors.
Mr. Holman, Mr. Wickens

***151. Computer Applications in Psychology.** Prerequisites: Engineering 10C, 10F, 10S and consent of instructor. Topics will include hardware and software computer problems in the design, control, and analysis of experiments; programming problems arising in the evaluation of models of psychological processes of the various content areas such as learning, perception, social, personality, and clinical. Recommended for Quantitative Psychology majors. Mr. Carterette

M153. Principles of Biotechnology. (Same as Engineering M107A.) Prerequisite: third-quarter sophomore or higher standing. The principles of biological science are developed in an engineering context. An emphasis is placed on how physiological, psychological, and sociological factors affect the integration of man into environmental, informational and managerial systems by engineering means. Mr. Lyman (F,W)

M155. A Laboratory for Naturalistic Observations: Developing Skills and Techniques. (Same as Anthropology M136Q and Psychiatry M112.) 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. Group and individual projects will be included. Some of the uses of observations and their implications for research in the social sciences will also be discussed.
Mr. Gallimore, Mr. Levine, Mr. Turner

162. The Psychological Approaches of Henry Murray; The Study of Biography. Prerequisite: consent of instructor. The study of lives and the personality theory of Henry Murray, touching upon autobiographical writings and biographical materials; and personality as a dynamic system of growth and change. Creative, proactive, normal and supernormal aspects of personality; the roles of values in the study of personality, society and culture.
Mr. Shneidman

M163. Death and Suicide: Psychological and Sociological Aspects. (Same as Sociology M158.) Junior standing required. This course is offered on both a Passed/Not Passed and letter grade basis. However, the instructor prefers that students select the Passed/Not Passed option. The definition and taxonomy of death; the new permissiveness and taboos relating to death; the romanticization of death; the role of the individual in his own demise; the modes of death; development of ideas of death through the life span; ways in which ideas of death influence the conduct of lives; the impact of dying on the social structure surrounding the individual; preventive, interventive and postventive practices in relation to death and suicide; partial death; megadeath; lethality; the psychological autopsy; the death of institutions and cultures. Mr. Shneidman

M165. The Psychology of Sex Differences. (Same as Women's Studies M165.) This course considers psychological literature relevant to understanding contemporary sex differences. Some topics included are sex-role development and role conflict, physiological and personality differences between men and women, sex differences in intellectual abilities and achievement and the impact of gender on social interaction. Ms. Peplau

***168. Environmental Psychology.** Prerequisites: courses 41, 125. A research-oriented course which surveys theoretical and methodological issues which comprise the area of environmental psychology. Discussion of basic dimensions of emotional response to physical and social environments, measurement of information of rate of situations, and personality variables that are relevant to environmental theory. Residential, therapeutic, work and recreational environments will be considered within a unified framework.
Mr. Mehrabian

170A. Behavior Modification. Prerequisite: upper division standing. Applied behavior theory; a study of the application of principles derived from learning theory, especially modelling and reinforcement, to behavior problems of retarded and autistic children, adult psychotic disorders, reading disorders, etc. Lectures, discussions and demonstrations.
Mr. Lovaas

170B. Fieldwork in Behavior Modification. Prerequisites: courses 41, 42 (or 100), 170A, Psychology major standing and consent of instructor. Advanced fieldwork in Applied Behavior Theory, especially to problems of retarded and autistic children, adult psychotic disorders, etc. Two hours discussion and eight hours fieldwork per week. May be repeated once for credit. Mr. Lovaas

M172. The Afro-American Woman in the U.S. (Same as Afro-American Studies M172 and Women's Studies M172.) Prerequisite: upper division standing. This course will focus on the impact of the social, psychological, political and economic forces which impact upon the interpersonal relationships of Afro-American women, as members of a large society and as members of their biological and ethnic group.
Ms. Mays

173. The Interview: Scientific and Professional Issues. For students who will conduct interviews or do consultation in their professional or scientific careers. Surveys literature and teaches basic performance skills pertinent to the process of special conversations, i.e., therapy sessions, standardized interviews, and consultation (legal, medical, educational, business, and pastoral). Mr. Goodman

174. Interpersonal Process Analysis. Prerequisites: courses 41, 42 (or 100), 127, Psychology major standing. An introduction to the conceptual tools for analyzing interpersonal structures and functions in goal-oriented human interaction such as psychotherapy, persuasion, courtship, etc. Class sessions will integrate small group exercises with lecture and discussion. Additional laboratory work to be arranged.
Mr. Goodman

***175. Community Psychology.** Prerequisites: junior or senior Psychology major standing and consent of instructor. The application of psychological principles to the understanding and solution of community problems. Topics will include community development, community mental health problems, drugs, racism, and rehabilitation of prisoners.
Mr. Myers

176. Experimental Community Psychology. Prerequisites: courses 41, 42 (or 100), 127, Psychology major standing and consent of instructor. Examination and experimental application of concepts drawn from interpersonal and community psychology for understanding the behavior of individuals in structured social systems (communities, schools, mental hospitals, prisons, etc). Mr. Myers

177. Counseling Relationships. Prerequisites: junior or senior Psychology major standing or consent of instructor with the following prerequisites: courses 10, 41, 127 and junior or senior standing. The course examines conceptual and empirical foundations of psychological counseling and compares alternative models of counseling processes. Emphasis is on counseling approaches in community mental health areas such as drug abuse, suicide prevention, and crisis intervention. Ms. Henker and the Staff

178. Human Motivation. Prerequisite: upper division standing required. Examination of current theories of human motivation, the experimental findings supporting the theories, and their applied value. Motivation in the classroom will be emphasized, particularly the effects of success and failure on performance. Other topics include stress, conflict, frustration, and perceptions of control. Mr. Weiner

179. Ethnic Minority Peoples: Their Health and Mental Health Problems. Prerequisite: course 10 or junior/senior standing. A course for undergraduates interested in or considering a career in a health or mental health profession (medicine, clinical psychology, social work, nursing, public health, etc) and for those who would deliver such health services to ethnic minority peoples. Mr. Castro

M180A. Contemporary Problems in Mental Retardation. (Same as Psychiatry M180A.) Prerequisites: courses 10, 41 and 127 or 130 and enrollment in Immersion Program. Presentation of the concepts, issues and research techniques in the area of mental retardation. Biological, psychological and community questions concerning the causes and treatment of developmental disabilities as well as systems for the care and training of retarded individuals will be explored. Lectures, directed reading and discussion. To to taken concurrently with Research in Contemporary Problems in Mental Retardation (M181A-M181B).
Mr. Fluharty and the Staff

M180B. Contemporary Issues in Mental Retardation. (Same as Psychiatry M180B.) Prerequisites: course M180A and enrollment in Immersion Program. Psycho-educational issues in mental retardation, relating literature to ongoing field experiences through lectures, discussions, media and six student papers. Mr. Baker

M181A-M181B. Research in Contemporary Problems in Mental Retardation. (Same as Psychiatry M181A-M181B.) Prerequisites: concurrent enrollment in courses M180A-M180B. Research experience to be taken concurrently with Contemporary Problems in Mental Retardation (M180A). In Progress grading. Mr. Fluharty, Mr. Kihara

M182A. Advanced Statistical Methods in Mental Retardation. (Same as Psychiatry M182A.) Prerequisites: course 41 and enrollment in Immersion Program. Introduction of statistical method and design in experimentation principles of statistical inference and appropriate testing methods. An introduction to the use of computers and various software packages is presented. Mr. Eyman, Mr. Silverstein

M182B. Advanced Design and Statistics. (Same as Psychiatry M182B.) Prerequisite: course M182A. Continuation of course M182A.
Mr. Eyman, Mr. Silverstein

M182C. Perception. (Same as Psychiatry M182C.) Prerequisite: enrollment in Immersion Program. Human information processing, both physical and psychological with special emphasis on pathologies in the mentally retarded. Mr. Galbraith

M182D. Current Issues in Mental Retardation. (Same as Psychiatry M182D.) Prerequisite: enrollment in Immersion Program. Advanced topics in mental retardation. May be repeated for credit with consent of instructor.

190A-190B-190C. Honors Course. Prerequisite: acceptance by departmental Honors Committee. Opportunity for the development and analysis of creative ideas through conceptual or experimental research and their implementation by experimental research. Information and applications may be obtained from the Psychology Undergraduate Office. (For further information, see "Honors Courses in Psychology.")
Mr. Mount

192. Practicum in the Teaching of Psychology. (Formerly numbered 300.) Prerequisites: upper division Psychology major and consent of instructor. Training and supervised practicum for advanced undergraduates in the teaching of psychology. Students will serve as junior teaching assistants, assist in the preparation of materials and the development of innovative programs. Only 12 units (total) of courses 192, 193 and 194 may be applied to the undergraduate degree. This course may not be applied toward requirements for any of the Psychology majors. P/NP grading only.

193. Fieldwork in Psychology. (Formerly numbered 350.) Prerequisites: sophomore Pre-Psychology or Psychology major standing and consent of instructor. Fieldwork in applications of psychology. Students must spend two hours in a weekly seminar and six hours per week working in approved community settings. The Psychology Undergraduate Office, 1531 Franz Hall, should be consulted for contracts and further information. Only 12 units (total) of courses 192, 193 and 194 may be applied to the undergraduate degree. This course may not be applied toward requirements for any of the Psychology majors. P/NP grading only. Mr. Friedman

194. 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. The Psychology Undergraduate Office, 1531 Franz Hall, should be consulted for contracts and further information. Only 12 units (total) of courses 192, 193 and 194 may be applied to the undergraduate degree. This course may not be applied toward requirements for any of the Psychology majors. P/NP grading only. Mr. Friedman

195. Current Issues in Psychology. Prerequisite: junior or senior Psychology major standing. Some sections may require consent of instructor. A study of selected current topics of psychological interest. See *Schedule of Classes* for topics and instructors to be offered each quarter. This course may be repeated for credit and may apply as elective units on the Psychology major. This course may not apply as an elective on the Psychobiology major.

199. Directed Individual Research and Study. Prerequisites: senior Psychology major standing or junior Psychology major standing with at least a 3.0 grade-point average in the major, consent of instructor and Vice-Chair for Undergraduate Affairs. To be arranged with individual faculty members. Consent is based on a written proposal outlining the proposed course of study. Students should consult the Psychology Undergraduate Office, 1531 Franz Hall, for further information and approval forms. Note the following regulations concerning 199 courses: a student may take only one 4-unit 199 course in psychology per quarter. Only 4 units of 199 may be applied toward the Psychology major elective course requirement. Only one Psychology 199 course may be taken for a letter grade; additional Psychology 199 courses may be taken in the department.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Public Health

(Office: 16-071 Public Health)

Abdelmonen A. Afifi, Ph.D., *Professor of Biostatistics and Biomathematics.*
Roslyn B. Alfin-Slater, Ph.D., *Professor of Nutrition and Biological Chemistry.*
Lawrence R. Ash, Ph.D., *Professor of Public Health (Chair).*
Judith Blake, Ph.D., *Fred H. Bixby Professor of Population Policy and Sociology.*
Lester Breslow, M.D., M.P.H., *Professor of Public Health.*
Potter C. Chang, Ph.D., *Professor of Biostatistics.*
Virginia A. Clark, Ph.D., *Professor of Biostatistics and Biomathematics.*
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).*
Olive Jean Dunn, Ph.D., *Professor of Biostatistics and Biomathematics.*
Jonathan E. Fielding, M.D., *Professor of Pediatrics and Public Health.*
Derrick B. Jelliffe, M.D., D.T.M.&H., D.C.H., F.R.C.P., *Professor of Public Health and Pediatrics.*
Snehendu B. Kar, Dr.P.H., *Professor of Public Health.*
Alfred H. Katz, D.S.W., M.A., *Professor of Public Health and Social Welfare.*
Jess 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 and Biomathematics.*
Alfred K. Neumann, M.D., M.A., M.P.H., F.A.B.P.M., *Professor of Public Health.*
Dennis D. Pointer, 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 Shonick, Ph.D., *Professor of Public Health.*
Marian E. Swendseid, Ph.D., *Professor of Nutrition and Biological Chemistry.*
Paul R. 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., *Emeritus Professor of Microbiology and Immunology, Pediatrics and Public Health.*
John M. Chapman, M.D., M.P.H., *Emeritus Professor of Epidemiology.*
Gladys A. Emerson, Ph.D., *Emeritus Professor of Nutrition.*
Carl E. Hopkins, Ph.D., M.P.H., *Emeritus Professor of Public Health.*
Raymond J. Jessen, Ph.D., *Emeritus Professor of Management and Public Health.*
Edward B. Johns, Ed.D., *Emeritus Professor of Health Education.*
Ralph W. McKee, Ph.D., *Emeritus Professor of Biological Chemistry and Public Health.*
Frank F. Tallman, M.D., *Emeritus Professor of Psychiatry and Public Health.*
Emil Berkanovic, 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, Ph.D., M.P.H., *Associate Professor of Public Health.*
Michael Criqui, M.D., Ph.D., *Associate Professor of Public Health and Medicine.*
Climis A. Davos, Ph.D., *Associate Professor of Environmental Health Sciences.*
Ralph R. Frerichs, Dr.P.H., M.P.H., *Associate Professor of Epidemiology.*
John Froines, 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.*
Isabelle F. Hunt, Dr.P.H., *Associate 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 Scrimshaw, Ph.D., *Associate Professor of Public Health and Anthropology.*
Gary H. Spivey, M.D., M.P.H., *Associate Professor of Epidemiology.*
Jane Valentine, Ph.D., *Associate Professor of Environmental Health Sciences.*
Barbara R. Visscher, M.D., Dr.P.H., *Associate Professor of Epidemiology.*
E. Richard Brown, Ph.D., *Assistant Professor of Public Health.*
James M. Cameron, Ph.D., *Assistant Professor of Public Health.*
M. Myra Chern, Ph.D., *Assistant Professor of Biostatistics.*
Joseph S. Coyne, Ph.D., *Assistant Professor of Public Health.*
William G. Cumberland, Ph.D., *Assistant Professor of Biostatistics.*
Curtis D. Eckert, Ph.D., *Assistant Professor of Nutrition.*
Sander Greenland, Dr.P.H., *Assistant Professor of Epidemiology.*
Huey Mays, Jr., M.D., M.B.A., *Assistant Professor of Public Health in Residence.*
Dianne Moore, Ph.D., M.S.N., *Acting Assistant Professor of Public Health.*
Martin B. Ross, Dr.P.H., *Assistant Professor of Public Health.*
Judith M. Siegel, Ph.D., *Assistant Professor of Public Health.*
Michael Vojtecky, Ph.D., M.P.H., *Assistant Professor of Public Health.*
William N. Washington, D.P.A., M.P.H., *Assistant Professor of Health Education.*

•

Lilia Aftergood, Ph.D., M.S., *Associate Researcher in Public Health.*
Ellen Alkon, M.D., *Adjunct Professor of Public Health.*
Nancy H. Allen, M.P.H., *Adjunct Lecturer in Public Health.*
Linda Beckman, Ph.D., M.A., *Adjunct Associate Professor of Public Health and Psychiatry.*
Arnold R. Beisser, M.D., *Visiting Lecturer in Public Health and Associate Clinical Professor of Psychiatry.*
Stewart N. Blumenfeld, Dr.P.H., *Researcher and Adjunct Lecturer in Public Health.*
Michael L. Bobrow, B.Arch., *Visiting Lecturer in Architecture and Urban Design and Public Health.*
Robert H. Brook, M.D., Sc.D., *Professor of Medicine and Public Health.*
Harold V. Brown, Dr.P.H., M.P.H., *Adjunct Lecturer in Public Health.*
Marianne P. Brown, M.P.H., *Adjunct Lecturer in Public Health.*
Edith M. Carlisle, Ph.D., *Research Biochemist and Adjunct Professor of Public Health.*
Wen-Ping Chang, M.D., M.P.H., D.M.Sc., *Visiting Lecturer in Public Health.*
Leonard M. Chanaky, Ph.D., *Adjunct Assistant Professor of Public Health.*
Arthur Chung, M.D., *Adjunct Professor of Public Health.*
Roger Clemens, Dr.P.H., *Visiting Lecturer in Public Health.*
Davida Coady, M.D., M.P.H., *Adjunct Associate Professor of Public Health.*
Carl F. Coffelt, M.D., M.P.H., *Visiting Lecturer in Public Health.*
Anne H. Coulson, *Adjunct Lecturer and Researcher in Public Health.*
Joseph W. Cullen, Ph.D., *Adjunct Professor of Public Health.*
Sigrid Deeds, Dr.P.H., M.P.H., *Adjunct Associate Professor of Public Health.*
G. A. Dhopeshwarkar, Ph.D., *Research Biochemist in Nuclear Medicine and Radiation Biology and Adjunct Professor of Public Health.*
Wilfrid J. Dixon, Ph.D., *Professor of Biomathematics and Public Health.*
Frederick Derey, Ph.D., *Adjunct Lecturer in Public Health and Assistant Researcher in Biomathematics.*
Robert M. Elashoff, Ph.D., *Professor of Biomathematics and Biostatistics.*
Patricia Engle, Ph.D., *Visiting Lecturer in Public Health.*
James E. Enstrom, Ph.D., *Associate Researcher in Public Health.*
Daniel Ershoff, Dr.P.H., *Adjunct Assistant Professor of Public Health.*
Charles M. Ewell, Jr., Ph.D., *Visiting Lecturer in Public Health.*
Edward J. Faeder, Ph.D., *Adjunct Associate Professor of Public Health.*
Arlene Fink, Ph.D., *Associate Research Social Scientist in Medicine and Adjunct Lecturer in Public Health.*
Paul M. Fleiss, M.D., M.P.H., *Visiting Lecturer in Public Health.*
Jay W. Friedman, D.D.S., M.P.H., *Adjunct Lecturer in Public Health.*

