University of California
1983-84
General Cat
University of California
1983-84
General Catalog

Note: The 1983-84 General Catalog reflects Berkeley's return to the semester system. Although care was taken to ensure the accuracy of all information, there may be unintended error and changes or deletions without notification. Courses preceded by † were pending approval by the Academic Senate at the time of publication. Students are urged to seek the most up-to-date information from their departments.

The General Catalog was jointly produced by the Publications Office and the Semester Conversion Coordinating Committee.
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POSTMASTER: send address changes to 2120 Oxford Street, Berkeley, CA 94720.
All qualified students, regardless of race, sex, color, creed, handicap, or national origin, are welcome.

Price $2.50; $4.00 by second-class mail; $6.00 by first-class mail (checks payable to the Regents of the University of California) from: Office of Admissions and Records, 120 Sproul Hall, University of California; Berkeley, CA 94720.
# Academic Calendar 1983–84

## Fall Semester 1983

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<th>Dates</th>
<th>Days</th>
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<tr>
<td>Registration by Mail</td>
<td>May 9–July 29*</td>
<td>Monday-Friday</td>
</tr>
<tr>
<td>Semester begins</td>
<td>August 24</td>
<td>Wednesday</td>
</tr>
<tr>
<td>Late Registration and Pre-enrollment</td>
<td>August 24–26</td>
<td>Wednesday-Friday</td>
</tr>
<tr>
<td>Instruction begins</td>
<td>August 22</td>
<td>Monday</td>
</tr>
<tr>
<td></td>
<td>August 29 (for Law School)</td>
<td>Monday</td>
</tr>
<tr>
<td>Labor Day Holiday</td>
<td>September 5</td>
<td>Monday</td>
</tr>
<tr>
<td>Thanksgiving Holiday</td>
<td>November 24, 25</td>
<td>Thursday-Friday</td>
</tr>
<tr>
<td>Instruction ends</td>
<td>December 10</td>
<td>Saturday</td>
</tr>
<tr>
<td></td>
<td>December 12–20</td>
<td>Monday-Tuesday</td>
</tr>
<tr>
<td></td>
<td>December 12–22</td>
<td>Monday-Thursay</td>
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<tr>
<td>Final Examinations</td>
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<td></td>
</tr>
<tr>
<td>Fall Semester ends</td>
<td>December 20</td>
<td>Tuesday</td>
</tr>
<tr>
<td></td>
<td>December 22 (for Law School)</td>
<td>Thursday</td>
</tr>
<tr>
<td>Winter Holiday</td>
<td>December 23–26</td>
<td>Friday-Monday</td>
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<tr>
<td>New Year Holiday</td>
<td>December 30–January 2</td>
<td>Friday-Monday</td>
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## Spring Semester 1984

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
<th>Days</th>
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<tbody>
<tr>
<td>Registration by Mail</td>
<td>October 24- November 11*</td>
<td>Monday-Friday</td>
</tr>
<tr>
<td>Semester begins</td>
<td>January 18</td>
<td>Wednesday</td>
</tr>
<tr>
<td>Late Registration and Pre-enrollment</td>
<td>January 18–20</td>
<td>Wednesday-Friday</td>
</tr>
<tr>
<td>Instruction begins</td>
<td>January 23</td>
<td>Monday</td>
</tr>
<tr>
<td></td>
<td>January 9 (for Law School)</td>
<td>Monday</td>
</tr>
<tr>
<td></td>
<td>February 20</td>
<td>Monday</td>
</tr>
<tr>
<td>President's Day</td>
<td>April 19–20</td>
<td>Thursday-Friday</td>
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<tr>
<td>Spring Recess</td>
<td>April 20</td>
<td>Friday</td>
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<tr>
<td>Spring Holiday</td>
<td>May 5</td>
<td>Saturday</td>
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<tr>
<td>Instruction ends</td>
<td>May 7–15 (for Law School)</td>
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<td>May 7–19 (for Law School)</td>
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<tr>
<td>(10-week intensive language workshops)</td>
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</tr>
<tr>
<td>Registration</td>
<td>June 14, 15</td>
<td>Thursday, Friday</td>
</tr>
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<td></td>
<td>June 18</td>
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</tr>
<tr>
<td>Instruction begins</td>
<td>July 4</td>
<td>Wednesday</td>
</tr>
<tr>
<td>(8-week session)</td>
<td>August 10</td>
<td>Friday</td>
</tr>
<tr>
<td>Independence Holiday</td>
<td></td>
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</tr>
<tr>
<td>Instruction ends</td>
<td>August 17</td>
<td>Friday</td>
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<tr>
<td>(8-week session)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instruction ends</td>
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<tr>
<td>(10-week intensive language workshop)</td>
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*Continuing students obtain registration forms beginning May 9 and October 24.*
Information Guide

University of California, Berkeley
Berkeley, CA 94720
Area Code 415

Admissions, Graduate
1 California Hall, 642-7405

Admissions, Undergraduate
120 Sproul Hall, 642-0200

Advising, Pre-Professional and Pre-Graduate
2440 Bancroft Way, 642-5207

Alumni Association
Alumni House, 642-7026

Associated Students (ASUC)
300 Eshleman Hall, 642-1431

Athletics, Intercollegiate
Men: Harmon Gymnasium, 642-0580
Women: 177 Hearst Gymnasium, 642-2098

Botanical Garden
Strawberry Canyon, 642-3343

Career Planning and Placement
Building T-6, 642-1716

Child Care Services
2537 Haste Street, 642-1827

Counseling and Psychological Services
Building T-5, 642-2366

Disabled Students' Program
2515 Channing Way, 642-0518

Education Abroad Program
2538 Channing Way, 104 Building D

Educational Opportunity Program (EOP)
Building T-8, 642-7224

Financial Aid
201 Sproul Hall, 642-1455

Foreign Student Admissions,
Undergraduate
120 Sproul Hall, 642-3246

Foreign Student Advising
International House
2299 Piedmont Avenue, 642-2818

Health Services
Cowell Hospital, 642-2000
642-5012—future appointments
642-6990—same day appointments

Vision Care
School of Optometry Clinic
642-5761—future appointments

Housing
2401 Bowditch Street, 642-3642

Interfraternity Council (Fraternities)
102 Sproul Hall, 642-5753

Library Information
Main Library Reference Desk, 642-BOOKS

Pacific Film Archive
2625 Durant Avenue, 642-1124

Panhellenic Office (Sororities)
102 Sproul Hall, 642-7507

Police
1 Sproul Hall, 642-6760

Rape Prevention Education Program
388 Cowell Hospital, 642-7310

Rape Counseling Center
Building T-5, 642-2366

Relations with Schools
103 Sproul Hall, 642-5135

Sports, Intramural and Recreational
193 Harmon Gymnasium, 642-8342

Strawberry Canyon Recreational Area
Strawberry Canyon, 642-5575

Student Activities and Services
102 Sproul Hall, 642-6412

Student Learning Center
Building T-8, 642-7332

Summer Session
22 Wheeler Hall, 642-5611

Tours, Campus
Visitor Center, Student Union, 642-5215

University Art Museum
2825 Durant Avenue, 642-0808

University Extension
2223 Fulton Street, 642-4111

Visitor Center
Student Union, 642-5215

Women's Center
112 Building T-9, 642-4786
During the Gold Rush Days of 1849, even before it was a state, California committed itself to the creation of a public university.

Nineteen years later the legislature and the governor made their commitment a reality, and in 1868, the University of California came into being. An instant faculty and student body were supplied by a small college in Oakland, and five years later, the University established itself in Berkeley with 189 students and 20 faculty members.

Soon the University was given a medical college in San Francisco, and the foundations of today's multi-campus system were laid. In 1905 the University Farm at Davis was added, followed by a research station at Riverside in 1907. Later campuses were opened in San Diego, Los Angeles, Santa Barbara, Santa Cruz, and Irvine.

Today the nine campuses enroll more than 131,000 students and have a full-time faculty of 6,000.

The Berkeley Campus. With 30,000 students, a distinguished faculty, nearly 300 degree programs, and alumni in positions of national and international leadership, Berkeley today is a large and complex institution, offering students a vast range of scholarly endeavor and an unusual depth of inquiry both for personal growth and individual involvement with others.

The campus is surrounded by wooded, rolling hills and by the town of Berkeley (population 106,000). Students study, work, and relax among academic buildings, wooded glens, and parklands spread across 1,232 scenic acres overlooking the San Francisco Bay.

The campus is internationally noted for its academic excellence. Its faculty includes 10 Nobel Laureates, 88 members of the National Academy of Sciences, and more Guggenheim Fellows in the last 20 years than any other university in the country. Thirty of 32 departments evaluated in a U.S. study rank in the top 10 programs. Berkeley was cited as the "best overall graduate institution" in the country.

The quality of Berkeley's student body complements the stature of its faculty. The majority of students are Californians, but people come from every part of the United States and 100 foreign countries to study at Berkeley. Perhaps the prime characteristic of all the students is their diversity—one quarter of the student population consists of minorities—which yields the wide range of opinion and perspective essential to a great university.

Colleges and Schools. For purposes of instruction the Berkeley campus is divided into 14 colleges and schools, most of which are subdivided into departments. Colleges accept students directly from high school or as transfers from other institutions and offer undergraduate instruction, normally as a four-year program, leading to the bachelor's degree. Schools usually begin instruction at the upper division level and provide students with training preparatory to specific professions.

Each of the colleges and schools has its own regulations for earning degrees and is headed by a dean who has final authority for all academic decision making. Students are encouraged to contact the deans for assistance with academic matters.

Special Studies. There are several innovative and interdisciplinary programs of study not within the colleges and schools. Special Studies courses provide credits directly applicable to a University degree and are established through interrelationships among colleges, schools, and departments, and, in certain cases, in conjunction with community groups, other UC campuses, and other universities.

The University Library. The Berkeley campus library system consists of the Main Library, the Moffitt Undergraduate Library, the Bancroft Library, 23 branch libraries, and numerous special libraries. The combined holdings of the libraries total more than 6,100,000 volumes, 102,000 current serial publications, over 42,000,000 manuscripts, 1,700,000 microform items, 300,000 maps, and 41,500 sound recordings.

Students are entitled to use the libraries upon presentation of their registration cards. Borrowing privileges and access to the collections vary from unit to unit. Orientation tours are scheduled throughout semesters, and other library instructional assistance and information are available from reference desks.

Most of the UC Berkeley humanities and social sciences materials are located in the Main Library. In addition, an open stack core collection of 172,000 volumes and 500 serial titles, designed to provide a convenient entry into the library system for Berkeley's 20,000 undergraduate students, is available in the Moffitt Undergraduate Library. Special collections in Moffitt include reserves, assigned in most undergraduate courses, and a file of past course exams. The Audio Visual Media Center is also housed in Moffitt.

A cooperative program between the university libraries of UC Berkeley and Stanford University provides convenient interlibrary services to faculty and graduate students. Together the two libraries have more than 10,000,000 volumes, a combined research collection that is one of the richest in the world.

Physical Education, Sports and Recreation. Each year more than half the Berkeley student body regularly uses the campus sports and recreation facilities. The campus has two gymnasiums as well as swimming pools, squash, handball, and tennis courts, and athletic fields. Except in summer, when students are required to purchase a gym privilege card, these facilities can be used by registered Berkeley students free of charge.