Emile Gauvreau, M.S., *Visiting Lecturer in Public Health.*
Bruce S. Gillis, M.D., M.P.H., *Adjunct Assistant Professor of Public Health.*
Robert B. Girard, L.L.B., *Visiting Lecturer in Public Health.*
Raymond D. Goodman, M.D., M.P.H., *Assistant Clinical Professor of Medicine and Adjunct Associate Professor of Public Health.*
Stephen Greenberg, M.D., M.P.H., *Adjunct Assistant Professor of Public Health and Pediatrics.*
James Greenwood, Ph.D., M.P.H., M.S., *Adjunct Assistant Professor of Public Health.*
Penari Guptavanij, M.D., Ph.D., *Adjunct Lecturer in Public Health.*
Donald Guthrie, Ph.D., *Adjunct Professor of Psychiatry and Biobehavioral Sciences and Biostatistics.*
Joseph Hafey, M.P.H., B.A., *Visiting Lecturer in Public Health.*
Eung-Soo Han, M.D., M.P.H., *Visiting Lecturer in Public Health.*
Brian E. Henderson, M.D., *Adjunct Professor of Epidemiology.*
Arthur C. Hollister, Jr., M.D., M.P.H., *Visiting Lecturer in Public Health.*
Richard L. Hough, Ph.D., *Adjunct Associate Professor of Public Health.*
Clifford Howell, Dr.P.H., M.P.H., M.A., *Adjunct Assistant Professor of Public Health.*
Patrice Jelliffe, R.N., M.P.H., *Researcher and Adjunct Lecturer in Public Health.*
Robert I. Jennrich, Ph.D., *Professor of Mathematics, Biomathematics and Biostatistics.*
Olive G. Johnson, B.A., *Visiting Lecturer in Public Health.*
Michael R. Jones, Ph.D., *Assistant Researcher in Medicine and Adjunct Assistant Professor of Public Health.*
Wilbert Jordan, M.D., M.P.H., *Adjunct Assistant Professor of Public Health.*
Martine Jozan, M.D., Dr.P.H., *Assistant Researcher in Public Health.*
Stephen W. Kahane, D.Env., *Visiting Lecturer in Environmental Health Sciences.*
Robert L. Kane, M.D., *Professor of Medicine and Public Health in Residence.*
Joel D. Kopple, M.D., *Professor of Medicine and Public Health in Residence.*
Jacqueline B. Kosecoff, Ph.D., *Associate Research Social Scientist in Medicine and Adjunct Lecturer in Public Health.*
Joel W. Kovner, Dr.P.H., *Visiting Lecturer in Public Health.*
John Kurata, *Adjunct Assistant Professor of Medicine and Epidemiology.*
Kenneth E. Lee, M.S., *Lecturer in Public Health.*
Martin L. Lee, Ph.D., *Visiting Lecturer in Public Health.*
Charles E. Lewis, M.D., Sc.D., *Professor of Medicine and Public Health.*
Harry M. Lieberman, M.D., M.P.H., *Visiting Lecturer in Public Health.*
Ronald L. Linder, Ed.D., *Adjunct Lecturer in Public Health.*
Lawrence S. Linn, Ph.D., *Adjunct Lecturer in Public Health.*
J. Robert Liset, L.L.B., *Visiting Lecturer in Public Health.*
Irvin M. Lourie, M.D., M.P.H., M.S., *Visiting Lecturer in Public Health.*
Thomas Mack, M.D., M.P.H., *Adjunct Associate Professor of Epidemiology.*
Louis E. Mahoney, Jr., M.D., M.P.H., *Adjunct Associate Professor of Public Health.*
Florence C. McGucken, M.S., *Visiting Lecturer in Nutrition Retired.*
Eric J. McLaughlin, M.B.A., *Assistant Professor of Public Health in Residence.*
James F. Mead, Ph.D., *Professor of Biological Chemistry and Public Health.*
Jean L. Mickey, Ph.D., *Lecturer in Biostatistics.*
Norma J. Murphy, M.S., *Assistant Field Program Supervisor and Adjunct Lecturer in Nutrition in Public Health.*
Leonard Mushin, M.P.H., B.S., *Visiting Lecturer in Public Health.*
Joseph P. Newhouse, Ph.D., *Visiting Lecturer in Public Health.*
Edward J. O'Neill, M.D., M.P.H., *Adjunct Assistant Professor of Public Health.*
Mario Panaqua, B.A., *Adjunct Lecturer in Public Health.*
Susan M. Preston-Martin, Ph.D., M.P.H., *Adjunct Assistant Professor of Public Health.*
Stanton J. Price, L.L.B., *Visiting Lecturer in Public Health.*
Walter Price, Dr.P.H., *Assistant Field Program Supervisor in Public Health.*
George W. Prichard, J.D., M.D., M.P.H., *Visiting Lecturer in Public Health.*
Jose Quiroga, M.D., *Adjunct Assistant Professor of Medicine and Public Health.*
Ruth F. Richards, M.P.H., M.A., B.S., *Field Program Supervisor and Adjunct Lecturer in Public Health.*
Ruth J. Roemer, J.D., *Adjunct Professor and Researcher in Public Health.*
Stanley N. Rokaw, M.D., *Researcher in Public Health and Clinical Professor of Medicine.*
Mossain Ronaghy, M.D., M.P.H., *Visiting Lecturer in Public Health.*
Lawrence S. Rubenstein, Ph.D., *Adjunct Assistant Professor of Public Health.*
Frederick T. Sai, M.B.B.S., D.T.M.&H., M.R.C.P., M.P.H., *Visiting Lecturer in Public Health.*
Rafatollah Salimpour, M.D., *Visiting Lecturer in Public Health.*
Simon A. Sayre, M.D., M.S.P.H., *Assistant Clinical Professor of Obstetrics and Gynecology and Adjunct Lecturer in Public Health.*
Max H. Schoen, D.D.S., Dr.P.H., *Professor of Dentistry and Public Health.*
Helen Shonick, M.S.W., B.A., *Visiting Lecturer in Public Health.*
Bernard M. Siegel, M.D., *Assistant Clinical Professor of Medicine and Adjunct Assistant Professor of Public Health.*
James Siemon, Ph.D., M.P.H., *Visiting Lecturer in Public Health.*
Grant G. Slater, Ph.D., *Research Biological Chemist in Public Health and Psychiatry.*
Howard M. Staniloff, M.D., M.P.H., *Adjunct Assistant Professor of Medicine and Epidemiology.*
Forest Tennant, M.D., Dr.P.H., M.P.H., *Adjunct Associate Professor of Epidemiology.*
Stephen L. Volla, M.P.H., *Visiting Lecturer in Public Health.*
Jeffrey Wales, Ph.D., M.A., *Adjunct Assistant Professor of Public Health.*
John E. Ware, Ph.D., *Adjunct Lecturer in Public Health and Visiting Researcher in Medicine.*
Fred W. Wasserman, Dr.P.H., *Adjunct Assistant Professor of Public Health.*
Lawrence G. Wayne, Ph.D., *Visiting Lecturer in Public Health.*
Paul F. Wehrle, M.D., *Visiting Lecturer in Epidemiology.*
Marjorie White, M.S., B.S., *Assistant Field Program Supervisor in Public Health.*
Donald Young, Ph.D., B.A., *Visiting Lecturer in Public Health.*
Ida Yu, Ph.D., *Assistant Researcher in Public Health.*
Adrienne P. Zeigler, M.P.H., *Visiting Lecturer in Public Health.*
Jack Zusman, M.D., M.P.H., *Adjunct Professor of Public Health.*

If you are interested in the programs offered by the School of Public Health, you are urged to get a copy of the *Announcement of the UCLA School of Public Health* by writing to the Office of Student Affairs, School of Public Health, University of California, Los Angeles, CA 90024. Please refer to the "School of Public Health" section in the chapter on "Undergraduate Schools and Colleges" earlier in this catalog for further information.

Lower Division Courses

18. Principles of Healthful Living. Analysis of health care issues as related to the health care consumer and the health care delivery system. Includes identification of health needs, and clarification of personal responsibilities for health. Ms. Richards

19. Peer Health Counselor Training. Prerequisite: acceptance into Peer Health Counselor Program. Analysis of student health care issues as related to the campus health care delivery system and to the health care consumer. Includes identification of health needs, determination of appropriate resources, delivery of preventive and self-care education and delineation of peer health counselor's role.

Upper Division Courses

100A. Introduction to Biostatistics. Lecture, three hours; laboratory/quiz, two hours. Prerequisites: upper division standing and one course in biological or physical science. Students who have completed courses in statistics may enroll only with consent of instructor. Introduction to methods and concepts of statistical analysis. Sampling situations with special attention to those occurring in the biological sciences. Topics include: distributions, tests of hypotheses, estimation, types of error, significance and confidence levels, sample size. Students may not receive credit for this course and course 101A.

100B. Introduction to Biostatistics. Lecture, three hours; laboratory/quiz, two hours. Prerequisites: course 100A or equivalent and consent of instructor. Introduction to analysis of variance, linear regression, and correlation analysis. Students may not receive credit for this course and course 101B.

100C. Introduction to Biostatistics. Lecture, three hours; laboratory/quiz, two hours. Prerequisites: course 100B or equivalent and consent of instructor. Design of experiments, analysis of variance, multiple and polynomial regression analysis with biomedical applications.

100D. Introduction to Biostatistics. Lecture, three hours; laboratory, two hours. Prerequisites: course 100B or equivalent and consent of instructor. Introduction to concepts of probability used in biomedical sciences. Enumeration statistics and nonparametric methods. Comparison of nonparametric with analogous parametric tests. Discussion of power and sample size.

101A. Basic Biostatistics. Lecture, three hours; quiz, one hour. Prerequisite: Mathematics 31B or equivalent. Basic concepts of statistical analysis applied to biological sciences. Topics include random variables, sampling distributions, parameter estimator, statistical inference. Students may not receive credit for this course and course 100A.

101B. Basic Biostatistics. Lecture, three hours; quiz, one hour. Prerequisite: course 101A. Topics include elementary analysis of variance, simple linear regression and correlation, nonparametric methods, elements of sequential analysis. Students may not receive credit for this course and course 100B.

103. Statistics for Public Health. Lecture, three hours; laboratory, two hours. Prerequisites: upper division standing and one course in biological or physical science. Introduction to sources of demographic and health information, methods of calculating and interpreting vital and health statistics, and elementary methods for statistical inference. Open to students in MPH and nursing programs; not satisfactory as prerequisite for course 100B.

110. Introduction to Medical Science. Prerequisite: one course in chemistry or other natural sciences. One-year sequence in biology, physiology or other biological science recommended. An introduction to normal human physiology and disease processes. Mr. Salenger

111. Human Disease and Public Health. Lecture, three hours; discussion, three hours. Prerequisites: upper division standing and one course in biological or physical science. Study of the mechanisms underlying human diseases, disorders and defects including genetic, mental, social, environmental, infectious, nutritional and degenerative and their public health implications. Mr. Schacher

112. Principles of Epidemiology. Lecture, two hours; laboratory, four hours. Prerequisite: course 110 or 111. Introduction to epidemiology including factors governing health and disease in populations. Students may not receive credit for this course and course 114.

113. Infectious Diseases and Public Health. Lecture, three hours. Prerequisites: upper division standing and one course in biological or physical science. Infectious diseases of public health importance emphasizing modes of transmission and control of etiologic agents. Mr. Schacher

114. Epidemiology I. Lecture, two hours; laboratory, four hours. Prerequisites: courses 100A (may be taken concurrently), 110 or 111 and consent of instructor. Introduction to epidemiology including factors governing health and disease in populations. Students may not receive credit for this course and course 112.

M115. Disease Problems of Socioeconomic and Political Impact in Latin America. (Formerly numbered M155.) (Same as Latin American Studies M155.) Lecture, six hours; discussion, six hours. Prerequisite: one upper division course in Latin American Studies Program. Social, economic and political impact of important disease problems in Latin American countries. Mr. Work

116. Epidemiology of Nosocomial Infections. Prerequisites: course 112 or Microbiology 110 and consent of instructor. An introduction to the epidemiology of hospital acquired bacterial, fungal, and viral infections.

125. Applied Social Science Methodology. Prerequisites: course 100A or equivalent and consent of instructor. Applied procedures for conducting research in family health. A research design comprises one of the course requirements. Ms. Bourque

130. Health Services Organization. Prerequisite: four units of social science. Structure and function of American health care system; issues and forces shaping its future.

131. Structure and Function of Health Care Facilities. Lecture, two hours; discussion, two hours. Prerequisites: course 130 (may be taken concurrently) and consent of instructor. Introduction to structure, organization and function of health care facilities. Mr. Ross

133. Interpersonal Dynamics in Health Services Management (½ course). Lecture, two hours. Prerequisites: one undergraduate course in sociology or psychology and consent of instructor. An introduction to the application of behavioral science theory to understanding the interpersonal dynamics of health care facilities and their management. Mr. Pointer

134. Introduction to Comprehensive Health Planning. Lecture, four hours; field work, four hours. Prerequisite: one upper division course in microeconomics, statistics, calculus or political science. Concepts underlying health planning, state of the art and some relevant literature.

M135. Organization of Medical Practice (½ course). (Formerly numbered M158.) (Same as Medicine M158.) Lecture, two hours. Prerequisites: course 130 and graduate standing in public health, medicine or nursing. Education and certification of medical practitioners. Organization of medical practice: solo, group, HMO. Doctor-patient relationships, medical ethics, economics, professional liability, health care evaluations. Mr. Goodman

136A. Introduction to Health Services Research. Prerequisites: prior or concurrent enrollment in courses 100A and 110 or equivalent and consent of instructor. Review of the field of health services research. Uses of quantitative methods and the applications of conceptual-theoretical constructs (as well as methodologies) from social and behavioral sciences and epidemiology to studies of the workings of health services. Mr. Lewis

136B. Practices of Evaluation in Health Services: Theory and Methodology. Prerequisites: course 136A or equivalent and consent of instructor. Introduction to health services evaluation. Examine and perform specific evaluation procedures. Conduct health services investigations and evaluations, and communicate results and methodologies. Ms. Fink, Ms. Kosecoff

136C. Social Experimentation as a Research Tool for Health Care Policy. Prerequisites: courses 136A, 136B or equivalent and consent of instructor. Economic and psychometric issues underlying social experimentation in health care. Topics include: relation of demand to insurance; role of regulation; relation of health insurance to health status; reliability of health status; approach to measurement validation and scale construction. Mr. Greenfield, Mr. Newhouse, Mr. Ware

137. Managing Human Resources in Health Facilities and Programs. Prerequisites: one course in social science and consent of instructor. Didactic and experimental study of management of human resources in health-related organizations and programs. Mr. Pointer, Mr. Ross

138. Politics of Health Care. Prerequisites: one course in social science and consent of instructor. Concepts and procedures for political analysis; national, state and local politics in health care; examination of selected case studies. Mr. Cameron

139. Quantitative Methods for Decision-Making in Health Services. Prerequisites: courses 100A, 110, 130 and consent of instructor. Decision theory and use of statistics in decision-making. Decision theory includes: frameworks for decision-making and control, decision under uncertainty, utility theory, Bayes' theorem, and value of information. Statistical topics include: communicating with statistics, measures of association, regression, analysis of variance, and forecasting. Ms. Cretin

140A-140B. Health Record Science. Lecture, two hours; laboratory, two hours. Prerequisites: Biology 5 or equivalent and consent of instructor. Course 140A is prerequisite to 140B. Principles and theories of systems and techniques used for organization, analysis, and maintenance of records and reports are studied and evaluated according to their use in varied situations. Ms. Johnson

141. Financial and Managerial Accounting for Health Services Organizations. Prerequisites: course 130 or equivalent and consent of instructor. An introduction to financial and managerial accounting and its application to the health services industry. Mr. Coyne

143. Integrating Medical and Fiscal Records in Health Institutions. Prerequisites: course 140A, Management 403 or equivalent and consent of instructor. This course will explore the patient charge system from admission through collection. The interfacing of patient medical records and patient fiscal records will be presented via a student field project. Mr. McLaughlin

144. Decisions in Automating Data Systems in Ambulatory Patient Care Facilities. Lecture, two hours; discussion, two hours. Prerequisites: courses 130, 140A. Definition of the techniques used to propose, design, and evaluate the automation of data systems for patient care and operations of ambulatory care facilities. Practical experience through analysis of a case problem. Mr. Chansky

150. Environmental Health. Lecture, three hours; discussion, one hour. Prerequisites: Chemistry 11A, Biology 5, Mathematics 3A, Physics 3A or 6A. Broad coverage of environmental health, including airborne and waterborne pollutants; pollutants from urban industrial and agricultural wastes; pollution from pesticide chemicals, mining, and energy production and consumption; chemical food additives; and occupational exposure to chemical and physical hazards. Mr. Mustafa

152. Biological Effects of Air Pollution. Lecture, three hours; discussion, one hour. Prerequisites: Biology 5, Chemistry 11A or equivalent and consent of instructor. Survey of biological effects and assessment methods of air contaminants present in urban, industrial and occupational environments. Mr. Mustafa

153. Public Health and Environmental Microbiology. Lecture, three hours; laboratory, six hours. Prerequisites: Chemistry 25, Biology 7 or equivalent and consent of instructor. Basic principles and laboratory procedures employed in the provision of sanitary elements to the community, including food and milk, water supply and waste disposal, soil and environmental effluents. Mr. Mah

154. Environmental Management. Lecture, four hours; discussion, one hour. Prerequisites: Economics 100, Political Science 142 or 143 or equivalent and consent of instructor. Introduction to foundations and principles of environmental management, decision-making, and evaluation of environmental policies and programs. Mr. Davos

155. Introduction to Environmental Health (½ course). Lecture, two hours. Prerequisites: one college-level course in chemistry or biology or equivalent courses and consent of instructor. Introduction to environmental health, including coverage of sanitary principles and chronic and acute health effects of environmental contaminants. This course is not open to students specializing in environmental health. Mr. Mah and the Staff

160. Principles of Food and Nutrition (½ course). Lecture, two hours. Prerequisites: one course in biology, chemistry or physiology and consent of instructor. Principles of nutrition and nutritional requirements for normal growth and development. Nutrition majors will not receive credit for this course toward their major. Ms. Alfin-Slater

161. Nutrition and Health (½ course). (Formerly numbered 193.) Lecture, two hours. Prerequisites: course 110 or 160 or equivalent and consent of instructor. Basic and clinical nutrition theory and practice for students in health science curricula. Nutrition majors will not receive credit for this course toward their major. Ms. Alfin-Slater, Mr. Jelliffe

162. Nutrition. Lecture, three hours. Prerequisites: organic chemistry, Biology 7 or equivalent. Metabolic aspects of carbohydrates, fats, proteins, vitamins and minerals. Digestion and absorption of nutrients, energy and protein requirements, mineral and vitamin metabolism. Ms. Hunt

163. Biologic Processes. Lecture, three hours. Prerequisites: one year of organic chemistry, Biology 7. Metabolism of carbohydrates, proteins and other nitrogen compounds, and lipids; role of hormones and enzymes in metabolism; physiological processes. Ms. Alfin-Slater

165. Clinical Nutrition Laboratory (½ course). Discussion, one hour; laboratory, four hours. Prerequisites: one course in quantitative analysis or equivalent, one year of organic chemistry, Biology 7 and consent of instructor. Analytical procedures for determining the various constituents of blood and urine. Mr. Eckhert

166A. Therapeutic Nutrition (½ course). Lecture, two hours. Prerequisites: courses 162, 163 or equivalent and consent of instructor. Recent findings in the field of diet and disease and modifications made in normal diet for pathological conditions. Ms. Carlisle

166B. Therapeutic Nutrition (½ course). Lecture, two hours. Prerequisites: course 166A and consent of instructor. Recent findings in the field of diet and disease and modifications made in normal diet for pathological conditions. Ms. Carlisle

167. Biologic Processes: Physiology and Nutrition. Lecture, three hours. Prerequisites: course 163 and consent of instructor. Metabolism of lipids, carbohydrates and proteins; role of hormones and enzymes in metabolism; physiology processes occurring in various organs. Ms. Alfin-Slater

170. Family Health and Biosocial Development. Lecture, two hours; discussion, two hours. Prerequisites: Psychology 130 or Physiology 100 or equivalent and consent of instructor. Biosocial factors related to normal human physical, intellectual and emotional growth and development from family and public health perspective. Mr. Katz

172. Introduction to Reproductive Health. Lecture, two hours; discussion, two hours. Prerequisites: course 110 or equivalent and consent of instructor. Review of reproductive physiology, normal and abnormal pregnancy, family planning, male-specific and female-specific health problems including health care and psychosocial considerations. Mr. Cusher

173. Population, Ecology and Health. Prerequisite: course 110. Introduction to major national and international aspects of current population issues. Particular attention paid to economic development, ecology, and policy conflicts as related to population growth and decline and family planning and health programs. Ms. Scrimshaw

174E. Health, Disease and Health Services in Latin America. Prerequisite: one upper division course in Latin American studies or course 110. Introduction to health, disease and health services in Latin America with emphasis on epidemiology, health administration, medical anthropology and nutrition. Ms. Scrimshaw

174H. Public Health in the People's Republic of China (½ course). Lecture, four hours. Prerequisites: course 130 or equivalent or two upper division or graduate courses in social or behavioral science or medical science and consent of instructor. Mr. Chung

176. Human Sexuality and Sexual Health. Lecture, three hours; discussion, one hour. Prerequisites: two courses in behavioral and/or life science and consent of instructor. Interdisciplinary review of sexual physiology and sexual behaviors is followed by consideration of pregnancy and its prevention, sexual dysfunction, and sex-transmitted disease. Psychosocial, cultural, political, and health care aspects are included. Mr. Cushner

177. Principles and Techniques of Counseling (½ course). Lecture, one hour; discussion, one hour. Prerequisites: course 170 and one course selected from Psychology 118D, 129B, 177 or equivalent. Concepts and methods appropriate to personal counseling in clinical situations by public health workers. Analysis of counseling principles and approaches drawn from case records, files and audio materials.

178. Legal Aspects of Family Health (½ course). Lecture, two hours. Prerequisites: course 170 and consent of instructor. Analysis and clarification of legal issues involving family health services, including family planning, sterilization, abortion, dental care for children, battered child laws, mental hospitalization, personnel and standards for care and implementation of sound health programs. Ms. Roemer

179A. Health Problems and Programs in Africa (½ course). Lecture, one hour; discussion, one hour. Prerequisites: one of the following or equivalent and consent of instructor: Public Health 110; History 175A-175Z, 176A, 176B, 177, 178A, 179A, 275, 278A, Anthropology M168, 171, 271, Political Science 168A, C250E, Geography 122, 188, 189, 288, 289. Consideration of traditional beliefs about illness and treatment, factors affecting health status in Africa, major health problems and some programs proposed as remedies. Mr. Nicholas

179B. African Health Sector Analysis Seminar (½ course). Seminar, two hours. Prerequisite: course 179A (prior or concurrent). Approach is that of a multidisciplinary team analyzing the health sector of a representative African country to determine needs and priorities for external aid. Mr. Blumenfeld, Mr. Nicholas

180. Introduction to Public Health. Prerequisite: four units of life science. Principles of Public Health. Analysis of demographic, professional, organizational, fiscal, social, and research features. Covers health, mental health, environmental health and consumer protection fields. Mr. Wilner

181. Introduction to Social Research Methods in Health. Lecture, four hours; assignments, eight hours. Prerequisites: course 100A or equivalent and consent of instructor. Basic methods and techniques in designing and conducting health research using variety of methods. Includes discussions of students' own research plans.

182. Behavioral Sciences and Health. Lecture, three hours. Prerequisite: one course in social science. Basic concepts in behavioral sciences pertinent to health and medical care; cultural and social class variations in health status; health team and community relations; community decision-making in public health. Mr. Berkanovic, Mr. Goldstein

183. Community Health Education. Lecture, two hours; discussion, two hours. Prerequisites: one course in social science and consent of instructor. Problems of social, economic, and cultural origin as they apply to sound community organization in the public health field. Examination of health education activities of professional, voluntary, and official health agencies and analysis of their interrelationships. Mr. Washington

184. Health and Consumer Economics. Lecture, three hours. Prerequisites: Economics 1 and 2 or 100, upper division or graduate standing. Impact of health problems and costs on individual and family incomes and expenditures, including productivity and dependency. Mr. Rada

185. Economics of Health and Medical Care. Lecture, three hours. Prerequisites: Economics 1 and 2 or 100, upper division or graduate standing. Demand, supply and price determinants in private and public sectors of health and medical care fields. Mr. Rada

186. The World's Population and Food. Lecture, three hours. Prerequisites: Economics 1 and 2 or 100, upper division or graduate standing. World food sources; major food groups, human food requirements and consumption; food in developing economies; international movement of foods; interrelations of foods, population, and economic progress. Mr. Rada

187. Health Education for Teacher Credentials (½ course). Lecture, two hours. Prerequisite: admission to the teacher education credential program. The teaching-learning process as applied to personal and community health. Content includes psychoactive drugs (alcohol, tobacco, and narcotics), human sexuality, and community health resources. Required for the California State Teaching Credential. Mr. Linder, Mr. Washington

188. Community Mental Health. Prerequisites: one upper division course in psychology, sociology or anthropology and consent of instructor. Concepts of mental health, mental illness, prevention of mental disorders, mental health in public health programs. Public health aspects of control of mental disorders. Epidemiology, program planning and legal aspects of mental disorders.

189. Community Cancer Education. Lecture, two hours; discussion, one hour; field work, one hour; reading assignments, one hour. Prerequisites: Biology 30 or equivalent and consent of instructor. Exploration of the process of cancer education through community resources, culminating in student-generated community field study proposal and presentation. Mr. Cullen

199. Special Studies (½ to 1 course). Prerequisites: senior standing, consent of instructor and departmental Chair. Consent is based on a written proposal outlining the course of study. Individual undergraduate guided studies under direct faculty supervision. Study to be structured by instructor and student at time of initial enrollment. Students may enroll in only four units each quarter. Offered on a letter grade basis.

Graduate Courses

For complete descriptions of graduate-level courses offered by this School, please consult the *UCLA Graduate Catalog*.

Radiological Sciences

(Office: BL-428 Center for Health Sciences)

The Department of Radiological Sciences does not offer an undergraduate degree. The following upper division course is offered with enrollment restrictions as indicated:

Upper Division Course

199. Directed Individual Study or Research for Undergraduate Students (½ to 1 course). Prerequisite: consent of graduate advisor of Medical Physics. Directed individual study in medical physics for undergraduate students. Student 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

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Religion

See Study of Religion

Romance Linguistics and Literature (Interdepartmental)

(Office: 340 Royce Hall)

The Romance Linguistics and Literature Program does not offer an undergraduate degree. For detailed information on graduate degrees offered by this program, please refer to the *UCLA Graduate Catalog*.

Slavic Languages and Literatures

(Office: 115 Kinsey Hall)

Aleksandar Albijanić, Ph.D., *Professor of South Slavic Languages and Literatures.*
Henrik Birnbaum, Ph.D., *Professor of Slavic Languages and Literatures.*
Thomas Eekman, Ph.D., *Professor of Slavic Literatures.*
Michael S. Flier, Ph.D., *Professor of Slavic Languages and Literatures (Chair).*
Marija 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 Denzler, M.A., *Lecturer in Russian.*

Undergraduate Majors

The department offers three majors: (1) Slavic Languages and Literatures, (2) Russian Civilization and (3) Russian Linguistics. The major in Slavic Languages and Literatures is normally required for admission to the department's graduate program and will be used to determine the number of courses in Russian literature and/or linguistics that students majoring in Russian Civilization or Russian Linguistics will be expected to make up in order to receive graduate degrees in the department. Students who do not choose the major in Slavic Languages and Literatures but who intend to pursue graduate study in the department are strongly encouraged to take courses in Russian literature and linguistics during their undergraduate years to reduce the number of makeup courses required, since these courses are not applicable toward graduate degrees. Such students should also note that several graduate courses numbered below 220 may be taken by qualified seniors with consent of the instructor and the graduate advisor.

Preparation for All Departmental Majors

Russian 1, 2, 3, 4, 5, 6.

Courses Required for All Departmental Majors

Russian 101A-101B-101C, 111A-111B-111C. Work completed in the University's summer or semester Russian programs at Leningrad State University may be applied toward fulfillment of these requirements.

The Major in Slavic Languages and Literatures

Preparation for the Major: Slavic 99, Russian 99.

The Major: Russian 118, 119, 120, 121, 122, 123; three courses chosen from Russian 130A, 130B, 130C, 134, 140A, 140B, 140C, 140D, 150; one course chosen from Russian 124A, 124B, 124C, 124D, 124E, 124F, 126; any two electives chosen from Russian 102A, 102B, 102C (when taken in conjunction with Russian 112A, 112B, 112C), 124A, 124B, 124C, 124D, 124E, 124F, 125, 126, 130A, 130B, 130C, 134, 140A, 140B, 140C, 140D, M150, 193, Czech 155A, 155B, Polish 152A, 152B, Serbo-Croatian 154A, 154B. Note: Russian 118, 119 and 120 may be taken in the sophomore year.

The Major in Russian Civilization

Preparation for the Major: Russian 99.

The Major: Russian 119, 120, three additional courses in Russian literature, seven courses chosen from Russian M170, Economics 182, Geography 184, History 131A, 131B, 131C, 131D, Political Science 128A, 128B, 156 or special courses in the Departments of Art, Music, Theater Arts and Slavic Languages and Literatures approved by the undergraduate advisor.

The Major in Russian Linguistics

The Major: Russian 121, 122, 123, Linguistics 100, 103, 110, 120A, 120B, five courses chosen from Russian 102A, 102B, 102C (when taken in conjunction with Russian 112A, 112B, 112C), 130A, 130B, 130C, 134, 140A, 140B, 140C, 140D, M150, Slavic 201, 202, Linguistics 125, 127, M150, 160, 164, C165A, C165B, Psychology 123. Students majoring in Russian Linguistics who intend to pursue graduate study in the department are strongly encouraged to take at least three of the Russian literature courses enumerated above.

Slavic

Lower Division Course

99. Introduction to Slavic Civilization. Three hours weekly. An introductory survey of the social and cultural institutions of the Slavic peoples and their historical background.

Upper Division Courses

M171. Slavic Folklore in North America. (Same as Folklore M171.) Three hours weekly. The nature and specifics of Slavic folklore in North America including a survey of verbal genres and other folkloric phenomena. Lectures and readings in English.

177. Baltic Languages and Cultures (½ course). Two hours weekly. A general survey of the peoples speaking Old Prussian, Lithuanian, and Latvian; their linguistic, historical and ethnic affiliations. Mrs. Gimbutas

M178. Southeast European Folklore and Ethnography. (Same as Folklore M178.) Three hours weekly. An exploration of the folklore and ethnography of Southeastern Europe with emphasis on Romania and Yugoslavia. Folklore genres will be examined in the context of traditional social organization and in the context of industrializing communist states.

M179. Baltic and Slavic Folklore and Mythology. (Same as Folklore M126.) Three hours weekly. A general course for students interested in folklore and mythology and for those interested in Indo-European mythic antiquities. Mrs. Gimbutas

199. Special Studies (½ to 2 courses). Prerequisites: senior standing and consent of instructor.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Bulgarian

Lower Division Course

99. Introduction to Bulgarian Civilization. Three hours weekly. An introductory survey of the social and cultural institutions of the Bulgarian people and their historical background.

Upper Division Courses

103A-103B-103C. Elementary Bulgarian. Five hours weekly. Basic course in the Bulgarian language.

154. Survey of Bulgarian Literature. Three hours weekly. Prerequisite: upper division standing. Lectures and readings in English. A survey of Bulgarian literature from the Middle Ages to the present.

Czech

Upper Division Courses

102A-102B-102C. Elementary Czech. Five hours weekly. Basic course in the Czech language.

102D-102E-102F. Advanced Czech. Three hours weekly. Prerequisite: course 102C.

155A-155B. Czech Literature. Three hours weekly. Lectures and reading in English. **155A.** Survey of Czech literature from the Middle Ages to the present. **155B.** Selected topics.

Polish

Upper Division Courses

102A-102B-102C. Elementary Polish. Five hours weekly. Basic course in the Polish language.

102D-102E-102F. Advanced Polish. Three hours weekly. Prerequisite: course 102C.

152A-152B. Survey of Polish Literature. Three hours weekly. Lectures and readings in English. **152A.** From the Middle Ages to Romanticism. **152B.** From Realism to the present.

160. Polish Romanticism. Three hours weekly. Lectures and readings in English. Comparison of Polish Romanticism with that of other Slavic and Western European countries.

Russian

Language Courses

1. Elementary Russian. Five hours weekly plus one hour per week in laboratory.

2. Elementary Russian. Five hours weekly plus one hour per week in laboratory.

3. Elementary Russian. Five hours weekly plus one hour per week in laboratory.

4. Intermediate Russian. Five hours weekly plus one hour per week in laboratory.

5. Intermediate Russian. Five hours weekly plus one hour per week in laboratory.

6. Intermediate Russian. Five hours weekly plus one hour per week in laboratory.

10A-10B-10C. Russian Conversation (½ course each). Three hours weekly. Prerequisite: course 3 or consent of instructor. Russian conversation designed to supplement the grammar and readings of courses 4, 5, 6.

11A-11B-12A-12B-13A-13B. Self-Paced Program in Russian (½ to 3 courses). Basic course in the Russian language. Each two-unit course in the sequence requires one-half hour of laboratory session per week and one-half hour of discussion session per week plus individual instruction as required by the staff. Courses 11B and higher require the completion or simultaneous enrollment in all courses lower in the sequence.

101A-101B-101C. Advanced Russian (¾ course each). Prerequisite: course 6. Course will meet three hours weekly with additional meetings and laboratory sessions at instructor's discretion. Advanced grammar and reading.

102A-102B-102C. Advanced Grammar and Reading (¾ course each). Three hours weekly. Prerequisite: course 101C or consent of instructor. Advanced grammatical analysis; reading of difficult texts. Required for the M.A. (Linguistics, Literature).

111A-111B-111C. Conversation and Composition (¼ course each). Two hours weekly. Prerequisites: courses 6 and 10C or consent of instructor. Conversation and composition. Conducted in Russian. Required of majors.

112A-112B-112C. Advanced Conversation and Composition (¼ course each). Two hours weekly. Prerequisite: course 111C or consent of instructor. Advanced conversation and composition. Conducted in Russian. Required for the M.A. (Linguistics, Literature).

Linguistics Courses

121. Russian Phonology. Three hours weekly. Prerequisite: course 6. Introduction to transliteration and transcription, articulatory phonetics, phonemics.

122. Russian Morphology. Three hours weekly. Prerequisite: course 121. Introduction to morphophonemics, inflection, derivation.

123. Historical Commentary on Modern Russian. Three hours weekly. Prerequisites: courses 121, 122. Historical explanation of the phonological and morphological anomalies of modern Russian.

Literature and Civilization Courses

99. Introduction to Russian Civilization. Three hours weekly. An introductory survey of the social and cultural institutions of the Russian people and their historical background.

100. The Russian Novel in Translation. Three hours weekly. A study of major works by the great nineteenth-century Russian novelists. (Not open to majors.)

110. Survey of Russian Literature to Pushkin. (Formerly numbered 119.) Three hours weekly. Prerequisite: upper division standing. Slavic majors should take this course during their sophomore year. Lectures and readings in English.

119. Survey of Nineteenth-Century Russian Literature. (Formerly numbered 120A.) Three hours weekly. Prerequisite: upper division standing. Slavic majors should take this course during their sophomore year. Lectures and readings in English.

120. Survey of Twentieth-Century Russian Literature. (Formerly numbered 120B.) Three hours weekly. Prerequisite: upper division standing. Slavic majors should take this course during their sophomore year. Lectures and readings in English.

124A-124F. Studies in Russian Literature. Three hours weekly. Lectures and readings in English. The following writers will be alternately discussed: **A.** Pushkin; **B.** Gogol; **C.** Turgenev; **D.** Dostoevsky; **E.** Tolstoy; **F.** Chekhov.

125. The Russian Novel in Its European Setting. Three hours weekly. Prerequisite: upper division standing. Emphasis on nineteenth- and twentieth-century novelists. Lectures and readings in English.

126. Survey of Russian Drama. Three hours weekly. Prerequisite: upper division standing. Major Russian plays of the 18th to 20th centuries. Lectures and readings in English.

130A-130B-130C. Russian Poetry. Three hours weekly. Prerequisite: course 6. Lectures and readings in Russian. **130A.** Introduction to analysis of poetic texts. **130B.** From mid-eighteenth century through precursors of Symbolism. **130C.** From late-nineteenth century through contemporary Soviet verse.

134. Pushkin. Three hours weekly. Prerequisite: course 6. Major poetical works. Lectures and readings in Russian.

140A-140D. Russian Prose. Three hours weekly. Prerequisite: course 6. Lectures and readings in Russian. **140A.** Major writers from Karamzin to Turgenev; **140B.** Dostoevsky to Gorky; **140C.** Contemporary writers; **140D.** Advanced readings in Russian prose.

M150. Russian Folk Literature. (Same as Folklore M150.) Three hours weekly. Lectures and readings in Russian.

M170. Russian Folklore. (Same as Folklore M170.) Three hours weekly. A general introduction to Russian folklore including a survey of genres and related folkloric phenomena. Lectures and readings in English.

193. Seminar in Russian Literature. Three hours weekly. Prerequisite: course 6 or consent of instructor; course 101C recommended. Reading and discussion of selected authors; written seminar papers will usually be required.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Serbo-Croatian

Upper Division Courses

103A-103B-103C. Elementary Serbo-Croatian. Five hours weekly. Basic course in the Serbo-Croatian language.

103D-103E-103F. Advanced Serbo-Croatian. Three hours weekly. Prerequisite: course 103C.

113A-113B-113C. Advanced Reading and Composition. Three hours weekly. Prerequisite: course 103F or consent of instructor. Reading and translation of difficult texts; advanced composition.

154A-154B. Yugoslav Literature. Three hours weekly. Lectures and readings in English. **154A.** Survey of Yugoslav literature from the Middle Ages to the present. **154B.** Selected topics.

Ukrainian

Upper Division Courses

101A-101B-101C. Elementary Ukrainian. Five hours weekly. Basic course in the Ukrainian language.

152. Ukrainian Literature. Three hours weekly. A survey of writers, literary trends and issues in Ukrainian literature from the late eighteenth century to the present. Special attention to the works of such major figures as I. Kotlyarevsky, T. Shevchenko, I. Franko, L. Ukrainka and P. Tychyna. Lectures and readings in English.

Non-Slavic Languages of Eastern Europe

Lithuanian

Upper Division Courses

101A-101B-101C. Elementary Lithuanian. Five hours weekly. Basic course in the Lithuanian language.

Romanian

Lower Division Course

99. Introduction to Romanian Civilization. Three hours weekly. An introductory survey of the social and cultural institutions of the Romanian people and their historical background.

Upper Division Courses

101A-101B-101C. Elementary Romanian. Five hours weekly. Basic course in the Romanian language.

152. Introduction to Romanian Literature. Three hours weekly. Lectures and readings in English. A survey of Romanian literature from the Middle Ages to the present.

Related Courses in Other Departments

Dance 71P, 142; **Economics** 182; **Geography** 184; **Linguistics** 100, 103, 110, 120A, 120B, M150, as well as several of the graduate courses in linguistics; **Music** 91C, 142A-142B; **Political Science** 128A-128B, 156, 157.

Social Welfare

(Office: 200 Dodd Hall)

The School of Social Welfare does not offer an undergraduate degree. For detailed information on graduate degrees offered by this School, please refer to the *UCLA Graduate Catalog*.

Sociology

(Office: 264 Haines Hall)

Jeffrey Alexander, Ph.D., *Professor of Sociology.*
Rodolfo Alvarez, 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.*
Ivan H. Light, Ph.D., *Professor of Sociology.*
Valerie K. Oppenheimer, Ph.D., *Professor of Sociology.*
Georges Sabagh, Ph.D., *Professor of Sociology.*
Emanuel A. Schegloff, Ph.D., *Professor of Sociology (Chair).*
Melvin Seeman, Ph.D., *Professor of Sociology.*
Warren D. TenHouten, Ph.D., *Professor of Sociology.*
Donald J. Treiman, Ph.D., *Professor of Sociology.*
Ralph H. Turner, Ph.D., *Professor of Sociology.*
Maurice Zeitlin, Ph.D., *Professor of Sociology.*
Leo J. Kuper, Ph.D., *Emeritus Professor of Sociology.*
Kenneth D. Bailey, Ph.D., *Associate Professor of Sociology.*
Robert M. Emerson, Ph.D., *Associate Professor of Sociology.*
Lucie C. Hirata, Ph.D., *Associate Professor of Sociology.*
John E. 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 Pollner, Ph.D., *Associate Professor of Sociology.*
Jerome Rabow, Ph.D., *Associate Professor of Sociology.*
Samuel J. 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.*
David O'Shea, Ph.D., *Associate Professor of Education 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.*

Purposes of the Major in Sociology

The primary purpose of the major in Sociology is to contribute directly to the student's capacity for critical analysis and understanding of social phenomena. It is intended at the same time to serve as a preparation for those who plan a career in areas such as the following: high school or junior college teaching, social work, architecture and urban planning, law, public health and government service. It also provides training for advanced graduate work in sociology and social psychology.

Preparation for the Major

An introductory course, Sociology 1 or 101, is required. Also required at the lower division level is a statistics course, Sociology 18. Alternatively, this requirement can be met with Mathematics 50A, Psychology 41, Economics 40 or Public Health 100A.

Also required at the lower division level are two courses from Group A: Mathematics 2, 4A, Philosophy 31, Economics 1, 2, Linguistics 1; two courses from Group B: Anthropology 5, 6, 22, History 1A, 1B, 1C, Philosophy 7, 21, Political Science 1, Psychology 10, Geography 3.

All courses required for the major in Sociology, including lower division and allied field courses, must be taken for a letter grade. A 2.0 grade-point average is required for the preparation and for the major.

The Major

Ten upper division sociology courses, not including course 101, are required for the major. These ten courses must include the following (40 units):

(1) *Sociology 109 and 112 or 113.* These courses, devoted to the systematic exploration of sociological methods and theories, introduce students to the skills and concepts necessary for upper division work in the department. Students are strongly advised to complete these two required courses as early as possible in the junior year.

(2) Four upper division courses as required by one of the specialized "Concentrations for the Major" listed below.

(3) Any four additional upper division sociology courses.

(4) Four upper division allied field courses (16 units) in other departments are required to complete the major. The allied fields are: anthropology, economics, geography, history, political science and psychology. Each concentration has its own set of recommended allied field courses. This list of courses (and faculty advisors) is available from the departmental undergraduate counselor in 254B Haines Hall. Students are encouraged to examine these specific concentration related listings as well as consult the respective faculty advisor for each concentration.