The Department of Physical Education offers instructional classes to students in sports, dance, combative, and gymnastic activities. Instruction is planned to develop and improve performance skills, to introduce knowledge and concepts relevant to the activity, and to develop and maintain physical fitness. Elementary, intermediate, and advanced level classes are provided in many activities. All classes are open to men and women for credit. (See Schedule and Director for specific classes each semester.)

The Department of Intramural and Recreational Sports offers a wide range of intramural, sport club, and open recreation activities. For further information, contact 193 Harmon Gymnasium or call 642-8342. In addition, the Department of Men's Intercollegiate Athletics and Women's Intercollegiate Athletics offers extramural competitive sports for the highly skilled.

California Adventures is Berkeley's Outdoor Recreation Program, offering a wide variety of classes and outings in sailing, whitewater rafting, rock climbing, cross-country skiing, backpacking,
kayaking, and much more. A complete line of rental equipment for most outdoor needs is available. The program is open to the community as well as students, alumni, and employees. Facilities include the main center located in Unit III Dorms at 2400 Durant Avenue (open Monday-Friday, 10 a.m.-6 p.m.) and a sailing area located at the Berkeley Marina. For information, call 642-4000.

The University Art Museum. The University Art Museum, located on Bancroft Way, is the major art museum serving the University community. Facilities include galleries, a fine arts bookstore, restaurant, sculpture garden, and the Pacific Film Archive. Museum hours are 11 a.m. to 5 p.m., Wednesday through Sunday. Admission is free for UC students. For a taped message about exhibits, call 642-0808; for a taped message on the Pacific Film Archive program, call 642-1124.

The Museum annually offers about 15 exhibitions; some are nationally-circulating and others originate at the Museum. A permanent collection of Western and Asian art is on display on a rotating basis. The M ATRIX program is a changing exhibition of contemporary art.

Special study collections are available to students and faculty, work in storage may be made available for study upon request, and various exhibitions are prepared for and by University classes and seminars. In addition, the Museum has a developing program in which advanced students receive practical experience by assisting in museum work.

Lectures on art, by artists and art historians, are regularly held.

The Museum's film department, the Pacific Film Archive, is one of the major film exhibition centers in the country. It maintains a study collection of 5000 prints and provides facilities and a media information service for both film study and research screening. Free film showings for classes are held several times weekly. In addition, the Pacific Film Archive offers 800 public film programs annually.

Lowie Museum of Anthropology. Facilitating scholarly research and educating undergraduate and graduate students from many disciplines including Anthropology are among the primary functions of the Lowie Museum. Teaching exhibits are installed to assist faculty and students with on-going instruction and individual study. The Museum also maintains a program of changing exhibits in its Exhibit Hall and at other points on campus to meet the varied educational and aesthetic interests of the University community and general public. Currently, there are 500,000 catalogued specimens in the Museum's holdings. The Exhibit Hall is open during the week from 10 a.m. to 4 p.m., closed Wednesdays, and on weekends from 12 noon to 4 p.m. For further information, please call 642-3681.

Botanical Garden. The Botanical Garden was established in the 1890's and transferred to its current location of 23 acres in Strawberry Canyon in 1919. Although relatively small in area, the Garden ranks with the world's leading gardens in the variety and quality of its plants. There are 8000 different species, and something is in bloom every month of the year.

The major collection is cacti and other succulent plants. Native plants of California occupy the largest area devoted to a regional collection. Special collections include: herbs and spicas, palms, rhododendrons, gymnosperms, ferns, carnivorous plants, orchids, and economically important species.

The Botanical Garden offers free tours to the public every Saturday and Sunday at 1:30 p.m. Special tour groups may be arranged for a nominal charge by phoning 642-3352. Monday through Friday, 9 a.m. to 4 p.m. The Garden is open to the public daily, except Christmas, from 9 a.m. to 4:45 p.m. An Information/Visitor's Center is also open daily. There is no admission charge. The Humphrey Go-Bart bus provides free transportation to and from the Garden on weekdays.

Lawrence Hall of Science. The Lawrence Hall of Science is both a public science center and a research unit in science education. In attempting to increase public understanding of science, the Hall's programs are designed to involve participants actively in science. Visitors play logic games on computers, participate in interactive planetarium shows, and explore a myriad of other exhibits dealing with everything from pulsars to energy conservation. The Hall also offers public lectures, science and general interest films, and numerous special events, as well as workshops in biology, physical sciences, astronomy, computers, and math for both school and after-school groups.

Science curricula developed at the Hall are used throughout the world. Teacher-training workshops actively involve participants in curriculum development. The Hall is open every day from 10 a.m. to 4:30 p.m. and on Thursdays until 9 p.m. There is an admission fee. Free transportation to and from the Hall is available on Humphrey Go-Bart on weekdays, excluding UC holidays. For more information, call 642-5132.

Music, Dance, Drama. The University offers a broad variety of extracurricular activities in the humanities. These include:

Cal Performances—a year-round program of music, dance, and drama. Some events are open to students and to the University community without admission charge. For those events requiring tickets, a reduced rate is usually available for registered students. For information, or to make telephone reservations, call 642-9998.

Music—a large selection of student performing groups may be joined for credit in the Department of Music, 104 Morrison Hall (642-2678). Included are the University Chorus, Orchestra, Collegium Musicum, Concert Band, chamber music ensembles, Javanese Gamelan, and African drumming.

Groups without credit are offered through the Office of Student Musical Activities, 102 Sproul Hall (642-5171). These include the Concert Chorale, the Chamber Singers, Jazz Ensembles, and the UC Marching Band. The Department of Music also presents free noon concerts on Wednesdays in Hertz Hall. San Francisco and Oakland Symphony tickets are available to students at special prices.

Theater and Dance—The Department of Dramatic Art offers a series of plays to all registered students interested in acting, design, or stagecraft. In addition, there are concerts and choreographic workshops in modern dance techniques. An in-residence dance company gives concerts and demonstrations throughout the year in schools and community centers on the West Coast. Unit credit may be earned by work on play and dance production.

Computing Services and Computer Facilities and Operations. Located in
Evans Hall, Computing Services directly assists users in instructional and research computing through several specialized services: User Services, an instructional and consultation group that provides drop-in consulting and free non-credit short courses at the central site and at remote campus facilities; Applications Programming, a general programming and documentation support group with specialized services such as statistical packages and graphics; and a small reference Library that houses computer science materials, hardware and software manuals, available applications programs and periodicals.

Computer Facilities and Operations, also in Evans Hall, provides computing, hardware, software, and operational services for instructional, research, and administrative purposes. Operations manages computing facilities, and Systems Support maintains computer system software. Additional support includes Data Entry and Hardware Maintenance.

Students, faculty, and staff typically use these services and facilities for instructional and research purposes, such as programming, computer applications, text editing and phototypesetting, graphics, and mathematical and statistical packages.

Language Laboratory. Located in the southwest corner of Dwinelle Hall, the Language Laboratory has audiotaped material in 90 languages for group or individual study. Some materials may be borrowed for home use or be purchased at cost. Facilities include 170 positions for listening and nine for videocassette viewing, a fully-equipped recording studio, and a tape duplication service.

Women's Center. The Center for the Study, Education, and Advancement of Women is located in 112 Building T-9. Hours are from 9 a.m. to 5 p.m. The Center provides lectures, workshops, and academic and career advising for students and the campus community. It also supports the academic work of students through its library of research materials on women, publications, and Undergraduate Research Project, and an annual research conference on current issues of interest to women. The Center is open to all interested persons from the campus and the community.

University Extension. UC Berkeley Extension brings the scholarly resources of the University to the wider community through continuing education courses in nearly all the fields of study represented on the campus. It ranks among the top few university-level extension programs in size, scope, and quality of instruction. Each year 50,000 adults enroll in courses that meet a broad range of needs—professional growth, career development, cultural interests, and understanding of current issues. A major emphasis is on disseminating the latest research—the "growing edge" of learning.

Summer Session. An extensive offering of regular academic courses and special programs is available through University Summer Session. Students in good standing at any campus of the University or at another collegiate institution are eligible for enrollment. Equally eligible are high school graduates, qualified adult applicants of sufficient maturity and aptitude for the work they plan to undertake, and, in certain cases, high school juniors and seniors. Tuition varies with the number of units taken. Introductory and advanced courses for University credit are offered, and there are also special sessions for selected intensive language workshops. Extensive cultural and recreational activities are provided. Courses are taught by both regular and visiting faculty.

Research. The Berkeley campus is renowned for its programs of faculty and graduate student research which are conducted within teaching departments and organized research units. In some instances, special departmental laboratories have been established to provide essential services to instruction and research projects.

Organized research units are established and administered separately from the teaching departments. These units are interdisciplinary in nature and organized around the work of a group of faculty and graduate students whose research interests transcend traditional disciplinary areas. The organized research unit aims primarily to support the research of faculty and to assist in graduate student training.

Organized research units may bear the designation of institute, center, laboratory, station, or other titles, depending on the nature of the activity supported and the organization visualized when a particular unit was established. These units are grouped administratively according to the breadth of interest they represent. Specific administrative groupings are listed in the Appendix.

The California Alumni Association. More than 90,000 former students are members of the Association in order to keep in contact with Berkeley and work for the continued welfare of the University and its student body. The Association administers the Alumni Scholarship program, which annually awards more than $130,000 to some 800 undergraduates. The Association co-sponsors career programs with various campus units and maintains the Career Information Aides file, a compilation of Cal graduates whom students may contact to learn more about career fields. In addition to offering free income tax counseling for students each Spring, the Association co-sponsors internship programs for students interested in summer work in Sacramento and Washington, D.C.

Alumni are actively involved in helping the University recruit the finest high school students to Berkeley and every year host receptions honoring newly admitted students.

Among the many benefits enjoyed by association members is the award-winning publication, California Monthly; free UC library privileges; access to the Lair of the Bear vacation center; year-round alumni travel programs; and discounts on selected UC Press books. The Association recognizes distinguished alumni achievement and outstanding service to the University, its alumni, and the community; and co-sponsors the Distinguished Teaching Awards for faculty. Alumni Clubs help members stay in close touch with the University and with one another. Information on all Association activities, including young alumni and club programs, and alumni events on Charter Day and at Commencement, is available at the Association's campus headquarters, Alumni House, where students and alumni are always welcome.
Undergraduate Education at Berkeley

To enter the University of California as an undergraduate student requires completion of a set of procedures which determines, as accurately as possible, whether applicants have sufficient intellectual knowledge, skills, and interests to pursue a degree at the level set by the University.

Students should begin fulfilling University admission requirements by the ninth grade and may need to continue working on them through the first two years of college. Admission requirements include completion of specific courses with specified minimum grades and achievement of specific scores on nationally-administered examinations. While these requirements are somewhat rigorous, consideration is given to special circumstances.

Applying for Admission

You may obtain a University of California Undergraduate Application Packet containing all necessary forms and instructions from California high school or community college counselors or from the Office of Admissions and Records, 120 Sproul Hall, University of California, Berkeley; Berkeley, CA 94720. This office accepts completed applications between November 1 and 30, 1982 for the Fall Semester, 1983; and between July 1 and 31, 1983 for the Spring Semester, 1984. After the indicated filing period, applications are accepted only until application targets are met.

You must include with your completed application forms a non-refundable fee of $30.