Concentrations for the Major

By the end of the junior year and no later than the beginning of the senior year, students are required to declare their specific concentration by filing a statement with the undergraduate counselor. The purpose of the concentration requirement is to expose the student to systematic, in-depth work within a specific area of sociology. Completion of a concentration will require four upper division sociology courses, as well as four upper division allied field courses. A student must take a concentration's required course (if any) *before* declaring that concentration. Students are required to select one of the following concentrations and to meet its course requirements:

(1) *Comparative and Historical Sociology*

Required: 138
Two of the following: 120, 126, 140, 141
One of the following: 130, 131, 132, 133, 134, 136, 137

(2) *Organizations*

Required: 121
Three of the following: 120, 123, 128, 140, 141, 147, 152

(3) *Political Sociology*

Required: 140
Three of the following: 114, 120, 124, M143, 147, 150

(4) *Quantitative Sociology*

The student should consult the faculty advisor for premajor requirements for this concentration.
Required: 116
Three of the following: 123, 126, 152, 154
Recommended: Mathematics 152A-152B instead of Sociology 18 on the preparation

(5) *Race and Ethnicity*

Required: 124
Two of the following: 120, 123, 151, 155
One of the following: 130, 131, 132, 133, 134, 136, 137

(6) *Social Change and Modern Society*

Required: 120
Two of the following: 123, 140, 150
One of the following: 124, 125, 136, 141

(7) *Social Demography*

Required: 126
Three of the following: 116, 123, 132, 160

(8) *Social Organization and Language, Thought and Experience*

Four of the following: 144A, 144B, 148, 149, 153, 157, 159

(9) *Social Psychology*

Required: 154
Three of the following: 115, 150, 151, 152, 153, 155, 156

(10) *Social Stratification*

Required: 123
Three of the following: 114, 116, 124, 128, 136, 140, 155, 160

A psychology course taken to fulfill the breadth requirement cannot also be used for the allied field requirement. Only eight units of Sociology 199 are allowed. At least four of the sociology courses must be taken while in residence in the College of Letters and Science on this campus.

Students are encouraged to consult Mary Jo Johnson, Undergraduate Counselor, in 254B Haines Hall whenever problems arise with regard to their academic programs. This office also provides counseling for students interested in obtaining career advice.

Courses 109, 210A and 210B are recommended for students who intend to pursue graduate work in sociology.

The Honors Program

The Honors Program in Sociology provides an opportunity for outstanding students to undertake an independent year-long research project under the guidance of a member of the sociology faculty. The project culminates with an honors thesis or paper. The main advantage provided is the opportunity to work closely with individual faculty sponsors. Students intending to obtain advanced degrees will find this program especially useful. Students selected will enroll in Sociology 199HA-199HB-199HC in their senior year. These courses will count toward the ten upper division course requirement for all Sociology majors. Upon completing the program students will graduate either with Departmental Honors or Highest Honors on their record.

Qualifications: In order to qualify for the program the student must have a 3.5 overall grade-point average, have completed the sociology preparation requirements and, in most cases, have completed the required theory course. Applications are available in the Sociology undergraduate counselor's office, 254B Haines Hall. Students should apply in the last quarter of their junior year.

Lower Division Courses

1. Introductory Sociology. No credit will be given to students with credit for course 101. Survey of the characteristics of social life, the processes of social interaction, and the tools of sociological investigation.

18. Interpretation of Quantitative Data. Prerequisite: course 1 or 101 or may be taken concurrently. Satisfies the statistics requirement for the major in Sociology. Reading graphs and tables; statistical description using indices of central tendency, dispersion, and association; simple linear regression. Probability; the binomial, normal, t and chi-square distributions and hypothesis testing based on them. Examples drawn from recent issues of *American Sociological Review* or other leading sociological journals.

Upper Division Courses

Course 1 or equivalent and upper division standing (upper division standing may be waived by consent of instructor) are prerequisite to all upper division courses in sociology.

101. Principles of Sociology. Prerequisite: upper division standing. No credit will be given to students with credit for course 1. For upper division students who have not taken course 1. A more intensive introduction to sociology than is given in course 1. May not be counted on the major.

102A-102Z. Special Topics in Sociology. Prerequisite: upper division standing; some sections may require prior course work or consent of instructor. A study of selected current topics of sociological interest. See *Schedule of Classes* for topics and instructors to be offered each quarter. This course may be repeated for credit and may apply as elective units on the Sociology major.

109. Introduction to Sociological Research Methods. A systematic treatment and semiquantitative skills of use in sociological research, e.g., classification, questionnaire and schedule design, content analysis, critical analysis of studies, conceptual analysis of case materials. Field work may be required for this course. Mr. Bailey, Mr. Harrison, Mr. TenHouten

110. Research Methods in Policy Analysis and Evaluation. Discussion, four hours. Prerequisite: course 129 or consent of instructor. Prior completion of course 109 is recommended. Provides a basic knowledge of approaches for identifying and analyzing social problems and for the assessment of policies and interventions for their control and management. Mr. Freeman, Ms. Zucker

112. Development of Sociological Theory. A comparative survey of basic concepts and theories in sociology, 1850-1920; the codification of analytic schemes; a critical analysis of trends in theory construction. Mr. Alexander, Mr. Bailey, Mr. Horton

113. Contemporary Sociological Theory. A critical examination of significant theoretical formulations, 1920 to the present; an analysis of the relation between theoretical development and current research emphasis. Mr. Garfinkel, Ms. Hirata, Mr. TenHouten

114. Marxist Sociology. The course will stress the fundamentals of Marxist theory and method and their historical development. Attention will be given throughout to continuing debates within Marxism and to differences between Marxism and other schools of sociological thought. This course does not meet the theory requirement for the major. Mr. Horton

115. Experimentation and Laboratory Methodology in Sociology. Prerequisites: course 18 or equivalent introductory statistics and introductory social psychology. This course provides opportunities for students to participate as observers, subjects, and experimenters in a variety of laboratory and simulations of social and political settings and to use a number of computer-supported techniques as aids in conducting, analyzing, and interpreting their experiences in these settings. Mr. Shure

116. Introduction to Mathematical Sociology. Prerequisites: Mathematics 2, 4A (a course whose content includes introductions to probability theory, matrix algebra, and differential and integral calculus) and Sociology 18 or equivalent. Mathematical treatments of several sociological phenomena, such as occupational mobility, population growth, organizational structure, and friendship patterns, each covered in some detail, including initial development and subsequent evaluation and modification, emphasizing both the deductive and computational aspects of mathematics. Mr. McFarland

118. Statistical and Computer Methods for Social Research. Lecture, three hours; laboratory, one hour. Prerequisite: course 18. A continuation of course 18, this course will cover more advanced statistical techniques, such as multiple regression, analysis of variance, or factor analysis. The content will vary. Students will learn how to use the computer and will write papers analyzing prepared data sets. Mr. Bonacich, Mr. Harrison

120. Social Change. A study of patterns of social change, resistance to change, and change-producing agencies and processes. Mr. Alexander, Mr. Surace

121. Organizations and Society. Sociological analysis of organizations and their social environment. An introduction to basic theories, concepts, methods, and research on the behavior of organizations in society. Mr. Alvarez, Mr. Grusky, Mr. Surace

122. Mass Communications. Formal organization, functions, and development of the mass media; communications as a social process; cultural patterns; audience characteristics; communications and bureaucracy. Aspects of the American media are compared with other systems, e.g., Soviet, British, Arabic. Field work may be required for this course. Mr. Levine

123. Social Stratification. An analysis of American social structure in terms of evaluational differentiation. Topics to be considered include criteria for differentiation, bases for evaluation, types of stratification, the composition of strata and status systems, mobility, consequences of stratification and problems of methodology. Mr. Lopez, Mr. McFarland, Ms. Nilson

124. Ethnic and Status Groups. The characteristics of the "visible" ethnic groups, e.g., Japanese, Mexican and Negro; their organization, acculturation, and differentiation. The development, operation and effects of selective immigration and population mobility. The status of the chief minorities in the continental U.S., with comparative materials drawn from Jamaica, Hawaii, and other areas. Mr. Alvarez, Mr. Kitano, Mr. Prager

125. Urban Sociology. Urban and rural cultures, the characteristics of cities in Western civilization, with emphasis on the American metropolis. Mr. Light, Mr. Oliver

126. Social Demography. Studies of past, present, and future trends in population growth. Sociological theories of causes and consequences of population growth and redistribution. Emphases on the correlates of fertility, mortality, and migration. Mr. Bailey, Ms. Oppenheimer, Mr. Sabagh

127. Sociology of Family Demographic and Economic Behavior. An examination of demographic behavior associated with the social organization of the family and its relationship to the society's economic system. The first half of the course deals with American and European historical studies of family socioeconomic and demographic characteristics and behavior. The second half focuses on the U.S. experience since the 1930's. Ms. Oppenheimer

128. Occupations and Professions. Description and analysis of representative occupations and professions, with emphasis upon the contemporary United States. Mr. Light, Ms. Nilson, Ms. Oppenheimer

129. Social Policies and Social Programs. Lecture, three hours; discussion, one hour. Prerequisites: junior standing, course 1 or 101 or consent of instructor. Analysis of problems of social disorganization with an emphasis on social structural explanations. Provides consideration of social policies and intervention strategies related to control and management of social problems. Mr. Freeman, Ms. Zucker

130. Social Processes in Africa. A course in comparative sociology. A study of selected processes in African societies, primarily in the fields of urban sociology, social structure and social change, involving an interdisciplinary approach.

131. Latin American Societies. A descriptive survey of the major Latin American societies, emphasizing their historical backgrounds and their emergent characteristics, with special attention to the relations between rural and urban life. Mr. Lopez

132. Population and Society in the Middle East. Prerequisites: upper division standing and consent of instructor. A survey of the Middle Eastern societies; their historic and environmental bases; the contemporary demographic and cultural situation. Mr. Sabagh

133. Comparative Sociology of the Middle East. Prerequisites: upper division standing and consent of instructor. A review of the unity of Middle Eastern societies in Islam and their diversity exemplified by such nomadic peoples considered throughout.

134. Comparative Social Institutions of East Asia. Analysis of selected social institutions of China, Japan, and Korea. Emphasis will be on continuity and change in East Asian societies. Ms. Hirata

136. American Society. Analysis of major institutions in the U.S. in historical and international perspective. The course will focus on topics such as industrialization, work, the state, politics, community, the family, religion and American culture. Theories of social change, conflict and order will be applied to the case of the U.S. Mr. Lo, Mr. Roy, Mr. Zeitlin

137. Comparative Studies of Jewish Communities in the U.S. and Abroad. The history, distribution, structure, and functioning of major Jewish communities are covered, with particular focus upon North America and Israel. Interrelationships and sources of conflict between Jews and Gentiles in Western countries are taken up. More generally, the economic and social integration of Diaspora Jewish communities is treated. Field work may be required for this course. Mr. Levine

138. Comparative and Historical Sociology. Prerequisite: course 1 or 101. A survey of the central themes of comparative and historical studies in sociology. The various aspects of the development of modern society are covered including the development of nation-state, the emergence of capitalism, industrialization, and population growth. Variation in contemporary society is viewed from a variety of theoretical perspectives. Ms. Hirata, Mr. Prager, Mr. Roy

140. Political Sociology. The contributions of sociology to the study of politics including the analysis of political aspects of social systems, the social context of action, and the social bases of power.
Mr. Prager, Mr. Roy, Mr. Zeitlin

141. Economy and Society. The sociology of economic life with emphasis upon principal economic institutions of the United States. Mr. Light, Mr. Lo

142. Sociology of the Family. Theory and research dealing with the modern family, its structure and functions, including historical changes, variant family patterns, family as an institution, and the influence of the contemporary society on the family.

M143. Sociology of Education. (Same as Education M106.) Prerequisite: course 1 or 101. Study of social processes and interaction patterns in educational organizations; the relationship of such organizations to aspects of society, social class and power; social relations within the school, college and university; formal and informal groups, subcultures in educational systems; roles of teachers, students and administrators. Mr. O'Shea, Ms. Wrigley

144A. Conversational Structures I. An introduction to some of the structures which are employed in the organization of conversational interaction, such as turn-taking organization, the organization of repair, and some basic sequence structures with limited expansions. Mr. Schegloff

144B. Conversational Structures II. Prerequisite: course 144A. A consideration of some of the more expanded sequence structures, story structures, topical sequences, and the overall structural organization of single conversations. Mr. Schegloff

145. Sociology of Deviant Behavior. An examination of the leading sociological approaches to the study of deviation and a general survey of the major types of deviation in American society.
Mr. Freeman, Mr. Horton, Mr. Surace

146. Criminology. Theories of the genesis of crime; factors in the organization of criminal behavior from the points of view of the person and group; criminal behavior systems. Mr. Katz, Mr. Rabow

147. Control of Crime. Theories of punishment; methods of dealing with convicts; social organization of police, courts, prisons, probation, and parole. Field work is a required feature of this course.
Mr. Emerson, Mr. Rabow

148. Normal Environments. Structural interpretation of the concerted production, management, and alteration of perceivedly normal interpersonal environments. Field work is a required feature of this course. Mr. Garfinkel, Mr. Pollner

149. A Study of Norms. Properties of norms, of normatively governed conduct, of lay and professional methods for describing, producing, using, and validating norms in contrasting settings of socially organized activities; relevance of these properties for the programmatic problems of analytic sociology. Field work is a required feature of this course.
Mr. Garfinkel, Mr. Pollner

150. Collective Behavior. Prerequisites: course 1 or equivalent, course 18 or equivalent and upper division standing. Characteristics of crowds, mobs, publics, social movements, and revolutions. Their relation to social unrest and their role in developing and changing social organization.
Mr. Prager, Mr. Seeman, Mr. Turner

151. Culture and Personality. Prerequisites: course 1 or equivalent, course 18 or equivalent and upper division standing. Theories of the relation of variations in personality to culture and group life, in primitive and modern societies, and the influence of social role on behavior. Mr. Turner

152. Group Processes. Systematic study of the formation, structure, and functioning of groups; analysis of group processes and group products from a variety of theoretical viewpoints; implications of various research techniques.
Mr. Bonacich, Mr. Rabow, Ms. Zucker

153. Process and Socialization in the Family. Prerequisites: course 1 or equivalent, course 18 or equivalent and upper division standing. Examination of the processes of interaction, decision-making, role differentiation, conflict, integration, and socialization within the family and their interrelations with society.

154. Social Psychology: Sociological Approaches. A survey of the contribution of sociologists to theory and research in social psychology including theories of social control; conformity and deviation; reference groups; and interaction process.
Mr. Bonacich, Mr. Rabow, Ms. Zucker

155. Intergroup Conflict and Prejudice. A study of the causes and consequences of group conflict, with emphasis upon majority-minority relations, prejudice and discrimination. Special attention is given to alternative sociological and psychological theories of prejudice; the effects of minority status upon the individual; and the possibilities for attitude and behavior change. Mr. Oliver, Mr. Seeman

156. Psychoanalytic Sociology. Prerequisites: courses 1 or 101 and 18. A course in theory (course 112 or 113) is recommended, as well as a course in social psychology. A course designed to review the models of integration, between psychoanalysis and sociology. This analytical perspective will be applied to selected substantive areas and social processes. The areas include, but are not limited to, group development, delinquency, and deviance. The processes include socialization, identity and self formation, role taking and role making. Mr. Rabow

157. Sociology of Mental Illness. Analysis of the major sociological and social psychological models of madness. Study of the social processes involved in the production, recognition, labeling and treatment of "mental illness."
Mr. Emerson, Mr. Goldstein, Mr. Pollner

M158. Death and Suicide: Psychological and Sociological Aspects. (Same as Psychology M163.) Junior standing required. This course is offered on both a Passed/Not Passed and letter grade basis. However, the instructor prefers that students select the Passed/Not Passed option. The definition and taxonomy of death; the new permissiveness and taboos relating to death; the romanticization of death the role of the individual in his own demise; the modes of death; development of ideas of death through the life span; ways in which ideas of death influence the conduct of lives; the impact of dying on the social structure surrounding the individual; preventive, interventive and postventive practices in relation to death and suicide; partial death; megadeath; lethality; the psychological autopsy; the death of institutions and cultures. Mr. Shneidman

159. The Sociology of Knowledge. Prerequisite: course 1 or equivalent. A study of the social production of modes of thought and forms of knowledge. The course includes the study of ways in which bodies of knowledge and cognitive styles are produced, used and transformed in every day, organizational, and extraordinary contexts. Mr. Pollner, Mr. TenHouten

160. The Demography and Sociology of Women's Economic Roles. Prerequisites: courses 1, 18 or Mathematics 50A or Psychology 41 or Economics 40 or Public Health 100A or consent of instructor. A demographic and sociological analysis of the factors affecting women's economic roles in the world of work and the family. Topics to be considered include demographic determinants of women's socioeconomic roles, women's changing place in the occupational structure, men's and women's contribution to the socioeconomic status of the family, the socioeconomic position of women without men to support them, future trends, and social policy affecting women's status. Ms. Oppenheimer

161. The Social Organization of Psychiatric Treatment. Review of current research and theory on psychiatric treatment processes and treatment organizations, including mental hospitals and community mental health organizations. Course 157 is *strongly recommended* as a prerequisite for this course.
Mr. Emerson, Mr. Grusky

162 Sociology of Law. Prerequisite: upper division standing. The political impact of court decisions; legalization of social relations in modern institutions; social movements toward equal justice; the judicial role; experience of participants in legal processes; common sense conceptions of justice. Mr. Katz

163. Medical Sociology. Prerequisite: course 1 (or 101) or consent of instructor. This course provides majors in Sociology and other social sciences, as well as students preparing for health science careers, with an understanding of health-seeking behavior and the interpersonal and organizational relations that are involved in the receipt and delivery of health services.
Mr. Freeman, Mr. Goldstein

Advanced Studies

197. Undergraduate Seminar. (Formerly numbered 181-186.) Prerequisites: upper division standing, major in Sociology and consent of instructor.

199. Special Studies (½ to 2 courses). Prerequisites: senior standing, 3.0 grade-point average in major, courses 1 and 18 or the accepted equivalent required, consent of instructor and departmental Chair. A course of independent study designed for graduate or senior undergraduate students who (a) desire a more advanced or specialized treatment of an area covered in the regular course list and who present that course as a prerequisite or (b) desire work in an area of sociological analysis currently not covered by an upper division course. Only 8 units are allowed. See undergraduate counselor for course contract.

199HA-199HB-199HC. Special Study for Honors. Prerequisite: admission to the Sociology Department Honors Program:

199HA. Design of a research project to serve as the student's honors thesis. A research proposal, detailed bibliography, and regular meetings with the sponsoring faculty member will be required.

199HB. Continuation of work initiated in course 199HA. A series of progress reports will be prepared in consultation with instructor.

199HC. Completion of the written report or honors thesis.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Spanish and Portuguese

(Office: 5303 Rolfe Hall)

Shirley L. Arora, Ph.D., *Professor of Spanish (Chair).*
José R. Barcia, Lic. F. y L., *Professor of Spanish.*
Rubén A. Benítez, Ph.D., *Professor of Spanish.*
Joaquín 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, Litt.D., *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. Zeitlin, Ph.D., *Emeritus Professor of Spanish and Portuguese.*
E. Mayone Dias, Ph.D., *Associate Professor of Spanish and Portuguese.*
A. Carlos Quicoli, Ph.D., *Associate Professor of Portuguese and Romance Linguistics.*
Richard M. Reeve, Ph.D., *Associate Professor of Spanish.*
Enrique Rodríguez-Cepeda, Ph.D., *Associate Professor of Spanish.*
Paul C. Smith, Ph.D., *Associate Professor of Spanish.*
Susan Plann, Ph.D., *Assistant Professor of Spanish.*
A. John Skirius, Ph.D., *Assistant Professor of Spanish.*

•

José M. Cruz-Salvadores, M.A., *Lecturer in Spanish.*
George L. Voyt, J.D., *Lecturer in Spanish.*

The following courses are primarily designed to serve the department's three B.A. programs: the B.A. in Spanish (Plan A), the B.A. in Spanish and Linguistics (Plan B) and the B.A. in Portuguese, as well as to prepare students for its three graduate programs: the M.A. in Spanish, the M.A. in Luso-Brazilian Language and Literatures and the Ph.D. in Hispanic Languages and Literatures. The department's courses are also functionally supportive of such extradepartmental programs as the Teaching Credential in Spanish, the B.A. and M.A. programs in Latin American Studies, the M.A. program in Folklore and Mythology and the M.A. and Ph.D. programs in Comparative Literature and Romance Linguistics and Literature.

Spanish

Students who have taken Spanish elsewhere and wish to enroll in UCLA Spanish classes for the first time must take the Placement Test given each quarter during the week before classes begin. Consult the *Schedule of Classes.*

Preparation for the Major

Spanish 25 or equivalent as determined by the Placement Test; courses M42 and M44 or equivalent.

The Major

Linguistics 100 is prerequisite to Spanish 100 and 103. Spanish majors may take it Passed/Not Passed or for a letter grade. It is applicable to the breadth requirements (Plan A and Plan B) as a course in social sciences.