If you have not registered in regular session in any college-level institution since graduation from high school, you will be applying for admission as a freshman student. You must meet the following subject, scholarship, and examination requirements.

Subject Requirement

At the heart of the admission process is a set of high school courses called the "a to f requirements." These consist of 11 year-long courses, each of which must be completed with at least a C grade. Your grades in the "a to f" required courses are the only grades used in calculating your grade-point average for determining admission. Courses that fulfill the "a to f" requirement must appear on a list that your high school principal has certified meet University requirements. This list is called "Courses to Meet Requirements for Admission to the University of California" and can be obtained from your school counselor.

The "a to f" requirement courses are:

a. History. One year of United States history or one-half year of United States history and one-half year of civics or American government.

b. English. Four years of university preparatory English composition and/or literature; not more than one year will be accepted from the ninth grade.

c. Mathematics. Two years of subjects such as algebra, geometry, trigonometry, calculus, elementary functions, and mathematical analysis. Nonacademic courses such as arithmetic and business mathematics may not be used.

d. Laboratory Science. A year course in one laboratory science, taken in the tenth, eleventh, or twelfth grade.

e. Foreign Language. Two years of one foreign language with a written literature are acceptable.

f. Advanced Courses. One or two years must be chosen from the following: Mathematics, a total of one year of advanced mathematics, intermediate algebra, trigonometry, or other comparable mathematics courses. Foreign language, either one additional year in the same foreign language offered under (e) or two years of another foreign language. Science, a year course in any laboratory science completed after the laboratory science used for (d) above.

Elective Courses. Applicants, except those with a certificate of proficiency, are required to complete at least 15 high school units. The "a to f" subject requirements can be fulfilled with 10 or 11 units, which leaves four or five units for electives. Your electives should strengthen your preparation for the University. Additional courses in mathematics are essential in the preparation for majors in engineering, mathematics, the sciences, and many other fields of study.

Scholarship Requirement

If you attain a grade point of 3.3 in courses listed in "a to f," taken after the ninth grade, you will be eligible to enter the University regardless of your scores on standardized tests. Students with grade-point averages below 3.3 but greater than 2.77 will be admitted to the University if they achieve specified scores on the standardized tests. (See University of California Freshman Eligibility Index.)

Grades you received in courses taken in the ninth grade or earlier are not used in determining your scholarship average, although subject requirements (except laboratory science) may be satisfied with grades of C or better in these courses. If you successfully complete more than the minimum units within each required subject, only the best grades are used in calculating your grade-point average. Grades are counted on a semester basis unless a school gives only year grades.

You may repeat courses where the original grade was D or F. The better grade will be used in determining your scholarship averages. Although there is no limit to the number of repeats that may be used in the a-f pattern, you may repeat a course only one time.

If the courses you repeat were taken before the ninth grade, they will be treated as if you were taking them for the first time.

High School Proficiency Examination

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, 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 standardized test scores will remain an option for the student ineligible on the basis of high school record.

Examination Requirement

All freshman applicants must submit test scores as described below. If you are applying for admission to the Fall term, you should take the tests by November of your senior year. The following tests are required:
1. One Aptitude Test—Either: (a) the Scholastic Aptitude Test—SAT (the verbal and mathematics scores you submit from this test must be from the same sitting); or (b) the American College Test—ACT—composite score.

2. Three College Entrance Examination Board Achievement Tests, which must include (a) English Composition, (b) one from among any third Achievement Test (not English Composition or mathematics), and (c) mathematics (level 1 or 2).

Admission by Examination Alone

If you do not meet the scholarship and subject requirements for admission and have completed less than 12 transferable college units since graduation, you can qualify for admission as a freshman by examination alone. (Note: If you have completed transferable college courses, CEEB tests cannot be taken in academic subjects covered in those courses.) To qualify for admission by this method, you must score at least 1100 on the Scholastic Aptitude Test or 26 on the American College Test. Further, your total score on the three Achievement Tests must be 1650 or higher, with no score less than 500 on an individual Achievement Test. High school graduation or a certificate of proficiency is required for students who qualify for admission by examination.

<table>
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<tr>
<th>University of California Freshman Eligibility Index</th>
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<td>GPA Composite Total</td>
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<td>3.04 23 990</td>
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*ACT is scored in intervals of 1 point from a minimum of 1 to 36 maximum. **SAT is scored in intervals of 10 points from a minimum of 400 to 1600 maximum.

Admission of Nonresident Applicants.

The admission requirements for nonresidents differ from those for residents in that the required grade-point average is higher. For freshmen, the average is 3.4. Admissions procedures and examination requirements are the same as for California residents described above except that to be admitted by examination alone requires the same total score on the Scholastic Aptitude Test of 1100 but a higher total score on the three Achievement Tests (1730 or higher, with no score less than 500 on an individual Achievement Test). For detailed information on these requirements, and admission by examination alone, consult the publications Information for Prospective Students or the Undergraduate Application Packet, obtainable from California high school or community college counselors, or the Office of Admissions and Records, 120 Sproul Hall.

If you do not meet the requirements for admission to freshman standing or if you cannot qualify by examination alone, you can only be admitted in advanced standing.

Admission in Advanced Standing

The requirements for admission in advanced standing vary according to your high school record. The transcript you submit from the last college you attended must show that at minimum you were in good standing and you earned a grade-point average of 2.0 or better. If your grade-point average was below 2.0 at any college you attended, you may have to meet additional requirements to qualify for admission.

Admission requirements differ depending on when you graduated from high school. Old requirements: if you graduated from high school prior to the end of academic year 1976-79. New requirements: if you graduated at the end of academic year or thereafter.

1. Old Requirements. If you completed all the "a to f" subjects and your grade-point average in those subjects was 3.0* or better, you may be admitted anytime after you have established an overall college grade-point average of 2.0 or better.

New Requirements. If you completed all the "a to f" subjects and met the Eligibility Index, you may be admitted any time after you have established an overall college grade-point average of 2.0 or better.

In either case, if you have completed less than 12 quarter or semester units of transferable college credit since high school graduation, you must also satisfy the examination requirement for freshmen.

2. Old Requirements. If your high school scholarship average in the required subjects was 3.0* or better, but you had not studied one or more of the "a to f" required courses in high school, you may be admitted after you have met the criteria below.

New Requirements. If you meet the Eligibility Index but you have not studied one or more of the "a to f" courses in high school, you may be admitted after you have: (a) established an overall grade-point average of 2.0 or better in another college or university; and (b) completed with a grade of C or better, appropriate college courses in the high school subjects that you lacked;

*If your high school scholarship average in "a to f" subjects was from 3.0 to 3.09 (D or F grades are not allowed), you must earn a score of 2,500 or better on the SAT and Achievement Tests required for freshmen.
and (c) completed 12 or more quarter or semester units of transferable units or have met the examination requirement.

3. Old Requirements. 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 met the criteria below.

New Requirements. If you did not meet the Eligibility Index, or did not meet the Eligibility Index and lacked required subjects, you may be admitted after you have: (a) established an overall grade-point average of 2.4 or better in another college or university; and (b) completed 84 quarter units (56 semester units) of college credit in courses accepted by the University for transfer; and (c) completed the following: (1) appropriate college courses, with a grade of C or better, 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 (2) one college course in mathematics; one in English; and one in U.S. history or a laboratory science or a foreign language, all with grades of C or better. 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. Courses other than mathematics must be transferable to the University.

Admission in Advanced Standing for Nonresidents. If you met the admission requirements for freshman admission as a nonresident, you must have a grade-point average of 2.8 or better 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 grade-point average in the "a to f" subjects required for freshman admission, you must have completed at least 84 quarter units (56 semester units) of transferable work with a grade-point average of 2.8 or better. In addition, if you lacked any of the required subjects in high school, you must complete appropriate college courses as outlined in 3c (1) or (2) above.

Intercampus Transfers. An undergraduate student who is registered on any campus of the University, or who was previously registered in a regular session of the University and has not since been registered in another institution, may apply for transfer to another campus of the University by filing the proper forms on the campus where last registered. The intercampus transfer application forms and application for transcript of record forms may be obtained from the Office of Admissions and Records and must be filed with that office. There is a fee of $30 at the time of filing. Dates for filing are the same as those listed for new applicants.

Additional Requirements for Admission in Advanced Standing. Refer to the announcement of the individual college or school to which you seek admission for additional requirements.

Special Admission Circumstances

Admission by Exception. A limited number of students who have not met the regular requirements for admission, but can offer evidence of their potential to succeed at the University, may be considered for admission by exception. Information on such admission may be obtained from the Office of Admissions and Records.

Educational Opportunity Program. This program (EOP) provides the opportunity for entrance to the University to students of minority and low-income background, who might not be able to attend otherwise. Prospective students who meet the regular admission requirements, as well as those who do not, may apply to the University through EOP. Prospective EOP students must show a potential to benefit from higher education. Financial aid counseling, tutoring, and housing aid are available under the program.

To be admitted to EOP, you must apply to the Office of Admissions and Records and complete a regular undergraduate application for admission. If you are interested you should apply as early as possible.

International Applicants. An applicant from another country should request the brochure, Information for Prospective Students from Other Countries, designed to answer questions about admission to the University, visas, special examinations, fees and expenses, housing, and travel. Prospective undergraduates should direct inquiries to the Office of Admissions and Records. Applicants who need to improve their English language skills should contact the English Language Program, University of California Extension, 2223 Fulton Street, Berkeley, CA 94720, USA. All nonimmigrant foreign students must check in at the Advisers to Foreign Students and Scholars Office, International House, as soon as possible.

Limited Status. This includes applicants with a bachelor's degree or with a substantial amount of college work completed with a superior scholastic average, whose special attainment may lead them to take certain courses toward a definite and limited objective. Only applicants of unusual merit are considered. They will normally have to complete a personal interview with an Admissions Officer who will determine from the applicant's record the applicant's needs, plans, and conditions of admission, subject to approval from the dean of the applicant's college or school.

Admission is for a specified time, determined beforehand, and students must maintain a prescribed scholastic average. There are no "special courses"; students will be admitted only to those courses for which they are able to demonstrate, in the opinion of the instructor, satisfactory preparation.

Work Toward a Second Bachelor's Degree. Ordinarily this is discouraged by the University, but complete changes in objective occasionally require the attainment of a second bachelor's degree. Applicants for admission to undergraduate study for a second bachelor's degree must indicate, by their previous scholastic record, a strong probability of academic success in such an undertaking. Admission is subject to approval of the Director, Office of Admissions and Records, and the dean of the college or school in which work is to be undertaken.

Graduation Requirements

As soon as you have been accepted for admission to Berkeley you should learn the requirements you will have to fulfill to earn your bachelor's degree.
These requirements are described below. You should also be fully aware of the rules and regulations that pertain to all Berkeley students. For more information, please visit the Office of Admissions and Records, 128 Sproul Hall.

**University Requirements**

The University sets two requirements which all undergraduates must fulfill in order to graduate: Subject A and American History and Institutions.

All students are advised that fulfillment of these requirements is the responsibility of the individual student.

**Subject A Requirement.** All University departments assume that students are proficient in reading and writing English, and understand how to compose an essay on an academic topic. Evidence of such proficiency is required of all undergraduates upon entrance to the University.

Students who have not satisfied the requirement must enroll in the Subject A course “Introduction to Language” or in a related course (see Courses for Non-Native Speakers below) during their first semester of residence at the University.

Students who have not fulfilled the requirement after two semesters will not be eligible to enroll in the University for a third semester (students enrolled in related courses excepted).

The Office of Admissions and Records accepts the following in fulfillment of the Subject A requirement (the examinations cited in 1-4 below must be taken prior to entering the University):
1. A score of 600 or above on the English Composition Test of the College Entrance Examination Board (CEEB);
2. A score of 3, 4, or 5 on the CEEB Advanced Placement Test in English;
3. A score of “Pass for Credit” on the California State University and Colleges English Equivalency Examination;
4. A score of 600 or above on the Test of English as a Foreign Language (restricted to foreign students without previous academic work in an English-speaking country);
5. Completion with a grade of C or better of a college-level course in English composition taken at a previous institution and judged acceptable by the Office of Admissions and Records;
6. A satisfactory grade on an essay examination administered by the Subject A Department. This examination may be taken only once.

Fulfillment of the Subject A requirement (either by one of the ways listed above or by passing the Subject A course with a grade of C- or better) is a prerequisite to all freshman reading and composition sequences. Credit for taking these courses will not be granted unless the Subject A requirement has first been fulfilled.

**Courses for Non-Native Speakers of English.** Students whose native language is not English and who have completed fewer than five years at American high schools fulfill the Subject A requirement (1) by demonstrating satisfactory writing ability on the Subject A Placement Examination for Non-Native Speakers of English, or (2) by completing with a grade of C- or better one to two specially designated Subject A courses, followed by successful completion of Subject A1, “Introduction to Language.” Students must enroll in one of these courses each semester until the Subject A requirement has been fulfilled.

**American History and Institutions Requirements**

The American History and Institutions Requirements are based on the principle that a U.S. resident enrolled at an American university should have an understanding of the history and the governmental institutions of the United States. These requirements may be met as follows:

**American History Requirement**

1. For students entering Berkeley for the first time Fall 1983 or later: Both the American History and the American Institutions Requirements may be satisfied by fulfilling the “A” subject requirement for admission. This requires a student to complete two semesters in high school of U.S. history or one half-year of U.S. history and one-half year of civics or American government with a grade of C or better.

For students who entered Berkeley for the first time between Fall 1981 and Spring 1983: The American History Requirement may be fulfilled by completion in high school of two semesters of U.S. history with an average grade of B or better. If the high school transcript does not say United States (or American) History, the Office of Admissions and Records will mark the requirement as unsatisfied.

It will be the responsibility of the student to petition any other high school courses at the American History and Institutions Office, 29 Dwinelle Hall.

Option 1 does not apply to students who entered Berkeley prior to Fall 1981.

2. For students who entered Berkeley Spring 1983 or before: The American History Requirement may be fulfilled by completion of an approved course at Berkeley. The list of courses for the American History Requirement is published each semester in the Schedule of Classes and is also available at the AH&I Office in 29 Dwinelle Hall. This list may change during the year. It is the student’s responsibility to check with the AH&I Office at the beginning of each semester to see whether any courses have been dropped from or added to the list.

Option 2 does not apply to students who enter Berkeley Fall 1983 or later. Any such students who wish to meet the History Requirement with coursework at Berkeley must consult the AH&I Supervisor.

3. Students may fulfill the American History Requirement by presenting official evidence of completion of a course, taken at an accredited college or university, which is equivalent in scope and content to those on the approved UC Berkeley American History List. The Admissions Office will approve some but not all such courses. Students not cleared by Admissions should present a syllabus, reading list, and grade report from the course to the American History and Institutions Office, 29 Dwinelle Hall. Students are encouraged to submit such course descriptions for approval prior to enrolling in the course.

4. Students may fulfill the American History Requirement by passing an essay examination in U.S. history which is administered by the AH&I Office three times each semester and twice during the summer. The exam is based on three books and is graded passed/not passed. Reading lists, sample answers, and test dates are available at the AH&I Office.
5. Students may fulfill the American History Requirement by passing the Advanced Placement Test in American History with a score of 3, 4, or 5.

6. Students may fulfill the American History Requirement by passing the College Board Achievement Test in U.S. History with a score of 500 or better. Option 6 does not apply to students who entered Berkeley prior to Fall 1981.

American Institutions Requirement

1. For students entering Berkeley for the first time Fall 1983 or later: Both the American History and the American Institutions Requirements may be satisfied by fulfilling the “a” subject requirement for admission. This requires a student to complete two semesters in high school of U.S. history or one half-year of U.S. history and one-half year of civics or American government with a grade of C or better.

For students who entered Berkeley for the first time between Fall 1981 and Spring 1983: The American institutions Requirement may be fulfilled by completion in high school of one semester of U.S. Government with a grade of B or better. If the high school transcript does not say United States (or American) Government (or Civics), the Office of Admissions and Records will mark the requirement as unsatisfied. It is the responsibility of the student to petition any other high school courses at the AH&I Office. Option 1 does not apply to students who entered Berkeley prior to Fall 1981.

2. For students who entered Berkeley Spring 1983 or before: The American Institutions Requirement may be fulfilled by completion of an approved course at Berkeley. The list of courses for the American Institutions Requirement is published each semester in the Schedule of Classes and is available at the AH&I Office in 29 Dwinelle Hall. This list may change during the year. It is the student’s responsibility to check with the AH&I Office at the beginning of each semester to see whether any courses have been dropped from or added to the list. Option 2 does not apply to students who enter Berkeley Fall 1983 or later. Any such students who wish to meet the Institutions Requirement with coursework at Berkeley must consult the AH&I Supervisor.

3. Students may fulfill the American Institutions Requirement by presenting official evidence of completion of a course taken at an accredited college or university (see History option 3 above for details).

4. Students may fulfill the American Institutions Requirement by passing an essay examination in American Institutions (see History option 4 above for details of format).

Attention foreign students: The AH&I Requirements will be waived for foreign students with at least 90 1/2 semester units (senior status), who hold a current, non-immigrant visa (F being the most common) and an I-94 entry and departure form. Students should present their visa and the I-94 form to the Office of Records, 128 Sproul Hall, before the semester in which they will graduate.

Minimum Scholarship Requirements

Failure of undergraduate students to maintain a minimum grade-point average prescribed by the college or school will normally result in probation or dismissal. Since scholarship rules are applied only at the close of regular sessions, grade points earned in a University of California summer session or by removing an Incomplete grade are not taken into consideration until the close of the student’s next semester of attendance.

Minimum Progress. For undergraduates, normal progress toward a degree requires 30 units of successfully completed coursework each year. The continued enrollment of a student who fails to achieve minimum academic progress shall be subject to the approval of the Dean of the College or School in which the student is enrolled. To achieve minimum academic progress, the student must have successfully completed a number of units no fewer than 15 times the number of Semesters less one, in which the student has been enrolled on the Berkeley campus. Summer Session is not counted as a semester. A 15-unit study list is considered to be a normal course load; a study list of fewer than 12 units must be authorized by the Dean of the appropriate college or school.

Academic Probation. Regulations and procedures governing academic probation vary with each college and/or school. For specific details, consult your college or school announcement. Students on probation are not entitled to take courses with a passed/not passed option.

Academic Dismissal. Regulations and procedures governing academic dismissal vary with each college and/or school. For specific details consult your college or school announcement.

Dismissed students may appeal, by formal petition, to the dean of their college or school, for a hearing, but the
action of dismissal is normally considered final. A dismissed student who wishes to transfer to another college or school at Berkeley may petition the dean of the jurisdiction sought.

**Work Toward a Degree.** At the close of each semester, the courses, units, grades, and grade points earned are added onto your cumulative University record. From this record, you may determine your progress toward a degree.

In working for a degree, you should keep in mind the various levels on which you are to satisfy requirements—University, college, school, and department—as well as the types of requirements you must fulfill: course, unit, grade point, and amount of upper division work. You may receive additional counsel in these matters from your adviser.

**Preparation for Graduate Study.** If you are preparing for study toward higher degrees, you should learn, as early as possible, the entrance and degree requirements of your graduate field, in order to include all prerequisite steps in the undergraduate program.

**Departmental Requirements**

Every student must select a field of concentration and pursue a major or curriculum, normally by taking a minimum number of units in one department or school. Occasionally—as, for example, with Business Administration, Optometry, and others—the school and the department are synonymous. In some cases—as, for example, the humanities field major in the College of Letters and Science—a major may embrace more than one department.

**Residence Requirement**

After 90 units toward the bachelor's degree have been completed, at least 24 of the remaining units must be completed in residence in not less than two semesters in the college or school of the University in which the degree is to be taken. Completion of these 24 units must be begun in the semester in which 90 units are exceeded. You should consult the announcement of your college or school for details concerning the senior residence requirement as it pertains to the summer session.

**Declaration of Candidacy**

You must file with your study list an announcement of candidacy for a degree at the beginning of the semester in which you expect to complete your work for the degree. The announcement is accepted no earlier than this period. The period for filing announcements ends with the third week of classes. However, announcements filed during the third week are subject to a $3 late fee. If for any reason you do not meet the requirements for graduation after announcing your candidacy, you must file a new announcement of candidacy in the filing period for the subsequent semester in which the degree will be awarded.

**Studying Abroad**

While progressing toward the bachelor's degree, you have a number of opportunities to earn University of California credit while studying abroad. The Universitywide Education Abroad Program has study centers at the following universities:

**Africa**

University College, Nairobi

**Asia**

Chinese University of Hong Kong

International Christian University, Tokyo, Japan

**Central America**

National Autonomous University of Mexico, Mexico City

**Europe**

Universities in France: Bordeaux, Grenoble, Marseilles, Montpellier, Paris (Film, History, Literature), Pau-Paris, Poitiers

Georg-August University, Goettingen, Germany

University of Dublin, Trinity College, Ireland (a part of the United Kingdom and Ireland program)

University of Padua, Italy; Academy of Fine Arts, Venice; G.B. Martini Music Conservatory, Bologna

University of Bergen, Norway

Universities in Spain: Barcelona, Madrid

University of Lund, Sweden

State University of Leningrad, USSR


**Middle East**

Universities in Israel: Haifa, Jerusalem (Hebrew University)

American University of Cairo, Egypt

**South America**

University of Sao Paulo, Brazil

Pontifical Catholic University of Peru, Lima, Peru

Requirements for participation are a grade-point average of 3.0, upper division standing, and sufficient language preparation. University scholarships, loans, and grants may be used to finance the year abroad.

Berkeley also participates in several intercollegiate consortia for advanced language studies: Rome Classics Program (requiring Latin fluency), Japanese language study in Tokyo, Mandarin Chinese study in Taipei, and Arabic study in Cairo.

Graduate students may study in most of the programs subject to the approval of their advisers and the Graduate Division. One year of graduate study must have been completed prior to the year abroad.

If you are interested, consult your academic advisers and the Education Abroad counselor in the International Education Office, 2538 Channing Way, 104 Building D, 642-1356.

**Undergraduate Degrees**

Afro-American Studies, A.B.

Ancient Near Eastern History and Archaeology, A.B.

Anthropology, A.B.

Architecture, A.B.

Art (History of), A.B.

Art (Practice of), A.B.

Asian Studies, A.B.

Asian-American Studies, A.B.

Astronomy, A.B.

Biochemistry, A.B.

Bioenergetics, B.S.

Bioengineering, B.S.