The Major, Plan A (Language and Literature)

Fifteen upper division courses distributed as follows (nine required courses): 100, 103, 105 or 109, 115 or M118, 120A, 120B, 121A, 121B, 127; six elective courses (one in Spanish literature, one in Spanish American literature and four selected from other departmental offerings not including courses 160A, 160B, 160C).

The Major, Plan B (Spanish and Linguistics)

In addition to the normal preparation for the major, Plan B requires completion of six quarters of work in one other foreign language or three quarters in each of two other languages. Portuguese is recommended.

The major consists of thirteen upper division courses distributed as follows: four required courses in Spanish (100, 103, 105 or 109, 119); six required courses in Linguistics (100, 103, 110, 120A, 120B, 140); three electives in Spanish.

General College Regulation

No credit will be allowed for completing a less advanced course after satisfactory completion of a more advanced course in grammar and/or composition.

Honors Program

To qualify for graduation with Departmental Honors, students must achieve a 3.0 overall grade-point average, a 3.5 grade-point average in the major and have completed two of the three Senior Seminars (170A, 170B, 170C) with appropriate grades.

Requirement for Teaching Credentials

Consult the *Announcement of the UCLA Graduate School of Education.*

Lower Division Courses

Spanish 1 through 4 use J.R. Barcia's *Lengua y Cultura.* The method is inductive. Selected examples are given to enable the student to inductively grasp the rules and develop his own grammar. This enables the student to use language effectively and creatively. The courses are taught entirely in Spanish — the student simultaneously learns to understand, speak, read and write Spanish.

1. Elementary Spanish. Meets five hours weekly; laboratory, one hour. This course corresponds to the first year of high school Spanish. Not open for credit to students who have completed more than one year of high school Spanish or equivalent. Students will, however, be credited with four units toward the minimum progress requirement.

1G. Reading Course for Graduate Students (No credit). Meets five hours weekly.

2. Elementary Spanish. Meets five hours weekly; laboratory, one hour. Prerequisite: course 1 or equivalent as determined by the Placement Test. Not open for credit to students who have completed two years of high school Spanish or equivalent. Students will, however, be credited with four units toward the minimum progress requirement.

2G. Reading Course for Graduate Students (No credit). Meets five hours weekly. Prerequisite: course 1G or equivalent.

3. Elementary Spanish. Meets five hours weekly; laboratory, one hour. Prerequisite: course 2 or equivalent as determined by the Placement Test. The main grammatical topics include: Relative clauses. Direct vs. indirect speech. Imperatives. Impersonal constructions. Subjunctive: present, imperfect. Idioms. Vocabulary of about 400 items and idioms dealing with everyday experience and some selected readings of good authors.

4. Intermediate Spanish. Meets five hours weekly; laboratory, one hour. Prerequisite: course 3 or equivalent as determined by the Placement Test. Grammar review. Also: Conditional. Imperative and conditional. Indicative vs. subjunctive. Past perfect of subjunctive. Infinitive. Vocabulary of about 400 items and idioms dealing with everyday experience and some literary pieces.

5. Intermediate Spanish. Meets five hours weekly; laboratory, one hour. Prerequisite: course 4 or equivalent as determined by the Placement Test.

8A-8B. Spanish Conversation (½ course each). Begins each quarter. Meets three hours weekly. Prerequisite: course 8A is open to students with credit for course 4 or equivalent. Students who have completed course 3 with a grade of "B" or better may be admitted.

9A-9B. Advanced Conversation (½ course each). Begins each quarter. Meets three hours weekly. Prerequisite: course 8B or equivalent.

25. Advanced Spanish. Prerequisite: course 5 or equivalent. Concentration on the building of vocabulary and the attainment of a high degree of comprehension in preparation for the courses in literature.

M42. Civilization of Spain and Portugal. (Same as Portuguese M42.) Highlights of the Civilization of Spain and Portugal, with emphasis on their artistic, economic, social and historical development as background for upper division courses. Conducted in English. Required for the major. Mr. Cruz-Salvadores

M44. Civilization of Spanish America and Brazil. (Same as Portuguese M44.) Highlights of the Civilization of Spanish America and Brazil with emphasis on their artistic, economic, social and historical development as background for upper division courses. Conducted in English. Required for the major.
Mr. Reeve, Mr. Skirius

Upper Division Courses

The basic prerequisite to all upper division courses except 160A-160B-160C is Spanish 25 or equivalent as determined by the Placement Test.

100. Phonology and Pronunciation. Prerequisite: Linguistics 100. Meets four hours weekly, including one hour laboratory. Analysis of the phonetic and phonemic systems of Spanish with special emphasis on the correlation between the phonemic and graphemic systems. Interrelation of phonological and morphological phenomena. Exercises and drills directed toward individual needs. Required for major (Plan A and Plan B). Ms. Plann, Mr. Robe

103. Syntax. Prerequisite: Linguistics 100. A study of sentence types and their variations. The lexicon and its features. Interrelation of syntactic, semantic and morphological phenomena. Required for major (Plan A and Plan B). Mr. Otero, Ms. Plann

105. Intermediate Composition. Prerequisite: course 103. Paraphrasing, summarizing, and study of idiomatic expressions.

109. Advanced Composition. *Prerequisite: course* 103. Correction of student's original compositions and analysis of basic stylistic elements.

115. Applied Linguistics. Prerequisite: course 103. Meets three hours weekly. Survey of the major linguistic problems faced by the teacher of Spanish.
Ms. Plann, Mr. Robe

117. The Spanish of Southern California. Prerequisites: courses 100, 103 or consent of instructor. Analysis of pronunciation, word formation, syntax, and lexicon of the Spanish of Southern California, with attention to regional features, social and age levels of speech, and interference from English.
Mr. Robe

M118. History of the Portuguese and Spanish Languages. (Same as Portuguese M118.) Prerequisite: course 100. Major features of the development of the Portuguese and Spanish languages from their origins in Vulgar Latin to modern times. Contributions of other languages to the formation of Portuguese and Spanish. Mr. Otero, Mr. Quicoli, Mr. Smith

119. Literary Analysis. An introduction to the study of literary devices, figures of speech and the differentiation of literary genres. Strongly recommended as preparation for the required courses in literature. Required for major (Plan B).

120A-120B. Survey of Spanish Literature. Prerequisite: course M42 for Spanish majors. Begins each quarter. An introduction to the principal authors, works and movements of Spanish literature. Required for the major (Plan A).

121A-121B. Survey of Spanish American Literature. Prerequisite: course M44 for Spanish majors. Begins each quarter. An introduction to the principal authors, works, and movements of Spanish American literature. Required for the major (Plan A).
Mrs. Arora, Mr. Luzuriaga, Mr. Reeve

122. Medieval and Renaissance Literature. The main genres of Medieval and Renaissance Spanish literature with emphasis on at least one representative work for each. Recommended preparation is course 120A. Mr. Gimeno

124. The Golden Age. The main genres of the Golden Age with emphasis on at least one representative work for each. Recommended preparation is course 120A. Mr. Johnson, Mr. Rodríguez-Cepeda

127. Don Quijote. Directed reading and intensive study of the novel. Required for the major (Plan A). Recommended preparation is course 120A.
Mr. Johnson, Mr. Rodríguez-Cepeda

128. Neoclassicism and Romanticism in Spain. *The main manifestations of thought and literature* from 1700 to 1850 with emphasis on representative works. Recommended preparation is course 120B.
Mr. Benítez, Mr. Rodríguez-Cepeda

130. Spanish Literature from 1850 to 1898. The development of post-Romantic literature with emphasis on representative works. Recommended preparation is course 120B. Mr. Benítez, Mr. Smith

132A. Spanish Literature in the 20th Century: Poetry and Drama. Spanish poetry and theater since 1898 with emphasis on several representative works for each genre. Recommended preparation is course 120B. Mr. Barcia, Mr. Benítez, Mr. Morris

132B. Spanish Literature in the 20th Century: Fiction and the Essay. Spanish prose genres since 1898 with emphasis on representative novels, short stories and essays. Recommended preparation is course 120B. Mr. Barcia, Mr. Benítez, Mr. Morris

137. The Literature of Colonial Spanish America. A study of the most important authors and movements in the various regions of Spanish America to 1810. Recommended preparation is course 121A.
Mrs. Arora

139. 19th-Century Spanish American Literature. A detailed study of the important writers and movements from 1810 to 1860. Recommended preparation is course 121A.
Mr. Luzuriaga, Mr. Reeve, Mr. Skirius

141. Mexican Literature. A study of the major Mexican literary contributions to the development of a national culture. Recommended preparation: courses 121A-121B. Mr. Reeve, Mr. Skirius

142A. Spanish American Literature in the 20th Century: Poetry and Drama. A detailed study of the important lyrical and dramatic movements in Spanish America since 1880. Recommended preparation is course 121B. Mr. Luzuriaga, Mr. Skirius

142B. Spanish American Literature in the 20th Century: Fiction and the Essay. Spanish American prose genres since 1880 with representative novels, short stories and essays. Recommended preparation is course 121B. Mr. Reeve, Mr. Skirius

M149. Folk Literature of the Hispanic World. (Same as Folklore M149.) A study of the history and present dissemination of the principal forms of folk literature throughout the Hispanic countries.
Mrs. Arora, Mr. Robe

160A-160B-160C. Hispanic Literatures in Translation. Class readings and analysis of selected works in translation. Classroom discussion, papers and examinations will be in English. Meets three times weekly:

160A. Spain and Portugal.

160B. Spanish America and Brazil.

160C. *Don Quijote* in English Translation. Class reading and analysis of Cervantes' *Don Quijote.*
Mr. Johnson

170A. Senior Seminar: Topics in Spanish Literature. Prerequisites: Spanish major, senior standing, 3.5 GPA in the major. Directed research on topics within the general area of Spanish literature. Two senior seminars are required for Departmental Honors. Given Fall Quarter only.

170B. Senior Seminar: Topics in Spanish American Literature. Prerequisites: Spanish major, senior standing, 3.5 GPA in the major. Directed research on topics within the general area of Spanish American literature. Two senior seminars are required for Departmental Honors. Given Winter Quarter only.

170C. Senior Seminar: Topics in Hispanic Linguistics. Prerequisites: Spanish major, senior standing, 3.5 GPA in the major. Directed research on topics within the general area of Hispanic linguistics. Two senior seminars are required for Departmental Honors. Given Spring Quarter only.

199. Special Studies (½ to 1 course). Prerequisite: consent of advisor and instructor. A maximum of two *full courses may count toward the major.*

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Portuguese

Preparation for the Major

Portuguese 3, 25, M42, M44 or equivalent.

The Major in Portuguese

Thirteen upper division courses distributed as follows (seven required courses): 100, 103, M118, 120A, 120B, 121A, 121B. The remaining six courses may consist of six electives in Portuguese, or four electives in Portuguese plus two courses supportive of the student's program and approved by the department in history, philosophy, linguistics, or another language or literature.

General College Regulation

No credit will be allowed for completing a less advanced course after satisfactory completion of a more advanced course in grammar and/or composition.

Requirement for Teaching Credentials

Consult the *Announcement of the UCLA Graduate School of Education.*

Lower Division Courses

1. Elementary Portuguese. Meets five hours weekly; laboratory, one hour.

2. Elementary Portuguese. Meets five hours weekly; laboratory, one hour. Prerequisite: course 1 or equivalent.

3. Intermediate Portuguese. *Meets five hours* weekly; laboratory, one hour. Prerequisite: course 2 or equivalent.

8A-8B. Portuguese Conversation (½ course each). Meets three discussion hours weekly. Prerequisite: open to students who have completed course 3 with a grade of "B" or better.

25. Advanced Portuguese. Prerequisite: course 3 or equivalent.

M42. Civilization of Spain and Portugal. (Same as Spanish M42.) Highlights of the Civilization of Spain and Portugal, with emphasis on their artistic, economic, social and historical development as background for upper division courses. Conducted in English. Required for the major. Mr. Cruz-Salvadores

M44. Civilization of Spanish America and Brazil. (Same as Spanish M44.) Highlights of the Civilization of Spanish America and Brazil with emphasis on their artistic, economic, social and historical development as background for upper division courses. Conducted in English. Required for the major.
Mr. Reeve, Mr. Skirius

*Upper Division Courses

100. Phonology and Pronunciation. Meets four hours weekly, including one hour in laboratory. Analysis of the phonetic and phonemic systems of Portuguese with special emphasis on the correlation between the phonemic and graphemic systems. Exercises and drills directed toward individual needs.
Mr. Quicoli

101A. Advanced Reading and Conversation. Meets three hours weekly. Reading and discussion of writings by modern Brazilian and Portuguese authors. Mr. Hulet

101B. Advanced Composition and Style. Meets three hours weekly. Correction of student's composition and analysis of basic stylistic elements.
Mr. Hulet

102A-102B. Intensive Portuguese. Prerequisite: advanced foreign language experience (other than Portuguese) or consent of instructor. An intensive course stressing both speaking and reading skills designed to cover the equivalent of three quarters of the traditional pattern, to meet the peculiar needs of advanced (upper division and graduate) students who are specializing primarily in foreign languages, linguistics, comparative or romance literature.

103. Syntax. A review of the patterns of the Portuguese language: the verb system, syntax of preposition, word pattern and word distribution. Mr. Quicoli

M118. History of the Portuguese and Spanish Languages. (Same as Spanish M118.) Prerequisite: course 100. Major features of the development of the Portuguese and Spanish languages from their origins in Vulgar Latin to modern times. Contributions of other languages to the formation of Portuguese and Spanish. Mr. Otero, Mr. Quicoli, Mr. Smith

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

120A. Survey of Portuguese Literature. First half of an introduction to the principal movements, authors, and works of Portuguese Literature. Mr. Dias

120B. Survey of Portuguese Literature. Second half of an introduction to the principal movements, authors, and works of Portuguese Literature. Mr. Dias

121A. Survey of Brazilian Literature. First half of an introduction to the principal movements, authors and works of Brazilian Literature. Mr. Hulet

121B. Survey of Brazilian Literature. Second half of an introduction to the principal movements, authors, and works of Brazilian Literature. Mr. Hulet

C124. Medieval Portuguese Literature. The main genres of Medieval Portuguese and Galician literature with emphasis on at least one representative work for each. May be concurrently scheduled with course C242A. Mr. Dias

C126. Renaissance and Baroque Portuguese Literature. The main genres of Renaissance and Baroque literature with emphasis on at least one representative work for each. May be concurrently scheduled with course C242B. Mr. Dias

C127. Colonial Brazilian Literature. A study of the most important authors and literary currents to 1830. May be concurrently scheduled with course C243A. Mr. Hulet

C128. 18th- and 19th-Century Portuguese Literature. The main manifestations of thought and literature from 1700 to 1900 with emphasis on representative works. May be concurrently scheduled with course C242C. Mr. Dias

C129. Romanticism in Brazil. A study of representative trends and authors. May be concurrently scheduled with course C243B. Mr. Hulet

C130. Naturalism, Realism and Parnasianism in Brazil. A study of representative trends and authors. May be concurrently scheduled with course C243C. Mr. Hulet

C136. Contemporary Portuguese Literature. A study of representative trends and authors. May be concurrently scheduled with course C242D. Mr. Dias

C137. Contemporary Brazilian Literature. A study of representative trends and authors. May be concurrently scheduled with course C243D. Mr. Hulet

140A-140B. Luso-Brazilian Literature in Translation:

140A. Portuguese Literature. Class reading and analysis of selected works in translation. Classroom discussion, papers and examinations will be in English. Meets three times weekly. Mr. Dias

140B. Brazilian Literature. Class reading and analysis of selected works in translation. Classroom discussion, papers and examinations will be in English. Meets three times weekly. Mr. Hulet

199. Special Studies (½ to 1 course). Prerequisite: consent of advisor and instructor. A maximum of two full courses may count toward the major.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog.*

Speech

(Office: 232 Royce Hall)

Waldo Woodson Phelps, Ph.D., *Professor of Speech.*
Walter Wilcox, Ph.D., *Professor of Journalism (Chair).*
Donald Erwin Hargis, Ph.D., *Emeritus Professor of Communication Studies.*
Harrison Manly Karr, Ph.D., *Emeritus Professor of Speech.*
Charles Wyatt Lomas, Ph.D., *Emeritus Professor of Communication Studies.*
Paul Irwin Rosenthal, Ph.D., *Associate Professor of Communication Studies.*
Ralph Richardson, Ph.D., *Emeritus Associate Professor of Speech.*

•

Steven A. Doyle, *Lecturer in Speech.*
Eugenie Dye, Ph.D., *Lecturer in Speech.*
Marde S. Gregory, *Lecturer in Speech.*
Thomas E. Miller, *Lecturer in Speech.*
Sonya H. Packer, *Lecturer in Speech.*

Lower Division Courses

1. Principles of Oral Communication. Prerequisite: satisfaction of Subject A requirement. Theory and practice of informal public speaking, including selection of content, organization of ideas, language and delivery; practice in extemporaneous and manuscript speaking; training in critical analysis through reading and listening to contemporary speeches.

2. Public Speaking and Discussion. Prerequisite: course 1. A continuation of course 1, with special emphasis on group discussions, panels, symposia, debates, and formal public speaking. Critical analysis of speeches in both contemporary and historical settings.

Upper Division Courses

107. Principles of Argumentation. Analysis of propositions, tests of evidence, briefing. Study of hindrances to clear thinking, ambiguity of terms, and prejudices. The critical analysis of selected argumentative speeches. Mr. Miller

144. Speech and Community Action. Consent of instructor required. An intensive laboratory-based, observation-oriented study of speech and communication practices of action groups, protest groups, and public officials involved with the metropolitan Los Angeles urban crises. Mr. Richardson

170. Rhetoric of Winston Churchill. An intensive study of the speeches of Winston Churchill during the wilderness years, the 30's and during the wartime years. The background and the impact of these speeches also are examined. Mr. Phelps

171. The Rhetoric of Franklin Roosevelt. An intensive study of major speeches and fireside chats during Roosevelt's presidency. The background and the impact of these speeches also are examined. Mr. Phelps

172. Rhetoric of Harry S. Truman. An intensive study of the major speeches of President Harry S. Truman. The background and the impact of these speeches are examined in relation to the social and political context of the Truman years.

175. The Speeches of Abraham Lincoln. Students will be introduced to the full span of Lincoln's speaking career. His methods of preparation, the influence of associates, his style, his delivery, and lastly, his effect upon the nation will be studied. Mr. Richardson

190A-190B. Forensics (½ course each). Prerequisite: consent of instructor. May be repeated once for credit.

191. Analysis and Briefing (½ course). Intensive study of selected political or social issues; preparation of bibliography; analysis and evaluation of issues and arguments. May be repeated once for credit.

197. Proseminar in Rhetoric. A variable topic course involving intensive study of discourse associated with a single major issue or personality. Senior standing or consent of instructor. Mr. Phelps

199. Special Studies (½ to 1 course). Prerequisites: senior standing and consent of instructor.

Study of Religion (Interdepartmental)

(Office: 5387 Bunche Hall)

Major in Study of Religion

The UCLA major in the Study of Religion has a twofold purpose. In the first place it is designed to give students a broad humanistic perspective. It introduces students to several religious traditions of mankind and thus to an appreciation of the very nucleus of civilization in various periods of history and various parts of the world, as well as to an understanding of fundamental human orientations. In the second place, the program asks the student to select one particular religious tradition for study at greater depth. Cohesion and integrity in the program are furthered by some courses dealing with philosophical problems in religion and with general anthropological reflections.

The program requires one year of language study which should be related to the major tradition of the student's concern. This minimum requirement will allow every student to develop some idea of the basic problems in understanding religious texts. Students contemplating graduate study will generally do more than fulfill the minimum requirement.

It is hoped that in the future a group of courses will be added to the nine groups of the present program to allow for a concentration of sociological and philosophical problems of religion.

Preparation for the Major

Anthropology 22; Philosophy 2; History 4; two courses chosen from History 1A, 1B, 1C, 9A, 9B, 9C, 9D, 10A, 10B.

The Major

The major requires a minimum of 13 upper division courses and three related courses in foreign language. These must include History 193A or 193E; Anthropology 133R or 156; two of the following: Philosophy 175, 177B or 195, 193.

In addition a student is to select one of the following groups as his main area of study and is to take three courses in that main area and three related courses in foreign language as indicated below. (The language courses may be either upper or lower division. If any requirements have been satisfied prior to admission to the program, they will be honored upon the recommendation of the appropriate instructor in the program. Another language pertinent to the student's main area may be substituted with the consent of the Committee in Charge of the Major. Among these languages are Hittite,

Ugaritic, Syriac, Coptic, Persian, Armenian, French, German, Irish, Welsh.)