Biological Sciences, A.B.
Biophysics, A.B.
Biophysics: Medical Physics Option, A.B.
Bioresource Sciences, B.S.¹²
Botany, A.B.
Business Administration, B.S.³
Chemical Engineering, B.S.
Chemistry, A.B. or B.S.⁴
Chicano Studies, A.B.
Civil Engineering, B.S.
Classical Civilization, A.B.
Classical Languages, A.B.
Comparative Literature, A.B.
Computer Science, A.B. or B.S.⁵
Conservation of Natural Resources, B.S.
Development Studies, A.B.
Dramatic Art, A.B.
Dramatic Art—Dance, A.B.
Dutch Studies, A.B.
Earth Science, A.B.
Economics, A.B.
Electrical Engineering and Computer Sciences, B.S.⁶
Engineering, Nine Double Major Programs, B.S.⁶
Engineering Geoscience, B.S.
Engineering Mathematics or Mathematical Statistics, B.S.
Engineering Physics, B.S.
Engineering Science, B.S.
English, A.B.
Entomology, B.S.
Environmental Sciences, A.B.
Ethnic Studies, A.B.
Film, A.B.
Forest Products, B.S.
Forestry, B.S.
French, A.B.
Genetics, A.B. or B.S.²
Geography, A.B.
Geology, A.B.
Geophysics, A.B.
German, A.B.
Greek, A.B.
Health Arts and Sciences, A.B.
History, A.B.
Humanities, A.B.

¹ Applicants interested in Preveterniary Medicine should apply for the major in Bioresource Sciences in the College of Natural Resources and contact the Preveterniary Adviser after admission.
² A student may select either the group major or Genetics in the College of Letters and Science or the Bioresource Sciences major with an emphasis in genetics in the College of Natural Resources.
³ The School of Business Administration requires completion of 60 semester units for admission into its program.
⁴ A chemistry major may be taken either in the College of Chemistry (B.S.) or in the College of Letters and Science (A.B.).
⁵ Computer Science may be studied either in the College of Engineering (B.S. in Electrical and Computer Sciences) or in the College of Letters and Science (A.B.).
⁶ See Announcement of the College of Engineering for details.

Industrial Engineering and Operations Research, B.S.
Italian, A.B.
Landscape Architecture, B.S.
Latin, A.B.
Latin American Studies, A.B.
Legal Studies, A.B.
Linguistics, A.B.
Manufacturing Engineering, B.S.
Mass Communications, A.B.
Materials Science and Engineering, B.S.
Mathematics, A.B.
Mathematics, Applied, A.B.
Mechanical Engineering, B.S.
Microbiology, A.B.
Middle Eastern Studies, A.B.
Mineral Engineering, B.S.
Molecular Biology, A.B.
Music, A.B.
Native American Studies, A.B.
Near Eastern Studies, A.B.
Neurobiology, A.B.
Nuclear Engineering, B.S.
Nutrition and Clinical Dietetics, B.S.
Nutrition and Food Science, B.S.
Optometry, O.D.
Oriental Languages, A.B. (Chinese, Japanese, Altaic languages)
Palaeontology, A.B.
Pest Management, B.S.
Petroleum Engineering, B.S.
Philosophy, A.B.
Physical Education, A.B.
Physical Sciences, A.B.
Physics, A.B.
Physiological Optics, B.S.
Physiology, A.B.
Plant and Soil Biology, B.S.
Plant Pathology, B.S.
Political Economy of Industrial Societies, A.B.
Political Economy of Natural Resources, B.S.
Political Science, A.B.
Psychology, A.B.
Religious Studies, A.B.
Rhetoric, A.B.
Scandinavian, A.B. (Danish, Norwegian, Swedish)
Slavic Languages and Literatures, A.B.
Social Science, A.B.
Social Welfare, A.B.
Sociology, A.B.
Soil Resource Management, B.S.
South and Southeast Asian Studies, A.B.
Spanish, A.B.
Statistics, A.B.
Women's Studies, A.B.
Zoology, A.B.
Graduate Education at Berkeley

Graduate study embraces all study for degrees and certificates beyond the bachelor's degree—principally the master's and doctor's degrees.

Higher degrees fall into two broad categories: (1) Professional—degrees awarded by each professional college and school in recognition of a candidate's command of a comprehensive body of professional knowledge and the ability to organize and carry out investigation of significant problems in the field. (2) Academic—degrees awarded by the academic departments, and also some professional schools, in recognition of a candidate's command of a wide range of related subjects within an academic field, preparation in one or more foreign languages, and ability to pursue original research leading to a significant contribution to the field of study.

These graduate degree programs have been approved by the Graduate Council and the Coordinating Committee on Graduate Affairs. Others may be instituted only with the consent of these bodies. For a list of graduate degrees offered, see the end of this section.

For complete information on regulations and procedures for graduates, see Appendix.

The Nature of Graduate Instruction. A graduate course is a highly advanced course in a field of study already intensively presented in the upper division. Graduate courses demand, on the part of both instructor and student, either a capacity for critical analysis or a specialization of research interests not normally appropriate to an undergraduate major. These courses may be conducted in a number of ways: (1) as advanced lecture courses; (2) as seminars in which faculty and students present critical studies of selected problems within the subject field; (3) as independent study or reading courses; or (4) as research projects conducted under faculty supervision.

The main purpose of graduate study is to inspire independence and originality of thought in the pursuit of knowledge. The graduate student is expected to achieve mastery of the chosen field through advanced coursework and—equally important—through independent study and research. Considerable liberty is accorded in the choice of courses, at the discretion of the graduate adviser, as long as minimum requirements for academic residence are met. Possession of a bachelor's degree does not in itself entitle a student to enroll in a graduate course. These courses assume adequate preparation at the upper division level in the subject field (a minimum of 12 units of upper division work basic to the subject matter of the graduate course; this basic work may be pursued in more than one department). Graduate students are encouraged, therefore, to take such upper division work as will provide them with the background needed for advanced work; they are not confined to graduate courses.

Graduate courses completed before attainment of the bachelor's degree are not acceptable for unit credit toward an advanced degree. Courses in the 300 and 400 series, which are professional in nature, are not acceptable for unit credit as part of the program for an academic degree. They may, however, satisfy certain substantive requirements in particular academic programs, such as engagement in teaching activity or particular kinds of research or technical work.

Graduate Advisers. Graduate advisers are appointed by the Dean of the Graduate Division for each academic unit and are announced before the opening of each semester. Their responsibilities include: (1) assisting students in selecting programs of study; (2) reporting to the Dean of the Graduate Division on the acceptability of upper division and graduate courses completed by a candidate at other institutions; (3) endorsing applications for candidacy for higher degrees and for qualifying examinations; (4) acting on petitions by graduate students; (5) maintaining records of all students enrolled under their jurisdiction; (6) supplying information requested by the Dean of the Graduate Division regarding a student's progress; and (7) assisting the Dean in the enforcement of regulations, particularly those relating to registration, admission to graduate courses, and maintenance of acceptable scholastic performance. The graduate advisers are deputys of the Dean of the Graduate Division and the chief representatives of the department or school in all matters related to graduate study, and their signatures are recognized as expressing official decisions.

Graduate students also have individual advisers, usually assigned after advancement to candidacy for the doctorate, but frequently appointed in the earlier stages of their training. The individual advisers may or may not be the same as the official graduate advisers. All graduate students should keep in close touch with their individual advisers and must confer with their official graduate adviser at the beginning of each semester to obtain approval of their programs of study (by signature on the Study List).

Applying for Admission

Completed applications for admission, as well as all additional documents specified on the application form (including transcripts from each college-level institution previously attended) and an application fee of $30, must be filed with the Graduate Admission/Fellowship Office by the established deadlines.

Many departments have earlier final application dates than the Graduate Division, both with respect to admission and to financial assistance. When this is the case, materials must be in both the department and the Graduate Division by the departmental deadline date if the application is to be considered. Many departments also admit students only for the Fall Semester. Information on special departmental deadlines and requirements is contained in the application packet.

The final dates of the Graduate Division for acceptance of applications for admission for the 1984-85 academic year are: Fall Semester, February 1; and Spring Semester, September 1. The School of Law admits only for the Fall Semester; the deadline is February 1.

Limited Enrollment. Each graduate program at Berkeley has a maximum enrollment that may not be exceeded. Almost invariably, this maximum is smaller than the number of persons who are at least minimally qualified for admission. Selection procedures are designed to admit applicants in accordance with their relative merit and promise among those at least minimally qualified. It is to the applicant's
advantage to make early inquiry about the possibility of study at Berkeley.

Admission Requirements. The University requires of the applicant the following: (1) a degree from an accredited institution, comparable to the bachelor's degree offered at Berkeley; (2) sufficient undergraduate training to undertake graduate study in the chosen field; and (3) a satisfactory scholastic average.

In addition to the general University requirements, certain schools or departments may require additional records, such as separate applications, reading lists, examples of original work, or the results of qualifying examinations. Information on undergraduate requirements for a major field and on graduate programs and requirements is available in the school or departmental announcements and bulletins, and in the "Courses and Curricula" section of this catalog.

Graduate Record Examination. Applicants for graduate admission (with certain exceptions listed below) are required to take the Aptitude Test of the Graduate Record Examination and to have their scores on this examination reported by the Educational Testing Service. Although current test scores are preferred, reports up to five years old—but not older—will be accepted.

International applicants from any country in which the official language is English or those who have studied for one year or more in schools or universities where English is the language of instruction, must take the Aptitude Test of the Graduate Record Examination. In general, others applying from countries outside the United States need not submit GRE scores, unless their major departments so require. A list of departments or groups that require the GRE of all their applicants is included in the application packet.

Applicants to the UCB-UCSF Joint Medical Program are not required to take the GRE but must take the MCAT (Medical College Admission Test).

School of Business Administration applicants take the Graduate Management Admission Test (GMAT) in place of the Graduate Record Examination.

Applicants to the School of Law for the J.D. degree take the Law School Admission Test (LSAT) rather than the GRE. However, law students applying to any other field in the Graduate Division must take the Graduate Record Examination.

Teaching Credential applicants (Multiple and Single Subject only) are not required to take the GRE. However, applicants for the M.A.T. degree must fulfill the GRE requirement.

Arrangements to take the GRE should be made directly with Educational Testing Service at least three weeks before the desired test date (six weeks, if registering to take the examination outside the United States).

Applications for the GRE examination and GMAT examination are obtainable from the Educational Testing Service, Box 955, Princeton, NJ 08540 or from its Western Office at 1947 Center Street, Berkeley, CA 94720.

Domestic candidates from families with extremely low incomes may qualify for a waiver of GRE test fees. Such applicants should see their undergraduate financial aid offices to determine whether their institution participates in the GRE Fee Waiver Program and whether they qualify. Fee waivers are not available directly from the Educational Testing Service.

International Applicants. International applicants are expected to fulfill all previously stated admissions requirements and to have an excellent command of English before beginning graduate study at Berkeley. Since no one is admitted to graduate standing to learn English, applicants from countries in which the official language is not English are required to take the Test of English as a Foreign Language (TOEFL) and have the results sent directly to the Graduate Admission/Fellowship Office by the TOEFL authorities in Princeton, New Jersey. The test is administered five times a year and applicants should register as soon as possible by writing either the TOEFL agent in their home country or TOEFL, Box 999, Princeton, NJ 08541. The results of institutional administrations are not acceptable in place of the international or special center administrations, and if the test was taken more than two years ago, it must be repeated.

Duplication of Higher Degrees. Normally, duplication of degrees is not permitted. A student may petition the Dean of the Graduate Division for exception to this policy if the degree desired is in a field of study distinctly different from the field in which the original degree was attained. A professional degree is not regarded as duplication of an academic degree.

On the recommendation of the graduate adviser, and with the approval of the Dean of the Graduate Division, a student may, however, be permitted to earn a second master's degree in the same subject as that of the first master's (or in a closely allied subject), if enrolled in a doctoral program at Berkeley in that subject (or allied subject), and if that particular doctoral program requires that a master's degree be earned at Berkeley.

Notification of Action on Admission. A written notice from the Dean of the Graduate Division is valid proof of admission. Admission to graduate study is limited by the number of places available in the various colleges, schools, and departments of UC Berkeley. Applicants for admission and fellowship consideration will be notified on or about March 1 of the action on their applications. Applicants for admission only will be advised as soon as possible after a decision has been reached. Normally, however, acceptance letters for applicants for admission only will not be issued until after March for the Fall Semester.

Statement of Firm Intent to Register and Failure to Register. The admission notice to new (including reactivating) graduate students contains a statement of firm intent to register which must be filled out and returned to the Graduate Admission/Fellowship Office by the date indicated therein. Only the return of the form to the Graduate Admission/Fellowship Office indicating a firm intent to register will reserve the allocated registration slot for the successful applicant. Applicants wishing to retain a record of the return of their firm intent to register should send it by certified or registered mail. Students who do not wish to accept the offer of admission should return the Notification of Declination of Admission so that their places can be reallocated to other applicants.

Students who fail to return the firm intent to register form and those who do, but do not follow through with registration for the semester in which they were admitt-
Reactivation of Application. The Graduate Division keeps application materials on file for two years. Any person who had filed an application within the past two years but did not complete the application process, was denied admission, or was admitted but did not register, may reactivate the previous file by submitting a new application form by the established deadline for the semester in question.

The application fee is $30, and the first reactivation is free. Thereafter, the fee will be required. A request for reconsideration (reconsideration) in another major field for the same semester shall not constitute a reactivation of application.

Financial Aid and Employment

Fellowships and Graduate Scholarships. Applications for fellowships and graduate scholarships are considered only once a year; awards are made for the academic year beginning with the Fall Semester. In assigning awards, the Committee on Fellowships and Graduate Scholarships considers the extent and quality of previous academic work, evidence of ability in research or other creative accomplishments, intellectual capacity and promise of productive scholarship. The amount of the award is based on the total resources available to the student as evidenced in the financial statement and on the determined need. In addition to Regents Fellowships, fellowships funded by endowed income and foundation and corporate donations, the following fellowships are awarded in open competition:

The Berkeley Fellowships for Graduate Study. Awarded to students of outstanding achievement and high promise who will commence graduate study toward the doctoral degree in any field of study. These are three year awards, based on continued excellence in the fellow’s advanced degree program, with an annual stipend of $8,000 plus tuition and fees.

Foreign Language and Area Studies Fellowships. The U.S. Department of Education allocates fellowship funds to institutions of higher education that offer advanced training in modern foreign languages, other than Western European languages, and in area or international studies. The fellowships are awarded to enable students specializing in various disciplines, or professional fields of study simultaneously, to acquire a high level of competence in one or more languages critical to the national interest of the United States, and a fuller understanding of the areas, regions, or countries in which that language is commonly used. To be eligible, the applicant must be a citizen or permanent resident of the U.S., show potential for high academic achievement and plan to enroll in a course in the language of award.

Graduate Opportunity Fellowships. The purpose of the Graduate Opportunity Fellowship (GOP) Program is to increase the participation of ethnic minorities and of women in departments where they have been traditionally underrepresented. To be eligible for an award under this program, a student must have demonstrated scholastic achievement and be an entering or continuing full-time registered graduate student and a citizen or permanent resident of the United States. Awards are only for study in residence on the Berkeley campus and will carry a maintenance stipend plus tuition and fees.

Fellowship Application Procedure. Students applying for admission/fellowship file the combined Application for Admission, Fellowships, and Financial Aid according to instructions included in the application. Important: Applicants for fellowships and graduate scholarships are strongly advised to take the October Graduate Record Examination.

Students applying for admission for the Spring Semester must file a Continuing/Returning Graduate Student Fellowship Application (secured from the Graduate Fellowship Office) for an award to commence with the academic year following the semester of admission.

Continuing or returning graduate students at Berkeley may obtain the necessary fellowship application material from the Graduate Fellowship Office. The application and supporting materials must be filed with the department or graduate work.

Fellowship application deadline: December 15.

Announcement of Awards. Awards are announced by April 1, and must be accepted or refused, in writing, by April 15. The acceptance of a fellowship or graduate scholarship carries with it the presumption that the incumbent will devote full time to graduate study and research at UC Berkeley.

Fellowship Supplementation. Fellows may supplement their fellowships with no more than 25 percent time employment per semester as a Teaching or Research Assistant or similarly educationaly relevant position. Any exception to this policy must be approved by the Dean of the Graduate Division upon recommendation of the graduate adviser.

Waiver of the Nonresident Tuition Fee. A limited number of waivers of the nonresident tuition fee are available each academic year. These are awarded to graduate students with distinguished academic records or to teaching assistants, by departmental recommendation, until departmental waiver quotas are filled. Applicants must be enrolled full time in a program of study leading to a degree and cannot be the recipients of a fellowship, scholarship, grant-in-aid, or other award from a foreign government. Applications can be obtained from the Office of the Dean of the Graduate Division and should be returned to that office by May 1. Awards are usually made during the summer, and applicants are then notified of the action taken on their requests. There is no waiver privilege for summer session registrants since the nonresident tuition fee is not assessed during the summer. For information regarding the establishments of legal residence in the state of California, see Appendix.

There are also a limited number of Earle C. Anthony Tuition Scholarships covering the nonresident tuition fee open to students who plan to study in the physical, biological, and agricultural sciences, in mathematics, or in engineering. The application procedure is the same as above.
Graduate Minority Program. The goal of the Graduate Minority Program is to increase the number of minority students entering and completing higher degree programs at the University. The program assists with recruitment activities and provides financial assistance and supportive services for students from groups which have been traditionally underrepresented in graduate and professional programs in the United States. The University has identified Blacks, Chicanos/Latinos (Hispanics), Native American Indians, and Filipinos as most severely underrepresented in these programs.

Graduate Minority Program awards are based upon evaluation of academic promise, financial need, and available program funds. The amount of the award is determined by financial need and may range from payment of fees to a maximum award which provides a stipend of $4000 plus payment of fees. Awards are made for one year and are renewable for a second year on condition that satisfactory academic progress is being made toward completion of the degree. A limited number of awards may be available for students in the final year of dissertation work.

A limited number of application fee waivers are also available for disadvantaged needy students. GMP applicants usually qualify for these waivers. The request forms are available in the Graduate Admission/Fellowship Office or the GMP Office.

Applications for prospective students are available in the Graduate Application for Admission, Fellowships, and Financial Aid. Applicants are required also to complete the Office of Financial Aid application with all necessary supporting documents for determination of financial need.

For further information write to: The Graduate Minority Program, 1 California Hall, University of California, Berkeley; Berkeley, CA 94720.

Teaching and Research Positions. Salary figures for all positions mentioned in the following sections are subject to United States income tax deductions. Figures given are gross, not net, and do not reflect deductions. Information about salary payment schedules should be obtained when an appointment is offered, since payment for work performed is later than dates when registration fees are due. Appointments carry no guarantee of waiver of the nonresident tuition fee or any other fees. Appointments are for a period of from one to two academic semesters. Reappointment may be recommended. Employment in the summer sessions may be additional and, in some cases, may be full-time. For teaching assistants and teaching fellows, payment is in eight equal installments (four installments per semester). Registered graduate students may not be employed by the University in any capacity at more than half-time without the express consent of the Dean of the Graduate Division. Registered graduate students employed half-time by the University are nevertheless considered full-time students if they are taking a full academic load, i.e., registered for at least six units of upper division and/or graduate work.

Teaching Assistantships. Many departments make teaching assistantships available to outstanding graduate students, providing them a salary of $611 per month. Appointments are for half-time service. The teaching assistant must be a registered full-time student. Chosen for scholarly achievement and promise as a teacher, the appointee serves the apprenticeship under active supervision of the regular faculty. In some departments, students working for the Ph.D. degree are required to complete a specified minimum period of teaching as a part of their degree program. Application is made directly to the chair of the department in which the student wishes to teach.

Research Assistantships. Qualified registered full-time graduate students may seek positions as research assistants in the departments, centers, and institutes of the University. The stipend is $629 per month for a half-time appointment. The duration and extent of such employment is variable. Application is made directly to the department, center, or institute.

Teaching Fellowships. An appointee must be a registered full-time student who has been advanced to candidacy for the doctorate, or who has otherwise achieved appropriate professional maturity. The appointee is chosen for competence to conduct the entire instruction of a group of students in a lower division course, under general supervision of a regular faculty member. The stipend is $597 per month for a half-time annual appointment. Application is made to the individual departmental chair.

Associateships. The title "Associate" is assigned to teachers employed temporarily and not under consideration for appointment as Instructor or Professor. Associates are employed to give independent instruction in lower division courses. Individuals holding this title must have the master's degree or equivalent training and at least one year of teaching experience (including that of a teaching fellowship or assistantship) in or outside of the University. Graduate students must be registered in order to hold the Associateship title. Application is made to the individual departmental chair.

Exchange Programs

Foreign Language Training. When space is available, graduate students and faculty may facilitate their research and overseas field work by enrolling in courses for oral proficiency training in any of the languages taught at the Defense Language Institute of the Presidio of Monterey. Application forms may be obtained from the Secretary, Language Training Advisory Committee, Merrill College, University of California, Santa Cruz; Santa Cruz, CA 95060.

Intercampus Exchange Program. A graduate student registered on any campus of the University may go to another campus of the University as an Intercampus Exchange Graduate Student with the approval of the graduate adviser, the chair of the department in which study is proposed, the Dean of the Graduate Division on the home campus, and the Dean of the Graduate Division on the campus visited. This program will also include those students who take courses on more than one campus of the University in the same semester.

Application forms for the Intercampus Exchange Program for Graduate Students may be obtained from the Office of the Dean of the Graduate Division on the student's home campus. Application forms should be completed and filed at least three weeks before
the opening of the semester of enrollment in the program.

It is anticipated that this privilege will be used by graduate students who seek the opportunity for association with scholars or fields of study not available on their home campus, or who seek the use of special facilities and collections. Whenever possible, personal arrangements between faculty members on the two campuses should be made so as to insure that the courses, seminars, or facilities will be available to meet the student's needs. This privilege will be granted where evidence of serious and high-quality scholarship is available.

Although the intercampus exchange student registers and pays fees on the home campus, such a student has library, infirmary, and other student privileges on the host campus. The exchange student should make arrangements with the Office of Admissions and Records to follow the enrollment procedure of the host campus so that grades obtained in courses taken here will be transferred to the record on the home campus. An exchange student is considered a graduate student in residence on the home campus. The enrollment of the intercampus exchange student is not transferred to the host campus and formal admission to the host graduate school and department is not granted. Unless specifically restricted, holders of fellowships may participate in the Intercampus Exchange Program.