Group 1: Ancient Near East and Eastern Europe — Three courses selected from the following: History 193D, Ancient Near East 130, 150A, 150B, 150C, 170, Indo-European Studies 131, 132, Iranian 170; three courses in one of the following languages: Ancient Egyptian or Akkadian.

Group 2: Indo-European Traditions—Three courses selected from the following: English M111D, M111E, History 193B, Old Norse and Medieval Scandinavian 140, Iranian 170, Slavic M179; three courses in one of the following languages: Sanskrit, Latin, Greek.

Group 3: Greece and Rome—Three courses selected from the following: Classics 161, 162, 166A, 166B, History 197 (Roman History: Christianity and Imperial Rome); three courses in one of the following languages: Latin or Greek.

Group 4: Israel and Judaism — Three courses selected from the following: English 108A, History M191A, M191B, 192A, 192B, Hebrew 120, 130, 135, 220 (Studies in Hebrew Biblical Literature), Jewish Studies 110, 150A, 150B, 151A, 151B, 199, Ancient Near East 170, 171; three courses in Hebrew.

Group 5: Christianity — Three courses selected from the following: Philosophy 105, 106, 107, English 108B, History 116A, 116B, 119, 120, 121A, 121B, 125B, 150A, 150B, 150C, Ancient Near East 170, Classics M170A; three courses in one of the following languages: Latin or Greek.

Group 6: Islam — Three courses selected from the following: Philosophy 104, History 106A, 107A, 107B, Arabic 150A, 150B, Iranian 150A, 150B; three courses in Arabic.

Group 7: South Asia—Three courses selected from the following: History 188A, 193B, 193C, 197 (South Asian Religions), Oriental Languages 167, Iranian 170; three courses in Sanskrit.

Group 8: Far East—Three courses selected from the following: History 193C, Oriental Languages 172, 173, 174; three courses in one of the following languages: Sanskrit, Chinese, Japanese.

Group 9: Traditional and Nonliterate Cultures — Three courses selected from the following: Anthropology 171, 174P, 177, Folklore and Mythology M111, M123A, M125, M129, 130, History 157A, 157B, 157C, Linguistics M150; three courses in a language chosen in consultation with an instructor in these areas.

The student will select six courses in traditions chosen from at least two groups outside his main area of study, excluding foreign language courses.

Honors in the Major

Honors in the interdepartmental major, Study of Religion, provides exceptional students with an opportunity to do independent research under the tutorial guidance of a faculty member associated with the program. A student admitted to Honors by the Committee in Charge of the Major should take three 199 courses under the guidance of the sponsoring professor. These courses will be taken in the student's senior year and will count as part of the regular requirement of sixteen upper division courses. Honors culminates in an Honors Thesis which the candidate should be capable of defending before his or her sponsoring professor and at least two members of the Committee in Charge of the Major.

In order to qualify for admission, students should have a minimum grade-point average of 3.4. They should consult the sponsoring professor of their choice and with his or her approval make their desire known to the Committee in Charge of the Major. They should do so preferably before the end of their junior year, and no later than the beginning of their senior year. The 199 courses designed for the program and the thesis topic should be approved by the Committee.

For further information, contact Professor Kees Bolle, History, 5387 Bunche Hall (825-3780, 825-4601).

Subject A Requirement

(Office: 302 Royce Hall)

Mike Rose, Ph.D., *Director of Freshman Writing Program.*

Subject A

Every student who does not satisfy the Subject A requirement by presenting transfer credit or acceptable test scores is required to take, in the quarter immediately following admission to the University, either English A or English 1. Placement in these courses is determined by performance on the Subject A Placement Test.

Theater Arts

(Office: 2310 Macgowan Hall)

William B. Adams, M.A., *Professor of Theater Arts.*
John R. Cauble, M.A., *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 (Chair).*
Arthur B. Friedman, Ph.D., *Professor of Theater Arts.*
Henry Goodman, Ph.D., *Professor of Theater Arts.*
Richard C. Hawkins, M.A., *Professor of Theater Arts.*
Melvyn B. Helstien, Ph.D., *Professor of Theater Arts.*
Carl R. Mueller, Ph.D., *Professor of Theater Arts.*
Louis C. Stoumen, B.A., *Professor of Theater Arts.*
Abe V. Wollock, Ph.D., *Professor of Theater Arts.*
John W. Young, M.A., *Professor of Theater Arts.*
Robert E. Lee, D.Litt., *Adjunct Professor of Theater Arts.*
Walden P. Boyle, Ph.D., *Emeritus Professor of Theater Arts.*
Michael Gordon, M.F.A., *Emeritus Professor of Theater Arts.*
Edward Hearn, M.A., *Emeritus Professor of Theater Arts.*
John H. Jones, M.A., *Emeritus Professor of Theater Arts.*
Walter K. Kingson, Ed.D., *Emeritus Professor of Theater Arts.*
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.*
William Froug, B.J., *Associate Professor of Theater Arts.*
Gary A. Gardner, Ph.D., *Associate Professor of Theater Arts.*
Robert H. Hethmon, Ph.D., *Associate Professor of Theater Arts.*
Dan F. McLaughlin, M.A., *Associate Professor of Theater Arts.*
Stephen D. Mamber, Ph.D., *Associate Professor of Theater Arts.*
Sylvia E. Moss, B.A., *Associate Professor of Theater Arts.*
Delia N. Salvi, 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 D. 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.*
Norman F. Welsh, B.A., *Visiting Associate Professor of Theater Arts.*
William H. Menger, M.A., *Emeritus Associate Professor of Theater Arts.*
Alan M. Armstrong, M.F.A., *Assistant Professor of Theater Arts.*
Teshome H. Gabriel, Ph.D., *Assistant Professor of Theater Arts.*
Michael J. Hackett, Ph.D., *Assistant Professor of Theater Arts.*
Patricia M. Harter, M.A., *Assistant Professor of Theater Arts.*
Michael S. McLain, M.F.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. Preloran, B.A., *Assistant Professor of Theater Arts.*
Richard S. 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.*
Edgar L. Brokaw, B.A., *Lecturer in Theater Arts.*
Ivan N. Cury, M.F.A., *Visiting Lecturer in Theater Arts.*
Gordon Davidson, M.A., *Visiting Lecturer in Theater Arts.*

Anthony DeLongis, B.A., *Visiting Lecturer in Theater Arts.*
Hugh M. Grauel, M.A., *Lecturer in Theater Arts.*
H. Peter Guber, LL.M., *Visiting Lecturer in Theater Arts.*
John Ingle, 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.*
Richard R. Portman, *Visiting Lecturer in Theater Arts.*
Beverly J. Robinson, M.A., *Visiting Lecturer in Theater Arts.*
Robert Rosen, M.A., *Adjunct Lecturer in Theater Arts.*
Robert Trachinger, *Visiting Lecturer in Theater Arts.*
Frank A. Valert, *Visiting Lecturer in Theater Arts.*
George Van Buren, *Visiting Lecturer in Theater Arts.*

The Department of Theater Arts bases its work in theater, motion pictures and television on a solid foundation in the liberal arts. The purpose of the curriculum is to develop in its students a scholarly, creative and professional approach to the theater arts. The aim of the department is to train graduates who will eventually make original contributions in the field of their work.

The student majoring in Theater Arts must complete the requirements of the College of Fine Arts and the requirements under one of the two majors: Theater or Motion Picture/Television.

ALL APPLICANTS PLEASE NOTE: The Motion Picture/Television Division's B.A. program has been changed effective Fall Quarter 1982. All new students are required to follow the new program.

Preparation for the Major

Theater: Courses 5A, 5B, 5C, 10, 20, English 90.

Motion Picture/Television: Students electing to specialize in motion picture/television for their B.A. degree should complete the general University and College of Fine Arts requirements before entering the program.

The Major

Theater: Courses 130A, 140A, 141A, 142A, 143, 160 or 161A*, 170, 172 (repeated four times); two units chosen from 122, 144A, 146, 149A, 174, 190A, 190B; 22 units of approved upper division theater arts electives, to bring the total to 60 upper division units. Through certain required courses listed above, all students during each quarter of residence are responsible for completing specific production assignments related to production activity of the theater curriculum.

*If course 161A is used to complete the requirement, 24 units of electives will be required.

Motion Picture/Television: Admission to this major is not automatic. Applicants may not apply until just prior to achieving full status as a junior at the University. They must obtain departmental consent by (1) filing a letter of intention; (2) giving evidence of creative or critical ability when requested; and (3) providing additional material as determined by the department.

No student in motion picture/television may begin the major, consisting of 68 upper division units, before the junior year, and during the junior and senior years must take courses 109, 134, 166 (double course), 185 (double course); one of the following writing courses: 131, 133, 135, 181B; two of the following film history courses: 106A, 106B, 106C, 106D, 106E, 108, 110A; two of the following film criticism courses: 107, 110B, 112, 113, 114, 116; two Motion Picture/Television Area courses; and four upper division advisor-approved electives pertinent to the student's course of study in at least two other departments, including the Theater Area of the Department of Theater Arts (these courses may not be used to satisfy College of Fine Arts or University requirements). It is recommended that the majority of the required courses be completed during the junior year.

The student should be mindful of the exigencies inherent in filmmaking and be prepared to meet the additional demands of time and costs.

NOTE: Students are required to perform assignments on each other's projects. In addition, the Department of Theater Arts reserves the right to hold for its own purposes, examples of any work done in classes and to retain for distribution such examples as may be selected.

Check the Schedule of Classes for courses restricted to majors only.

Lower Division Courses

THEATER AREA

5A. History and Drama of the Theater from Primitive Times to 1640. Lecture, three hours; discussion, one hour. Required of Theater majors. The history of the influence of different cultures, traditions and technologies on the development of theater as a social institution.

5B. History and Drama of the Theater from 1640 to 1900. Lecture, three hours; discussion, one hour. Required of Theater majors. The history of the influence of different cultures, traditions and technologies on the development of theater as a social institution.

5C. History and Drama of the Theater from 1900 to the Present. Lecture, three hours; discussion, one hour. Required of Theater majors. The history of the influence of different cultures, traditions and technologies on the development of theater as a social institution.

10. Fundamentals of Theater Production. Lecture, three hours; laboratory, three hours. Required in the first quarter of residence for Theater Arts majors specializing in theater. A basic study of the relationship of acting, stage management, scenery, lighting, costume and sound to the production of the play. Emphasis will be placed on the planning, procedures, materials, equipment and disciplines of theater production.

20. Acting Fundamentals. Lecture/laboratory, four hours. Required of Theater majors. An introduction to the interpretation of drama through the art of the actor. Development of individual insights, skills, and disciplines in the presentation of dramatic material to an audience.

*Upper Division Courses

THEATER AND GENERAL SECONDARY CREDENTIAL AREAS

100. The Teaching of Theater. Lecture, three hours. Prerequisites: courses 160 or 161A and 162A or consent of instructor. Study of current methods and problems of production as related to the secondary level. Highly recommended for students pursuing a secondary teaching credential.

101. Introduction to Theater Arts (½ course). Lecture, two hours; laboratory, two hours. Not open for credit to Theater Arts majors. A survey of theater, motion pictures, television and radio, together with critical analysis of their roles in contemporary culture, leading to an appreciation and understanding of the theater arts. A nontechnical presentation for the general student. To be taken on a Passed/Not Passed basis only.

102A. Selected Topics on the History of the European Theater. Lecture, three hours. Prerequisites: course 5A or equivalent and/or consent of instructor. An investigation in depth of a selected area of study in theater history from the Greeks through the Renaissance. May be repeated for a maximum of 12 units.

102B. Selected Topics on the History of the European Theater. Lecture, three hours. Prerequisites: course 5B or equivalent and/or consent of instructor. An investigation in depth of a selected area of study in theater history from the Baroque to the present. May be repeated for a maximum of 12 units.

102D. History of the European Theater. Lecture, three hours. Prerequisite: consent of instructor. A survey of the development of the theater from the Greeks to the present. May not be taken for credit by students with credit for more than one course from the 5A, 5B, 5C series.

102E. Theater of the Non-European World. Lecture, three hours; discussion, one hour. A survey of theater forms of the non-European world in which primary attention will be concentrated on an examination and analysis of the traditional dance-drama and puppet theaters of East Asia, Southeast Asia, South Asia, the Middle East and Africa. Analogous forms from European theater will be included for comparative purposes.

103A. Black People's Theater in America, Slavery to 1930. Lecture, three hours. An exploration of all extant materials on the history and literature of the theater developed and performed by Black artists in America from Slavery to 1930.

103B. Black People's Theater in America, 1930 to the Present. Lecture, three hours. An exploration of all extant materials on the history and literature of the theater as developed and performed by Black artists in America from 1930 to the present.

104D. History of the American Theater. (Formerly numbered 104A.) Lecture, three hours. The history of the American theater from the Revolutionary War to the Civil War. Not open for credit to students with credit for former course 104A prior to Fall 1981.

104E. History of the American Theater. Lecture, three hours. The history of the American theater from the Civil War to WWI. Not open for credit to students with credit for former course 104A prior to Fall 1981.

104F. History of the American Theater. (Formerly numbered 104B.) Lecture, three hours. The history of the American theater from WWI to the present. Not open for credit to students with credit for former course 104B prior to Fall 1981.

105. Main Currents in Theater. Lecture, three hours. Critical examination of the leading theories of theater from 1887 to the present. Study and discussion of modern styles of production.

*For concurrently scheduled courses ("C" prefix), activities and/or standards for performance and evaluation are applied separately for undergraduates and graduates.

117. The Puppet Theater (½ course). Lecture/laboratory, four hours. Prerequisite: consent of instructor. Study of the history and practice of the art of puppetry. An examination of the materials and methods of construction. Staging of puppet productions as laboratory practice. May be repeated for a maximum of six units.

118A. Creative Dramatics. Lecture/laboratory, four hours. Studies of the principles and procedures of the improvisational approach to drama as done with children from nursery school to junior high.

118B. Advanced Creative Dramatics (½ course). Discussion, one hour; laboratory, two hours. Prerequisite: course 118A or consent of instructor. Practical application of the methods and principles introduced in course 118A. May be repeated for a maximum of six units.

119. Theater for the Child Audience. Lecture/laboratory, four hours. Principles of production and performance for the child audience.

121. Acting Workshop (½ course). Laboratory, to be arranged. Prerequisites: course 20 and consent of instructor. A workshop which provides students with an opportunity to rehearse, perform and criticize scenes. Offered concurrently only with courses 160 and 161A, 161B, 161C. May be repeated once for credit (4 units).

122. Makeup for the Stage (½ course). Studio, two hours. The art of makeup and its relation to the production as a whole. History, aesthetics, materials, and procedures of makeup.

123. Intermediate Acting for the Stage. Lecture/laboratory, four hours. Prerequisites: course 20 and consent of instructor. Study and practice of the art of acting through the perfecting of techniques and application of those techniques to acting problems. Not open for credit to students with credit for former course 120.

124. Voice for the Stage. Lecture/laboratory, four hours. Prerequisites: course 20 and consent of instructor. Development of voice techniques for the stage. Includes work on relaxation, limbering, breathing, articulators, and resonators.

125A. Movement for the Actor. (Formerly numbered 125.) Lecture/laboratory, four hours. Prerequisites: course 20 and consent of instructor. Physical awareness for the actor, concentrating on warming up the body, relaxation, control, stunts and gymnastics. Not open for credit to students with credit for former course 125.

125B. Advanced Movement for the Actor. Lecture/laboratory, four hours. Prerequisites: course 125A and consent of instructor. An advanced and contemporary approach to classical and modern movement for the stage actor. Not open for credit to students with credit for former course 125.

130A. Fundamentals of Playwriting I. Lecture, three hours. Required of Theater majors. Course designed to stimulate the student's critical and creative faculties through the preparation of original material for the theater. Guidance in the completion of a one-act play.

130B. Fundamentals of Playwriting II. Lecture, three hours plus conference. Prerequisites: course 130A and consent of writing staff. Study in original material for the theater, its preparation and development. The course is designed to give further insight into the critical and creating aspects of the short and full-length play and guidance in the completion of the one-act and full-length play. May be repeated for a maximum of 12 units.

132. Manuscript Evaluation for Theater. Lecture, three hours. Prerequisites: course 130A and consent of instructor. May be repeated for a maximum of eight units. Principles and practices in the evaluation of manuscripts for theater.

136. Advanced Acting for the Stage. Lecture/laboratory, four hours. Prerequisites: courses 123, 124, 125A and consent of instructor. Study and practice of the art of acting through a progression to more advanced acting problems. May be repeated for a maximum of 12 units. Consecutive enrollment with the same instructor is not permitted. The total number of units for courses 136, 137A-137B-137C and former course 120 may not exceed 12 units.

137A-137B-137C. Continuum Study in Acting for the Stage. Lecture/laboratory, four hours. Prerequisites: courses 123, 124, 125A and consent of instructor. The technique of characterization and performance in advanced and complex acting styles. The total number of units from courses 136, 137A-137B-137C and former course 120 may not exceed 12 units. Students having taken former course 120 once prior to the institution of this change may take this course.

138. Special Problems in Performance Techniques. Lecture/laboratory, four hours. Prerequisites: courses 123, 124, 125A and consent of instructor. Study of complex problems in voice, movement and acting. May be repeated for a maximum of 12 units.

140A. Scenic Techniques for the Stage. Lecture, three hours; laboratory, six hours. Prerequisites: course 10 and consent of instructor. Required of Theater majors. An intensive study of scenic materials, construction techniques, production organization and the rigging of scenery. (Courses 140A, 141A and 142A may be taken in any sequence, but not concurrently.)

140B. Advanced Scenery for the Stage. Lecture/laboratory, four hours. Prerequisite: course 140A. Advanced study of technical problems in staging theater productions, including design analysis and planning related to rigging, shifting and construction techniques.

141A. Lighting Techniques for the Stage. Lecture, three hours; laboratory, six hours. Prerequisites: course 10 and consent of instructor. Required of Theater majors. An intensive study of theater lighting with emphasis on the relationship of lighting instruments and control equipment to lighting design. (Courses 141A, 140A and 142A may be taken in any sequence, but not concurrently.)

141B. Advanced Lighting for the Stage. Lecture/laboratory, four hours. Prerequisite: course 141A. The detailed study of stage lighting as an art, with emphasis given to design concepts. The interpretation of a script or score through the control of light and color in relation to actor and audience.

142A. Theater Costuming Techniques. Lecture, three hours; laboratory, six hours. Prerequisites: course 10 and consent of instructor. Required of Theater majors. The study of costumes analysis and the interpretation of theatrical costume design through the use of patterns, fabrics, and related costume materials. (Courses 142A, 140A and 141A may be taken in any sequence, but not concurrently.)

142B. Advanced Costuming for the Stage. Lecture, three hours; laboratory, four hours. Prerequisite: course 142A or consent of instructor. Special problems in the procuring, designing, construction and management of costumes used in theatrical productions.

143 . Scenic Design for the Theater. Prerequisites: course 10 and consent of instructor. Required of Theater majors. Basic principles of design as applied to the interpretation and presentation of the visual aspects of dramaturgy. Study of styles, techniques and methods of design for the theater arts. The translation of ideas into visual forms. Not open for credit to students with credit for former course 143A.

144A. Theater Sound Techniques (½ course). Lecture, two hours; laboratory, two hours. Prerequisite: course 10 or approved equivalent. A study of the equipment and techniques utilized in the recording and reproduction of sound for the theater.

144B. Advanced Theater Sound. Lecture, three hours; laboratory, four hours. Prerequisite: course 144A or consent of instructor. A detailed study of theater sound with emphasis on the composition and execution of theater sound tracks, recording techniques, and acoustic reinforcement.

145. Costume Design for the Theater. Lecture/laboratory, four hours. Prerequisite: consent of instructor. Design of costumes for theatrical presentations. The study of the use of silhouette, fabrics, color, and decoration as related to theatrical characterizations.

146. Scene Painting Techniques (½ course). (Formerly numbered 146B.) Lecture/laboratory, three hours. Prerequisite: consent of instructor. The study of scenic painting techniques and materials, and their relation to the realization of color design and elevations. May be repeated once for credit. Maximum credit: four units.

148. Special Courses in Design and Technical Theater. Lecture, three hours. Prerequisite: consent of instructor. Group study of selected subjects in design and technical theater. May be repeated for a maximum of 12 units.

149A. Basic Drafting Techniques for the Stage (½ course). Lecture/laboratory, four hours. Prerequisite: course 10 or consent of instructor. Studies of the basic skills and techniques of drafting for the stage, through the execution of floor plans and elevation drawings.