Stanford-California Exchange Program. Graduate students with superior academic records may participate in the Stanford-California Exchange Program, with the approval of the Graduate Division and the department, when it is deemed desirable for them to take a limited amount of work in courses offered at Stanford and not available at Berkeley. Normally, students are not allowed to participate in the Exchange Program until they have completed a year of graduate study here. Participants in this program register and pay the applicable fees at Berkeley and are exempt from tuition and fees at Stanford. The same privilege is accorded to Stanford students who wish to take courses at Berkeley. Further information and application forms may be obtained from the Petitions Desk in the Graduate Division, 1 California Hall.

Exchange Program with Hayward, Mills, and Sonoma. Graduate and undergraduate students may participate in exchange programs with California State University, Hayward; Mills College, Oakland; and California State University, Sonoma. With the approval of the Graduate Division and the department, participants in these programs may register and pay applicable fees at Berkeley and be exempt from tuition and fees at the host campus. It should be noted that the number of graduate and upper division units completed in an exchange program is limited to six units toward the master's degree.

Graduate Theological Union. There are two types of programs which include the facilities of the Graduate Theological Union in Berkeley: the "Casual Program" and the joint Ph.D. program in Near Eastern Religions. The Casual Program is open to all students in the GTU community and all graduate students at UC Berkeley. This program provides cross registration between the two campuses whereby a student registered on one campus may take courses on the other campus, subject to the appropriate academic approvals. Applications and deadline dates can be obtained from the Petitions Desk in the Graduate Division, 1 California Hall.

The Joint Doctoral Program in Near Eastern Religions is open only to students who intend to work toward the Ph.D. degree, but all students must first possess an M.A. (or equivalent) in the field of Near Eastern Studies or in a related field provided they have at least two ancient languages suitable to the proposed program. Applicants must be admitted to both the Graduate Theological Union and the University, as the degree is conferred jointly by both institutions. Students in the joint doctoral program are under the administrative supervision of the graduate dean at each institution, and final action on a student matter may only be taken after both deans have participated in the decision. Students in this program may use the extensive library holdings of the Union and supplement their programs with selected courses in Palestinian archaeology, Biblical studies, Semitic epigraphy, and philology. Initial information about the program, a catalog, and application forms should be obtained from the Graduate Theological Union, 2465 LeConte Avenue, Berkeley, CA 94709.

Berkeley-Harvard Exchange Program. Graduate students whose majors fall under the aegis of the College of Letters and Science and who have superior academic records may, with the approval of the graduate adviser and the Dean of the Graduate Division, participate in the Berkeley-Harvard Exchange Program. Participants in this program register and pay fees at Berkeley and are exempt from tuition at Harvard. Students may take courses only in the Faculty of Arts and Sciences at Harvard and are limited to two semesters of participation in the program. Approval should be secured at least two months in advance of the date of proposed registration. Further information and application forms may be obtained from the Office of the Dean of the Graduate Division, 1 California Hall.

The Exchange Scholar Program. The Exchange Scholar Program is a three year experimental program designed to enable graduate students who are enrolled in a doctoral program and who have superior academic records to study at one of the participating institutions for a limited period of time so as to take advantage of particular educational opportunities not available on the home campus. Students may take courses and/or conduct research with particular faculty at the host institution while remaining registered at the home institution. The participating institutions are: UC Berkeley, Brown University, University of Chicago, Columbia University, Cornell University, Harvard University, Massachusetts Institute of Technology, Princeton University, Stanford University, and Yale University. Further information and applications may be obtained from the Petitions Desk in the Graduate Division, 1 California Hall.

Please note: Guidelines for participation in exchange programs with Stanford University and Harvard University are outlined above.

Study Abroad. Graduate students who have been admitted to study toward a higher degree may, under certain conditions, be granted permission to...
study abroad. An applicant must have completed at least one year in residence before departure for study abroad, and must demonstrate language proficiency, where required.

Graduate students are eligible to apply to most of the study centers under the Universitywide Education Abroad Program. A student must obtain the approval of the Dean of the Graduate Division and the Dean of the Graduate Division.

Internship/Study Opportunities in Professional Studies Program in India. The Professional Schools in Berkeley conduct a program in New Delhi. Students earn credit for internship work in local government agencies appropriate to their professional interest, and enroll in an Indian university. For additional information on all the above programs, write to: Office of International Education, 2538 Channing Way, 104 Building D, University of California, Berkeley; Berkeley, CA 94720.

Tropical Biogeography. Registered graduate students interested in doing field research in the tropics may be assisted by the Associates in Tropical Biogeography who among other objectives have that of serving as an advisory committee to the Dean of the Graduate Division. Please see listing under Biology 250 for more information.

The Master's Degree

Instruction is offered on the Berkeley campus leading to both academic and professional degrees as listed in this section.

Specific regulations governing the professional master's degrees are set forth in the Individual Announcements of the colleges and schools. This section will deal primarily with the academic master's degree.

Residence Requirement. A minimum of two semesters of academic residence is required for the master's degree. Specific subject requirements and performance levels are set by the schools and departments.

Transfer of Credit from Other Institutions. Up to six quarter units (or four semester units) of courses completed at other institutions may be applied toward the degree, upon approval of the Dean of the Graduate Division. These units are allowed if earned in graduate status at an institution of high standing, but they cannot be used to reduce the minimum residence requirement or minimum requirement of graduate-level units. Course content of the units to be transferred should be equivalent to work normally offered within the student's program of study. A letter grade of B or better in the course is required for transfer credit. Requests for degree credit for such courses are not considered until a student has completed at least one half of the program for the master's degree and is applying for advancement to candidacy. The student's entire record must indicate superior scholarship. Credit for graduate work completed on other campuses of the University of California may be granted in excess of six quarter units or four semester units. Requests are handled on an individual basis.

Concurrent Enrollment/University Extension. Concurrent courses through Extension are those taken on the Berkeley campus under the instruction of a regular member of the Berkeley faculty. In general, such course work cannot be applied toward a Berkeley Master's degree. These courses are intended to provide Extension students with an opportunity to take course work that would not ordinarily be available to them. They are not intended to provide a substitute for normal registration by Berkeley graduate students, nor are they to be used as a means of accumulating credit toward a Berkeley degree by an individual not formally admitted to graduate standing on this campus. Exceptions to this rule will be made only when there is clear evidence that such course work was taken by the student while in graduate standing at another institution and with the intent of applying the units toward a graduate degree at that institution. Exceptions must be fully justified by the Graduate Adviser and will require special approval by the Dean of the Graduate Division.

Plan I requires at least 20 semester units of upper division and graduate courses and a thesis. At least 8 of these units must be in graduate courses (200 series) in the major subject. Course units are not granted for the thesis.

Plan II requires at least 30 semester units of graduate study and a thesis, following by a comprehensive final examination administered by the student's department or group. At least 12 of the units must be in graduate courses in the major subject.

Students under both plans are guided by their graduate advisers regarding distribution of course work among the departments. Please note that departments, schools, and groups have the option of requiring performance standards higher than the minimum B average required by the Graduate Division. Further requirements are specified by the major department.

Advancement to Candidacy. Admission to candidacy for a master's degree is not automatic upon completion of the degree requirements; it requires a formal application to the Dean of the Graduate Division that bears the approval of the student's major department or school and a precise statement of the studies on which the application is based. Application must be made not later than the end of the second week of instruction in the semester in which the degree is to be awarded. If a student is to submit a thesis, however, the adviser should be consulted about advancement to candidacy as early as possible so that the appropriate committee can be formed.

The Master's Thesis. Students under Plan I described above must submit a thesis in typewritten form, double-spaced on medium weight, B½ x 11 inch paper of good quality, with a minimum left hand margin of two inches. Consult the Degree Staff in the Office of the Dean of the Graduate Division for required brands of paper.

The thesis must be unbound and without perforations. The type must be adequate for photographic reproduction. Following approval by the student's thesis committee, two copies are filed with the Dean of the Graduate Division. Further information regarding the organization and format of the thesis is available.
from the Degree Staff, Office of the Dean of the Graduate Division.

The thesis constitutes a report, in as brief a form as possible, of results obtained in an original investigation of a problem. While it is understood that the problem in question need be one of only limited scope, the thesis should be comparable in style, organization, and depth of understanding to investigations of greater scope, such as the dissertations of doctoral candidates.

The thesis is submitted to a committee of three members of the faculty appointed by the Dean of the Graduate Division, with one member of the committee being chosen from a department other than that of the candidate's major subject. The candidate is required to confer with all members of that committee before undertaking the work of a thesis. Since the committee is not appointed until a student is advanced to candidacy, the student, to avoid the possibility of having to make extensive revisions, should not begin thesis work before advancement. Responsibility for placing the completed thesis in the hands of the committee members rests with the student.

Three years is the normal time period allowed for completion of the thesis. Candidacy for the master's degree will be lapsed automatically at the end of that time. Reinstatement can be accomplished upon the recommendation of the graduate adviser to the Dean at the time a final draft of the thesis has been approved by the thesis committee members.

If all three members of the committee approve the thesis, they sign the official title page prepared by the Office of the Dean of the Graduate Division, where two copies of the thesis are filed by the student for later deposit in the University Library. If any member of the committee doubts the acceptability of the thesis, the chairperson convenes the committee to discuss it. If the committee then reaches agreement on its acceptability, the thesis is signed and filed as previously indicated. If there is disagreement, the thesis is sent to the Dean of the Graduate Division together with a brief statement of each committee member's opinion. If the thesis is rejected by all members of the committee, it is sent to the Dean with a statement to that effect by the committee chairperson. In all cases of rejection or split vote, the Administrative Committee of the Graduate Council makes the final decision.

### The Doctor's Degree

Instruction is offered on the Berkeley campus leading to both academic and professional degrees. Professional degree programs are outlined in the individual Announcements of the colleges and schools offering them. The general procedures given in this section apply primarily to the academic doctoral degree.

The Doctor of Philosophy degree is not granted solely for fulfilling technical requirements such as residence and completion of specified courses. The degree is awarded in recognition of a candidate's knowledge of a broad field of learning and for distinguished accomplishment in that field through an original contribution of significant knowledge and ideas. The candidate's research must reveal high critical ability and powers of imagination and synthesis.

**Program of Study.** Programs of study for doctoral degrees are more individualized than those for master's degrees, permitting more specialization within a field or the establishment of connections among fields. Nevertheless, aspirants must have their programs of study approved by the graduate adviser of the department or group to which they are admitted or later transferred. University policy requires continuous registration from entrance until receipt of the degree, unless a formal withdrawal is granted by the Dean of the Graduate Division.

The field of study may be in a single department, except for essential related courses in other departments, in several departments, or in an interdisciplinary group. Once a field of study has been chosen, students should confer with their graduate advisers to select the sequence of courses that will best prepare them for qualifying examinations and research work.

**Residence Requirement.** A minimum of two years or four semesters of academic residence is required for the Ph.D. degree. A maximum period in candidacy determined by the department and the Graduate Division is permitted, after which candidacy for the degree is likely to lapse. The department or the Graduate Division should be consulted for the time permitted in candidacy.