149B. Advanced Drafting for Theater Arts. Lecture/laboratory, four hours. Prerequisite: course 149A or consent of instructor. An advanced course in the technical sketching and drafting of working drawings essential in the development of the design of sets and properties for theater, television and motion picture productions.

160. Fundamentals of Play Direction. (Formerly numbered 160A.) Lecture/laboratory, four hours. Required of Theater majors. Course 161A may be substituted for this requirement*. Basic theories of play direction and their application through the preparation of scenes under rehearsal conditions. Course 121 may be offered concurrently with this course. (*If course 161A is substituted, an additional two upper division units will be required.)

161A. Continuum in Directing for the Stage (½ course). Lecture/laboratory, six hours. Prerequisite: consent of instructor. The intensive development of primary directing skills and process, including text analysis and the exploration of craft fundamentals as a basis for director-actor communication and effective staging. The student will work in proscenium configuration with scenes drawn from plays of American Realism. This course may be used to fulfill the major requirement in directing. Course 121 may be offered concurrently with this course.

161B. Continuum in Directing for the Stage. Lecture/laboratory, six hours. Prerequisites: consent of instructor and course 160 or 161A. The further development of craft elements of directorial method with additional emphasis on the psychological aspects of director-actor communication. The student will work in arena and proscenium configurations with scenes drawn from the period of Early Realism through Expressionism. Course 121 may be offered concurrently with this course.

161C. Continuum in Directing for the Stage (1½ courses). Lecture/laboratory, six hours. Prerequisites: consent of instructor and course 161B. Working in three-quarter and environmental configurations, the student director will explore problems of style in production by staging scenes drawn from period plays (Greek through Romantic eras) and from contemporary, non-Realistic plays. Course 121 may be offered concurrently with this course.

162A. Intermediate Play Direction. (Formerly numbered 160B.) Lecture/discussion, two hours; laboratory, eight hours. Prerequisites: course 160 or 161A and consent of instructor. A course in the application of stage direction techniques to the one-act play. Each student will direct a one-act play to be performed under rehearsal conditions. Material will be drawn from published sources. Not open for credit to students with two units of credit for former course 160B.

162B. Advanced Play Direction. (Formerly numbered 161.) Lecture, four hours; laboratory, six hours. Prerequisites: course 160 or 161A and consent of instructor. Special problems in the direction of original one-act plays under production conditions. May be repeated for a maximum of eight units with consent of instructor.

170. Theater Laboratory. Lecture, four hours; laboratory, eight hours. Prerequisites: courses 140A, 141A, 142A, 143A. Required of Theater majors. Laboratory in theater production, under supervision. The translation of ideas and concepts into the dramatic form.

171A. Advanced Theater Laboratory (½ or 1 course). Hours to be arranged. Prerequisite: consent of instructor. May be taken for a maximum of one course. Creative participation as an actor or stage manager in the public presentation of departmental productions.

171B. Advanced Theater Laboratory (½ or 1 course). Hours to be arranged. Prerequisite: consent of instructor. May be taken for a maximum of one course. Creative participation in the realization of production elements related to the public presentation of departmental productions.

C172. Technical Theater Laboratory (½ course). Hours to be arranged. Prerequisite: consent of instructor. Required of Theater majors. A laboratory in various aspects of theater production. The student must repeat the course for a total of eight units. No assignment may be repeated more than once. Maximum eight units. Concurrently scheduled with courses C272A-C272B-C272C, C472.

174. Techniques of Stage-Managing (½ course). Lecture, two hours. The professional duties of the stage manager. The problems of unions, professional auditions, organization, scheduling, out-of-town openings, Broadway openings, and the responsibilities of a lengthy run.

180A. The Role of the Producer in the Professional Theater (½ course). Lecture, two hours. A study of the structure governing the economic and artistic decision-making processes in the professional theater of America.

180B. The Role of Management in the Educational and Community Theater (½ course). Lecture, two hours. A study of the artistic, social and economic criteria in the administration of educational and community theater.

181. The Touring Company (2 or 3 courses). Lecture, 20 hours; laboratory, 22 hours. Prerequisite: consent of instructor. Rehearsal and technical preparation of a theatrical work for touring, and the performance of that work on tour.

MOTION PICTURE/TELEVISION AREAS

***105A. History of the American Motion Picture.** Lecture/screenings, eight hours; discussion, one hour. A historical and critical survey, with examples, of the American motion picture both as a developing art form and as a medium of mass communication. May be repeated for credit (maximum 2 courses) with departmental consent (determined on basis of change in course content).

***105B. History of the European Motion Picture.** Lecture/screenings, eight hours; discussion, one hour. A historical and critical survey, with examples, of the European motion picture both as a developing art form and as a medium of mass communication. May be repeated for credit (maximum 2 courses) with departmental consent (determined on basis of change in course content).

106C. History of African, Asian and Latin American Film. Lecture/screenings, eight hours; discussion, one hour. A critical, historical, aesthetic and social study—together with an exploration of the ethnic significance—of Asian, African, Latin American and Mexican films.

106D. The Development of Film in Europe and the United States: From WWI Through the Depression. Lecture/screenings, eight hours; discussion, one hour. An interdisciplinary and comparative approach to the development of film in Europe and the United States from the silent era through the Depression. Particular stress will be given to the interrelationship of film with its historical context and to the social dimensions of film structure, aesthetics, and language. (Part of one two-quarter sequence, including course 106E, that can be taken jointly or separately.)

106E. The Development of Film in Europe and the United States: From WWII to the Present. Lecture/screenings, eight hours; discussion, one hour. An interdisciplinary and comparative approach to the development of film in Europe and the United States from the end of the 30's through the present. Particular stress will be given to the interrelationship of film with its historical context and to the social dimension of film structure, aesthetics, and language. (Part 2 of the two-quarter sequence, including course 106D, but may be taken separately.)

107. Experimental Film. Lecture/screenings, eight hours; discussion, one hour. A study and analysis of unconventional developments in the motion picture.

108. History of Documentary Film. Lecture/screenings, eight hours; discussion, one hour. Prerequisite: consent of instructor. The philosophy of the documentary approach in the motion picture. The development of critical standards, and an examination of the techniques of teaching and persuasion used in selected documentary, educational, and propaganda films.

109. Introduction to Film and Television Study. Lecture, three hours; discussion, one hour. Prerequisite: consent of instructor. Introduction to the major principles and concepts that organize film and television studies, including author, work, style, genre, structure and ideology, with special attention to the approaches and procedures involved in a critical "reading" of a work. Required of Motion Picture/Television majors in the first quarter of residency and recommended as a prerequisite to other motion picture/television history and criticism courses.

110A. History of Broadcasting. Lecture/viewing, six hours; discussion, one hour. Prerequisite: consent of instructor. Critical survey of broadcasting here and abroad. Consideration of the social responsibilities and educational implications of broadcasting. Not open for credit to students with credit for former course 110.

110B. Problems and Issues in Broadcast Media. Lecture, four hours; discussion, two hours; laboratory, to be arranged. Prerequisite: consent of instructor. Study of the current issues and problems related to public and commercial broadcast programming and management, including analysis of contemporary criticism of the broadcast media. Open for credit to students with credit for former course 110.

111. Film Distribution and Exhibition. Lecture, three hours; laboratory, to be arranged. Prerequisite: consent of instructor. History and theory of organization of theatrical and nontheatrical distribution and exhibition of motion pictures and analysis of their interrelationships with production practices.

112. Film and Social Change. Lecture/screenings, eight hours; discussion, one hour. The development of documentary and dramatic films in relation to and as a force in social development.

***113. Film Authors.** Lecture/screenings, eight hours; discussion, one hour. An in-depth study of a specific film author (director or writer). May be repeated for credit (maximum 2 courses) with departmental consent (determined on basis of change in course content).

***114. Film Genres.** Lecture/screenings, eight hours; discussion, one hour. Study of a specific film genre, e.g., the Western, the gangster cycle, the musical, the silent epic, the comedy, the social drama. May be repeated for credit (maximum 2 courses) with departmental consent (determined on basis of change in course content).

115. Producers and Their Films. Lecture/screenings, eight hours; discussion, one hour. A consideration of the individual or corporate producers as they have affected the art and industry of the motion picture. Course content will vary, considering the work of a studio such as Paramount, Metro-Goldwyn-Mayer, Warner Brothers, etc. or of an individual such as Samuel Goldwyn, Stanley Kramer, Hal Wallis, etc. May be repeated for credit (maximum 2 courses).

***116. Criticism.** Lecture, four hours; laboratory, to be arranged. Study of and practice in criticism for the theater, motion pictures and television. May be repeated for credit (maximum 2 courses) with departmental consent (determined on basis of change in course content).

126A. Advanced Acting for Television and Motion Pictures. Laboratory, six hours. Prerequisite: course 20 or consent of instructor. Projects in acting for television and motion pictures. Videotape recording of selected acting exercises and readings. May be repeated for a maximum of 12 units.

126C. Sportscasting. Lecture, two hours; laboratory, four hours. Prerequisite: consent of instructor. Intensive study of Sportscasting; laboratory emphasis on studio and field training; videotaping and playback of straight sportscasts, play by play, color, interviews, commentary and editorials. Students required to write original material for all exercises. Extensive training re hand-held field equipment; use of the remote truck. Field exercises. Students rotate in production positions. May be repeated for a maximum of 12 units.

127. The Film Image. Lecture, one hour; discussion, two hours; laboratory, one hour. Prerequisite: consent of instructor. Proseminar in the craft of film aesthetics. The Visual Revolution. Biophysical nature of perception. Lenses, perspective, graphic styles. Principles of composition, screenwriting, sound, editing. Problems of time and movement. How a director views his work and his world.

131. Nontheatrical Motion Picture/Television Writing. Discussion, three hours. Prerequisite: consent of instructor. A course in the research and writing of documentary, technical, educational, industrial and propaganda scripts. May be repeated for a maximum of three courses.

133. Script Analysis. Lecture, three hours; discussion, one hour. Prerequisites: consent of instructor, restricted to Motion Picture/Television majors. The considerations and practices in the evaluation of scripts written for motion picture or television production.

134. Motion Picture/Television Writing. Lecture, one hour; discussion, two hours. Prerequisites: consent of instructor, restricted to Motion Picture/Television majors. A course on the fundamentals of the craft of writing scripts for film or television, including the differences in writing for feature films, short films, filmed television, "live" television and experimental films. Required of Motion Picture/Television majors.

135. Advanced Motion Picture/Television Writing (2 courses). Discussion, three hours. Prerequisites: course 134 and/or consent of instructor. A course in motion picture/television writing offered each quarter. Original motion picture/television material to be developed. May be repeated for a maximum of 24 units.

150. Basic Motion Picture Photography. (Formerly numbered 150A.) Lecture, three hours; laboratory, four hours. Prerequisites: course 166, consent of instructor, restricted to Motion Picture/Television majors. Introduction to image control in motion picture photography through exposure, lighting, and selection of film, camera, and lens. Supervised projects in photography to complement material covered in the lecture. Not open to students with credit for former course 150A.

151. Design for Motion Pictures and Television. Lecture, three hours; laboratory, to be arranged. Prerequisites: consent of instructor, restricted to Motion Picture/Television majors. The techniques of art direction. If the course is repeated, the student is required to design and complete a short film. May be repeated for a maximum of 12 units.

152. Motion Picture/Television Sound Recording. (Formerly numbered 152A.) Lecture, three hours; laboratory, to be arranged. Prerequisites: course 166, restricted to Motion Picture/Television majors. Introduction to principles and practices of motion picture and television sound recording, including supervised exercises. Not open to students with credit for former course 152A.

153C. Color Cinematography. Lecture, three hours. Prerequisite: consent of instructor. History and theories of color photography with emphasis on present-day methods in motion picture and television production. A comparative study of additive and subtractive systems as employed by Technicolor, Ansco, Kodak, and others.

154. Motion Picture Editing. (Formerly numbered 154A.) Lecture, three hours; laboratory, to be arranged. Prerequisites: course 166, consent of instructor, restricted to Motion Picture/Television majors. Introduction to the artistic and technical problems of film editing, with practical experience in the editing of image and synchronous sound. Not open to students with credit for former course 154A.

164. Direction for Motion Pictures. Laboratory, to be arranged. Prerequisites: course 166, consent of instructor. A study of the problems faced by a motion picture director and various approaches to their solution. May be repeated for a maximum of 12 units.

165. Direction for Television. Laboratory, six hours. Prerequisites: courses 134, 166, 185, consent of instructor. Instruction and supervised exercises in television direction with emphasis on the creative use of cameras, sound, composition, and communication with those in front of and behind the camera. May be repeated for credit: maximum of three courses.

166. Undergraduate Production I (2 courses). Lecture/discussion, four hours; laboratory, eight hours; other, four hours. Prerequisites: consent of instructor, restricted to Motion Picture/Television majors. The completion of one or more short films, including their writing, production and editing. May not be repeated. Required of Motion Picture/Television majors. Not open to students with credit for former course 179A.

176A-176B. Undergraduate Production II (2 courses each). Discussion, three hours; laboratory, to be arranged. Prerequisites: course 166, consent of instructors, restricted to Motion Picture/Television majors. The completion of a motion picture, television or video production, including its writing, production and editing. May not be repeated. Not open to students with credit for former courses 179B, 179D or 179E.

177. Motion Picture/Television Acting Workshop (½ or 1 course). Laboratory, to be arranged. Prerequisite: consent of instructor. A workshop providing opportunities for students to rehearse, perform and evaluate their scenes under the supervision and criticism of the instructor.

178. Technical Motion Picture/Television Laboratory (½ or 1 course). Laboratory, to be arranged. Prerequisites: consent of instructor, restricted to Motion Picture/Television majors. A laboratory of various aspects of motion picture/television production. May be repeated for a total of 12 units. Only eight units may apply toward the Motion Picture/Television major.

180A-180B-180C. Workshop in Broadcast News and Documentary. Discussion, three hours; laboratory, five hours. Prerequisite: consent of instructor. Instruction and supervised exercises in writing, reporting, editing, and producing radio and television news, public affairs, and documentary programs.

181A. Animation Design in Theater Arts. Lecture, three hours; laboratory, three hours. Prerequisite: consent of instructor. History and use of speech, rhythm, and graphic design to form effective communication on film.

181B. Writing for Animation (1 or 2 courses). Lecture, six hours; laboratory, to be arranged. Prerequisites: course 181A, consent of instructor and a storyboard at the first class meeting. Research and practice in creative writing and planning for the animated film. May be repeated for credit: maximum of four courses (16 units).

181C. Animation Workshop (1 or 2 courses). Lecture, six hours; laboratory, to be arranged. Prerequisites: course 181A, consent of instructor and a storyboard at the first class meeting. Organization and integration of the various creative arts used in animation to form a complete study of a selected topic. May be repeated for credit: maximum of four courses (16 units).

182. Introduction to Video Production (2 courses). Lecture, four hours; discussion, four hours; laboratory, to be arranged. Prerequisites: consent of instructors, restricted to Motion Picture/Television majors. An introduction to the techniques, processes and equipment used in video production culminating in a short project each student originates.

185. Beginning Television and Video Production (2 courses). Laboratory, sixteen hours. Prerequisites: consent of instructor, restricted to Motion Picture/Television majors. Instruction and exercises in the basic techniques of television and video production, including class participation in campus broadcasts. Required of Motion Picture/Television majors. Not open to students with credit for course 185 prior to Fall Quarter 1982.

187A-187B-187C. Remote Television Broadcasting. Laboratory, three hours plus additional hours to be arranged. Prerequisites: course 185, consent of instructor. Instruction and supervised exercises in the planning and production of remote on-location television programs.

189. Overview of the Motion Picture Industry. Discussion, three hours. Prerequisite: consent of instructor. Evolution of economic and business structure of Motion Pictures from early beginnings to present, stressing methods of operation and the influence of social and economic pressures that contributed to the changing financial, distribution and exhibition practices.

192. Motion Picture and Television Internship (1 or 2 courses). Laboratory, ten or twenty hours weekly; field experience. Prerequisite: consent of instructor. An internship at various film and television studios accentuating the creative contribution, the organization, and the work of professionals in their various specialties. May be repeated once for a maximum of 12 units.

193A. Film Curatorship. Lecture, two hours; discussion, two hours; laboratory, four hours. Prerequisite: consent of instructor. Study of the principles and techniques of film curatorship and research, including but not limited to acquisitions, cataloging, storage and retrieval systems. Special attention will be devoted to the application of new technology, equipment, and program materials to film archival-library design for research and teaching.

193B. Television Curatorship. Lecture, two hours; discussion, two hours; laboratory, four hours. Prerequisite: consent of instructor. Study of the principles and techniques of television curatorship and research, including but not limited to acquisitions, cataloging, storage and retrieval systems. Special attention will be devoted to the application of new technology, equipment, and program materials to television archival-library design for research and teaching.

195. Independent Production of Feature Films. Lecture, three hours. Prerequisites: course 189 and consent of instructor. Survey of financial and business aspects involved in packaging, distributing and exhibiting motion pictures today from the various perspectives of prominent industry leaders. May be repeated for credit (maximum 2 courses) with departmental consent (determined on basis of change in instructors).

198. Senior Colloquium. Lecture, three hours. Prerequisites: consent of instructor, senior standing. An advanced seminar investigating special topics in film and television studies (i.e., style, modes of adaptation, media and social effects, etc).

Special Studies for All Specializations

199. Special Studies in Theater Arts (½ to 2 courses). Hours to be arranged. Prerequisites: senior standing, 3.0 GPA in major and consent of instructor. May be repeated for a total of two courses.

Graduate Courses

For complete descriptions of graduate-level courses offered by this department, please consult the *UCLA Graduate Catalog*.

Related Courses in Other Departments

Classics 142. Ancient Drama.

Dance 152A. Lighting Design for Dance Theater.

152B. Costume and Scenic Design Concepts for Dance Theater.

English 10A, 10B, 10C. English Literature.

90. Shakespeare.

112. Children's Literature.

135A-135B-135C. Creative Writing: Drama.

167. The Drama, 1842 to the Present.

Humanities 1A, 1B, 1C. World Literature.

Italian 46A-46B-46C. Italian Cinema and Culture (in English).

121. Italian Cinema.

122. The Italian Theater.

Music 135A-135B-135C. History of the Opera.

Urban Studies or Organizational Studies (Interdepartmental)

(Office: 4289 Bunche Hall)

Special Program in Urban Studies or Organizational Studies

Students may elect to combine one of these programs with a departmental major and may petition to have the area of specialization recognized with the bachelor's degree.

The option of completing an individual major in Urban Studies or Organizational Studies is also open to qualified students.

Students with departmental majors should seek advising in the appropriate department. Students interested in the individual major should consult a counselor in the College of Letters and Science.

The requirements for the specializations (courses within the two specializations must

be taken for a letter grade) to be taken in conjunction with the major in the division of social sciences are:

Preparation for the Programs

At least five of the following courses appropriate to the courses to be taken in the specialization: Economics 1 and 2; Sociology 18 and 109 or the equivalent; Political Science 1; Psychology 10; Sociology 1 or 101; Geography 4.

Urban Studies Specialization

(1) At least three courses outside the major department chosen from: Political Science 182A, Sociology 125, Economics 120, Geography 150, Anthropology 167, Psychology 168; (2) one of the following suites of courses, outside the major department: Political Science 180, 182B, 188B; Economics 121, 130, 131, 133; Sociology 124, 154, 155; Geography 145, 146, 152, 156; History 154A-154B, 154C-154D; Psychology 127, 135, 137A; (3) internship experience in an urban governmental or community service organization.

Organizational Studies Specialization

(1) At least three courses outside the major department chosen from: Political Science 181, 190, Sociology 121, 141, Management 190; (2) one of the following suites of courses, outside the major department: Political Science 142, 145, 146; Economics 131, 170, 171; Sociology 124, 140, 152, 154; Geography 146, 148, 149; Psychology 135, 148; (3) internship experience in a governmental or service organization.

For further information, contact Professor Robert Fried, Political Science, 4289 Bunche Hall (825-4331).

Women's Studies (Interdepartmental)

(Office: 240 Kinsey Hall)

Special Program in Women's Studies

Students completing a bachelor's degree may petition to receive a Women's Studies Specialization in addition to a major in their chosen discipline.

The Women's Studies Program, established in 1975, spans departments, disciplines and ideologies. It integrates the study of women — their social contributions and cultural experiences — into traditional academic curricula and draws upon new research and findings. A Women's Studies Committee (composed of the director, faculty members and a student representative) sets program policies and curricula. Professionals within and without the University contribute their time, expertise and enthusiasm to the program.

The program sponsors ongoing research in women's studies, presents guest lecturers and has established a Women's Studies Student Union. A library of information related to women's issues is housed in the program office.

Preparation for the Program

Women's Studies 100, Introduction to Women's Studies.

Upper Division

Students participating in this program are required to complete a departmental major in Anthropology, Biology, English, History, Philosophy, Political Science, Psychology or Sociology (students in other majors may petition to attach the Women's Studies Specialization), Women's Studies M197 and six courses from the "Supporting Courses" list (at least two of the six courses must be taken in departments other than the major department, and two may be experimental courses offered by the Council on Educational Development). All courses applied to the specialization must be taken for a letter grade. Students may petition to have other courses accepted.

Students are encouraged to declare their Specialization in Women's Studies as early as possible and to discuss with the director their proposed course of study.

For further information, contact Mary M. Smith, Women's Studies Program, 240 Kinsey Hall (206-8101).

Upper Division Core Courses

100. Introduction to Women's Studies. Lecture, three hours. This one-quarter course introduces students to the interdisciplinary and cross-cultural study of women in preparation for further investigation within traditional disciplines. Intended for sophomores and first-quarter juniors, it is required for students who wish to graduate with a "Specialization in Women's Studies." Ms. Henley

165. Special Topics in Women's Studies. Prerequisites: upper division standing and one prior course in women's studies. This course is designed to allow specialized or advanced study in an area within women's studies.

M197. Senior Seminar in Women's Studies. (Formerly numbered 197.) (Same as Education M197.) Discussion, three hours; laboratory, one hour. Prerequisites: course 100 plus two other women's studies courses; seniors and juniors by consent of instructor. Designed for students completing work in Women's Studies. Each student pursues research on a specific topic concerning women, explores frameworks for understanding female experience (biological, economic, historical and psychological) and refines methods for research. Fulfills social science or humanities breadth requirement. Ms. Astin

Supporting Upper Division Courses

M107. Women in Literature. (Same as English M107.) Prerequisite: satisfaction of Subject A requirement. A survey of literary works by and about women, the course examines the delineation of women in English and American literature, studies in historical and contemporary themes, and the evolution of forms and techniques in poetry, fiction and biography. Ms. Rowe, Ms. Yeazell

M137E. Work Behavior of Women and Men. (Same as Psychology M137E.) Prerequisites: course 100 or Psychology 10 and junior or senior standing. Examination of work behavior of men, and especially women. Covers such topics as antecedents of career choice, job finding, leadership, performance evaluation, discrimination and evaluation bias, job satisfaction and interdependence of work and family roles.

M148. Women in Higher Education. (Same as Education M148.) Prerequisite: upper division standing. The course examines the education and career development of women in higher education. Specifically, it focuses on undergraduate and graduate women; women faculty and administrators; curricula, programs and counseling services designed to enhance women's educational and career development, affirmative action and other recent legislation. Ms. Astin

M158. Women in Italy. (Same as Italian M158.) This course is designed with the intent of examining the role that women have played in Italian society. It will concentrate alternatively on the world of the Medieval and Renaissance "Matriarch" and on the "liberated" women of our times. Historical and political documents and social and religious taboos will be presented and discussed together with other data derived from literature and art. Mrs. Cottino-Jones

M163. Women in Culture and Society. (Same as Anthropology M163.) Prerequisite: Anthropology 5 or 22. A systematic approach to the study of sex roles from an anthropological perspective. A critical review of relevant theoretical issues supported by ethnographic material from traditional cultures and contemporary American culture. Ms. Levine

M165. The Psychology of Sex Differences. (Same as Psychology M165.) This course considers psychological literature relevant to understanding contemporary sex differences. Some topics included are sex-role development and role conflict, physiological and personality differences between men and women, sex differences in intellectual abilities and achievement and the impact of gender on social interaction. Ms. Peplau

M172. The Afro-American Woman in the U.S. (Same as Afro-American Studies M172 and Psychology M172.) Prerequisite: upper division standing. This course will focus on the impact of the social, psychological, political and economic forces which impact upon the interpersonal relationships of Afro-American women, as members of a large society and as members of their biological and ethnic group. Ms. Mays

Supporting Upper Division Courses In Other Departments

Anthropology 151. Marriage, Family and Kinship.

Classics 150. The Female in Antiquity.

French 158. The Woman in French Literature.

History 136J. Topics in European History: Women.

156C-156D-156E. Social History of American Women.

197. Undergraduate Seminar: Constitutional Law and Sex Discrimination.

Philosophy 192. Philosophical Analysis of Issues in Women's Liberation.

Public Health 176. Human Sexuality and Sexual Health.

Sociology 160. The Demography and Sociology of Women's Economic Roles.

Zoology

See Biology

Administrative Officers

REGENTS EX OFFICIO

Governor of California
Edmund G. Brown, Jr.

Lieutenant Governor of California
Mike Curb

Speaker of the Assembly
Willie L. Brown, Jr.

State Superintendent of Public Instruction
Wilson Riles

President of the Alumni Association of the University of California+
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 accession 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.

Edward W. Carter (1988)
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 (1988)
Vilma S. Martinez (1990)
John F. Henning (1989)
Stanley K. Sheinbaum (1989)
Yori Wada (1992)
Frank W. Clark, Jr. (1988)
David Geffen (1990)
Willis W. Harman (1990)
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)

PRINCIPAL OFFICERS OF THE REGENTS

President of The Regents
Edmund G. Brown, Jr.

Chair of The Regents
Joseph A. Moore

Vice Chair of The Regents
Glenn Campbell

General Counsel
Donald L. Reidhaar

Secretary
Bonnie M. Smotony

Treasurer
Herbert M. Gordon

OFFICE OF THE PRESIDENT

President of the University
David S. Saxon

Vice President of the University
William B. Fretter

Academic Vice President
William R. Frazer

Vice President — Academic and Staff Personnel Relations
Archie Kleingartner

Vice President — Agriculture and University Services
James B. Kendrick, Jr.

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

OFFICERS EMERITI

President of the University, Emeritus, and Professor of Economics, Emeritus
Charles J. Hitch

President of the University, Emeritus, and Professor of Business Administration, Emeritus
Clark Kerr

Vice President of the University, Emeritus, Professor of Agricultural Economics, Emeritus, and Agricultural Economist, Emeritus
Harry R. Wellman

Vice President — Budget Plans and Relations, Emeritus
Thomas E. Jenkins

University Provost, Emeritus, Chancellor at Santa Cruz, Emeritus, and Professor of Mathematics, Emeritus
Angus E. Taylor

Vice President, Emeritus, and Secretary and Treasurer of The Regents, Emeritus
Robert M. Underhill

Treasurer of The Regents, Emeritus
Owsley B. Hammond

General Counsel of The Regents, Emeritus
Thomas J. Cunningham

Associate Counsel of The Regents, Emeritus
John E. Landon

CHANCELLORS OF THE CAMPUSES

Chancellor at Berkeley
Ira Michael Heyman

Chancellor at Davis
James H. Meyer

Chancellor at Irvine
Daniel G. Aldrich, Jr.

Chancellor at Los Angeles
Charles E. Young

Chancellor at Riverside
Tomas Rivera

Chancellor at San Diego
Richard C. Atkinson

Chancellor at San Francisco
Julius R. Krevans

Chancellor at Santa Barbara
Robert A. Huttenback

Chancellor at Santa Cruz
Robert L. Sinsheimer

UNIVERSITY PROFESSORS

Melvin Calvin, *Emeritus University Professor,* Berkeley, Laboratory of Chemical Biodynamics

Murray Krieger, *University Professor,* Irvine, Department of English and Comparative Literature

Josephine Miles, *Emeritus University Professor,* Berkeley, Department of English

Julian S. Schwinger, *University Professor,* Los Angeles, Department of Physics

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

Sherwood L. Washburn, *Emeritus University Professor,* Berkeley, Department of Anthropology

John R. Whinnery, *University Professor,* Berkeley, Department of Electrical Engineering and Computer Sciences

Lynn White, Jr., *Emeritus University Professor,* Los Angeles, Department of History

GENERAL ADMINISTRATIVE OFFICERS — UCLA

Chancellor
Charles E. Young, Ph.D.

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

Vice Chancellor — Faculty Relations
Harold W. Horowitz, S.J.D.

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

Vice Chancellor—Research Programs
Albert A. Barber, Ph.D.

Vice Chancellor—Student Affairs
Winston C. Doby, Ed.D.

Assistant Executive Vice Chancellor and Assistant to the Chancellor
Tallman Trask III, M.B.A., Ph.D.

Administrative Vice Chancellor
James W. Hobson, M.B.A.

Vice Chancellor—Institutional Relations
Elwin V. Svenson, Ed.D.

Vice Chancellor—Public Affairs
Alan F. Charles, J.D.

Assistant Chancellor—Planning
Adrian H. Harris, M.S.

Executive Assistant to the Chancellor
Rosemary Ford, B.A.

Assistant to the Chancellor—Special Projects
John R. Sandbrook

Director of Hospital and Clinics
Raymond G. Schultze, M.D.

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.

University Librarian
Russell Shank, M.B.A., D.L.S.

Dean of Continuing Education
Leonard Freedman, Ph.D.

DEANS OF THE COLLEGES AND SCHOOLS

Graduate School of Architecture and Urban Planning
Harvey S. Perloff, Ph.D.

School of Dentistry
James R. Hooley, D.D.S.

Graduate School of Education
John I. Goodlad, Ph.D., L.H.D., LL.D.

School of Engineering and Applied Science
Russell R. O'Neill, Ph.D.

College of Fine Arts
Robert H. Gray, M.F.A.

School of Law
Susan W. Prager, J.D.

College of Letters and Science

Provost
Raymond L. Orbach, Ph.D.

Division of Humanities
Philip Levine, Ph.D.

Division of Life Sciences
John D. O'Connor, Ph.D.

Division of Physical Sciences
Harold K. Ticho, Ph.D.

Division of Social Sciences
Antony R. Orme, Ph.D.

Graduate School of Library and Information Science
Robert M. Hayes, Ph.D.

Graduate School of Management
J. Clayburn LaForce, Jr., Ph.D.

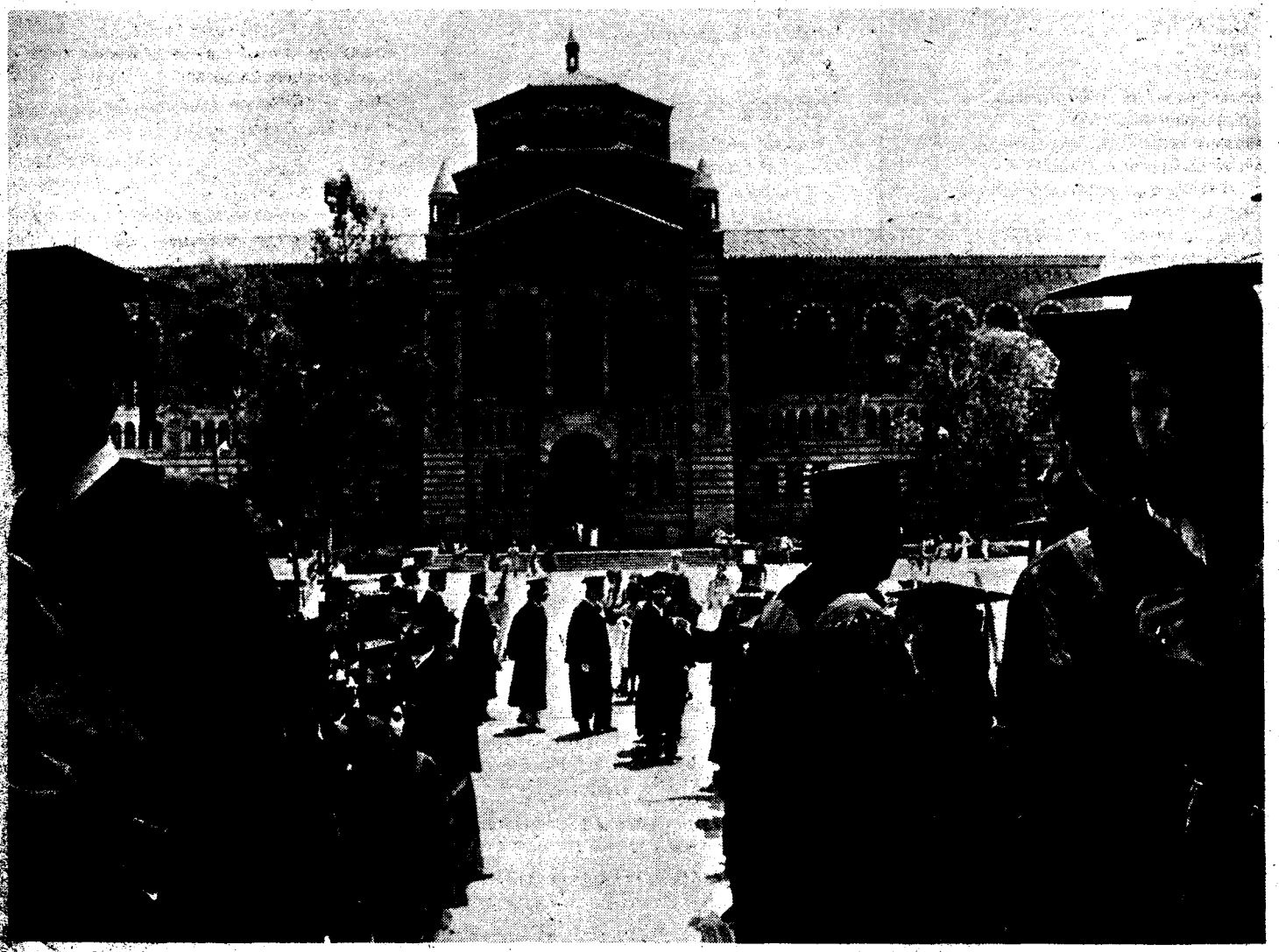
School of Medicine
Sherman M. Mellinkoff, M.D.

Associate Dean
A. Frederick Rasmussen, Jr., M.D., Ph.D.

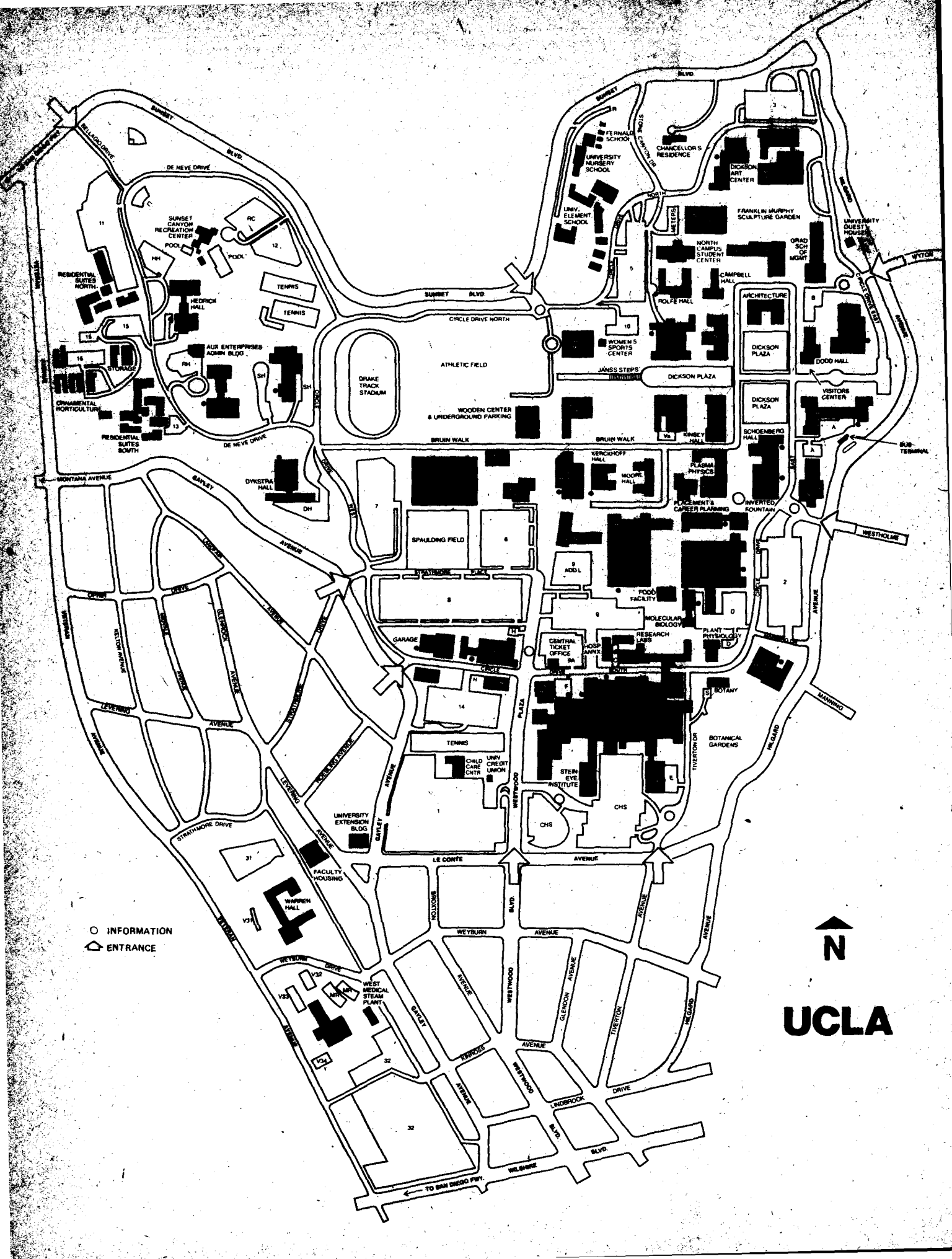
School of Nursing
Mary E. Reres, R.N., M.P.N., Ed.D.

School of Public Health
Roger Detels, M.D., M.S.

School of Social Welfare
Maurice F. Connery, D.S.W.



Index


SUNSET BLVD.
BELLAGIO DRIVE
DE NEVE DRIVE
SUNSET CANYON RECREATION CENTER
POOL
TENNIS
RESIDENTIAL SUITES NORTH
HEDRICK HALL
AUX ENTERPRISES ADMIN BLDG.
STORAGE
ORNAMENTAL HORTICULTURE
RESIDENTIAL SUITES SOUTH
CIRCLE DRIVE NORTH
ATHLETIC FIELD
DRAKE TRACK STADIUM
WOMEN'S SPORTS CENTER
JANSS STEPS
WOODEN CENTER & UNDERGROUND PARKING
BRUIN WALK
FERNALD SCHOOL
UNIVERSITY NURSERY SCHOOL
UNIV. ELEMENT SCHOOL
CHANCELLOR'S RESIDENCE
DICKSON ART CENTER
FRANKLIN MURPHY SCULPTURE GARDEN
NORTH CAMPUS STUDENT CENTER
CAMPBELL HALL
ROLFE HALL
ARCHITECTURE
DICKSON PLAZA
DODD HALL
VISITORS CENTER
SCHOENBERG HALL
KINSEY HALL
KERCKHOFF HALL
MOORE HALL
PLASMA PHYSICS
PLACEMENT & CAREER PLANNING
INVERTED FOUNTAIN
SUB TERRANEAN
WESTHOLME
DYKSTRA HALL
MONTANA AVENUE
GAYLEY AVENUE
SPAULDING FIELD
STRATHMORE PLACE
ADD'L
FOOD FACILITY
MOLECULAR BIOLOGY
RESEARCH LABS
PLANT PHYSIOLOGY
GARAGE
CENTRAL TICKET OFFICE
HOSP ANNEX
BOTANY
BOTANICAL GARDENS
TIVERTON DR
HILGARD AVENUE
MANNING
KELTON AVENUE
LEVERING AVENUE
GLENROCK AVENUE
STRATHMORE DRIVE
TENNIS
CHILD CARE CNTR
UNIV CREDIT UNION
STEIN EYE INSTITUTE
CHS
WESTWOOD PLAZA
UNIVERSITY EXTENSION BLDG.
FACULTY HOUSING
WARREN HALL
LE CONTE AVENUE
WEYBURN AVENUE
WEYBURN DRIVE
WEST MEDICAL STEAM PLANT
HOLMBY BLVD.
GLENDON AVENUE
KELTON AVENUE
LINDBROOK DRIVE
WILSHIRE BLVD.
TO SAN DIEGO FWY.
INFORMATION
ENTRANCE
N
UCLA