**Foreign Language Requirement.** The requirement serves (1) to make certain that Ph.D. candidates have the ability to acquire wide knowledge in their field of study; and (2) to enable them to keep up with foreign developments in the field. Students are urged to complete the foreign language requirement early in their graduate career. They must fulfill the foreign language requirement for the Ph.D. before advancement to candidacy and preferably before admission to the Qualifying Examinations according to the policies current in the department or group. Each graduate program may have somewhat different foreign language requirements, not only with respect to the particular languages required but also with respect to their number. Some graduate programs include the satisfaction of the foreign language requirement for the doctorate in their requirements for admission to doctoral programs. Prospective students are urged to inquire about the foreign language requirement as soon as possible and, if they can, to fulfill it while still in undergraduate status.

**Qualifying Examinations.** Before admission to candidacy, students must pass a series of qualifying examinations administered by a five-member committee approved by the Graduate Council. The student must be registered in the semester the examinations are taken. Any previous deficiencies in training must have been removed, including satisfactory resolution of any incomplete grades in courses required by the graduate adviser for the individual program. At least a B average in all coursework undertaken in graduate status must have been maintained, and the language requirement(s) must have been fulfilled. Please note: Departments, schools, and groups have the option of requiring performance standards higher than the minimum B average required by the Graduate Division.

**Advancement to Candidacy.** Application is made on a form furnished by the Graduate Division, no later than the semester following the one in which the
qualifying examinations were passed. The completed form, bearing the endorsement of the student's department, is filed with the Dean of the Graduate Division, who determines whether all formal requirements have been met. A fee of $25 must be paid when the application is filed. All requirements for the doctoral degree except the dissertation must have been completed before the student may be advanced to candidacy.

The Candidate's Degree. The degree, "Candidate in Philosophy," which gives formal recognition to a definite state of progress toward the doctorate, may be awarded to students when they are advanced to candidacy for the Ph.D. degree. The following departments and groups currently offer this degree:

- Agricultural and Resource Economics
- Ancient History and Archaeology
- Anthropology
- Applied Mathematics
- Architecture
- Astronomy
- Biochemistry
- Biostatistics
- Botany
- City and Regional Planning
- Classics
- Comparative Literature
- Computer Science
- Demography
- Economics
- Education
- Endocrinology
- Engineering
- English
- Environmental Planning
- French
- Genetics
- Geography
- German
- Hispanic Languages and Literatures
- History
- Immunology
- Italian
- Latin American Studies
- Library and Information Studies
- Linguistics
- Logic and the Methodology of Science
- Mathematics
- Microbiology
- Philosophy
- Physics
- Political Science
- Psychology
- Sociology
- Slavic Languages and Literatures
- Soil Science
- Social Sciences
- Statistics
- Technology
- Zoology

The dissertation, the product of independent investigation under faculty supervision, must be submitted to the committee in charge (see below), and must receive both its approval and the approval of the Graduate Council.

The dissertation is the most important requirement for the doctoral program; the degree is in no case granted for completion of course work only, no matter how extensive.

The candidate is to work under one of two plans, as adopted by the department or group:

**Plan A:** the Administrative Committee of the Graduate Council appoints a five-member committee which determines whether the candidate has met the requirements for the degree. Three members of the committee, one of whom must be from a department other than that of the student's major subject, guide the candidate in research and pass judgment on the merits of the dissertation. The whole committee conducts a final oral examination dealing with the relationship between the dissertation and the general field of study in which the subject of the dissertation lies. Admission to the final examinations may be restricted to the members of the committee, members of the Academic Senate, and guests of equivalent rank from other institutions.

**Plan B:** the Administrative Committee of the Graduate Council appoints a committee of three members, one of whom must be from a department other than that of the student's major subject, to guide the candidate in research and judge the merits of the dissertation. This committee may require any necessary conferences for elucidation of the subject treated in the dissertation. After presentation of the dissertation, but before final action is taken upon it, the committee may, if deemed necessary, require the candidate to defend the dissertation in a formal oral examination.

After the dissertation has been approved by the candidate's committee, the original is filed with the Dean of the Graduate Division on a date specified by that office. Along with the dissertation, an abstract of it in duplicate not to exceed 350 words, with one copy signed by dissertation chairperson, is also filed with the Graduate Division.

All of the procedures and regulations described above, and in the preceding section on master's degrees, constitute the **minimum** requirements for the higher degrees, as set by the Graduate Division. Each academic department may adopt additional requirements, as approved by the Dean of the Graduate Division and the Graduate Council, according to the demands of a candidate's field of study. Programs using Plan A and Plan B are listed below.

**Plan A**
- Anatomy
- Asian Studies
- Buddhist Studies
- Comparative Literature
- Hispanic Literatures
- Logic and the Methodology of Science
- Near Eastern Studies
- Romance Languages and Literatures
- Emphasis: French, Italian, Spanish
- Roman Philology

**Plan B**
- Agricultural and Environmental Chemistry
- Agricultural and Resource Economics
- Ancient History and Archaeology
- Anthropology
- Applied Mathematics
- Architecture
- Astronomy
- Biochemistry
- Bioengineering
- Biophysics
- Biostatistics
- Botany
- Business Administration
- Chemical Engineering
- Chemistry
- City and Regional Planning
- Classical Archaeology
- Classics Emphasis: Greek, Latin
- Comparative Biochemistry
- Comparative Pathology
- Computer Science
- Demography
- Dramatic Art
- Economics
- Education
- Endocrinology
- Engineering
- Environmental Science
- Entomology
- Environmental Health Sciences
- Epidemiology
- French
- Genetics
- Geography
- Geology
- Geophysics
- German
- History
- History of Art
- Immunology
- Italian
- Jurisprudence and Social Policy
- Latin American Studies
- Library and Information Studies
- Linguistics
- Mathematics
- Medical Anthropology
- Medical Physics
- Microbiology
- Molecular Biology
- Music
- Neurobiology
- Nutrition
- Paleontology
- Parasitology
- Philosophy
- Physical Education
- Physics
- Physiological Optics
- Plant Pathology
- Plant Physiology
- Political Science
- Psychology
- Public Policy
- Rhetoric
- Scandinavian Languages and Literatures
- Science/Mathematics Education
- Slavic Languages and Literatures
- Sociology
- Soil Science
- South and Southeast Asian Studies
- Statistics
- Wood Science and Technology
- Zoology

**Normative Time.** The primary goals of this program are to provide incentives to both students and instructional units to reduce the average amount of time taken to complete requirements for the doctoral degree, to facilitate a greater degree of continuity in doctoral
studies, and to provide a more equitable assessment of fees for doctoral students advanced to candidacy. After advancement to candidacy, eligible students will receive a special grant to offset the cost of the Educational Fee.

Normative time is defined as the elapsed calendar time in years that under normal circumstances would be needed to complete all requirements for the doctoral degree, assuming that the student is engaged in full-time, uninterrupted study and is making desirable progress toward the degree.

The program is obligatory for all doctoral students (independent of original degree goal) first enrolled on the Berkeley campus in Fall 1978 and thereafter. Students who entered earlier may elect to join the program. The conditions of the Normative Time Program are described in the Appendix.

Interdisciplinary Groups. UC Berkeley has established graduate programs in a number of fields that cut across conventional departmental lines yet comprise definite cores of knowledge. These programs are administered by groups of faculty from several related departments and, in certain instances, from several campuses. Students enrolled in these programs can work with any faculty member in the group without having to pursue the particular discipline of the department with which the faculty member is associated. Moreover, this arrangement makes available to group students a range of facilities not ordinarily open to students enrolled in departmental programs.

In some cases (e.g., Medieval Studies), a faculty committee is specifically appointed to advise both the student and the interested departments on setting up a program that will best meet both the student's needs and the departments' views of the proposed program's intellectual quality. Since groups have no budgets or facilities of their own, however, most applicants, to be accepted by a particular group, must first obtain the sponsorship of one of its faculty members.

Following is a current list of Graduate Groups on the Berkeley campus:

Group in Agricultural and Environmental Chemistry
Professor Isao Kubo, Chair
c/o Department of Entomological Sciences
201 Weiman Hall

Group in Ancient History and Archaeology
Professor Andrew F. Stewart, Chair
c/o Department of History of Art
405 Doe Library

Group in Asian Studies
Professor Robert R. Reed, Chair
c/o Group Office
460 Stephens Hall

Group in Bioengineering
Professor Edwin R. Lewis, Chair
c/o Department of Electrical Engineering and Computer Sciences
231 Cory Hall

Group in Biophysics, Medical Physics, and Bioradiology
Professor Edward L. Alpen, Chair
c/o Donner Laboratory

Group in Biostatistics
Professors E.L. Scott and C.L. Chiang, Co-chairs
c/o School of Public Health
19 Warren Hall

Group in Buddhist Studies
Professor Michel Strickmann, Chair
c/o Department of Oriental Languages
104 Durant Hall

Group in Comparative Biochemistry
Professor Lester Packer, Chair
c/o Department of Physiology-Anatomy
2549 Life Sciences Building

Group in Comparative Pathology
Professor Stewart H. Madin, Chair
c/o School of Public Health
19 Warren Hall

Group in Demography
Professor Eugene A. Hammel, Chair
c/o Graduate Group in Demography Office
2234 Piedmont Avenue

Group in Endocrinology
Professor Howard A. Bern, Chair
c/o Department of Zoology
4079 Life Sciences Building

Group in Energy and Resources
Professor C. Bartlett McGuire, Chair
c/o Group Office
100 T-4

Group in Environmental Health Sciences
Professor Eddie T.F. Wei, Chair
c/o School of Public Health
19 Warren Hall

Group in Epidemiology
Dr. William C. Reeves, Chair
c/o School of Public Health
19 Warren Hall

Group in Folklore
Professor Alan Dundes, Chair
c/o Department of Anthropology
232 Kroeber Hall

Group in Food Science
Professor Benito O. Delumen, Chair
c/o Department of Nutritional Sciences
119 Morgan Hall

Group in Genetics
Professor Kenneth Paigen, Chair
c/o Department of Genetics
345 Mulford Hall

Health and Medical Sciences
Professors Philip Cowan and Todd R. La Porte, Co-chairs
Program Office
106 T-7

Group in Immunology
Professor Phyllis B. Blair, Chair
c/o Department of Microbiology and Immunology
3573 Life Sciences Building

Group in Latin American Studies
Professor Brent Berlin, Chair
Center for Latin American Studies
2334 Bowditch Street

Group in Logic and the Methodology of Science
Professor John W. Addison, Jr., Chair
c/o Department of Mathematics
970 Evans Hall

Committee on Medieval Studies
Professor Richard W. Zemanek, Chair
c/o Department of Romance Languages and Literatures
3573 Life Sciences Building

Group in Microbiology
Professor David R. Zusman, Chair
c/o Department of Microbiology and Immunology
3573 Life Sciences Building

Group in Neurobiology
Professor Frank S. Werlin, Chair
c/o Department of Electrical Engineering and Computer Sciences
231 Cory Hall

Group in Nutrition
Professor Janet C. King, Chair
c/o Department of Nutritional Sciences
119 Morgan Hall

Group in Parasitology
Professor Clarence J. Weinmann, Chair
c/o Department of Entomological Sciences
201 Weiman Hall

Group in Physiological Optics
Dean Jay M. Enoch, Chair
School of Optometry
350 Minor Hall

Group in Plant Physiology
Professor Richard Malkin, Chair
c/o Department of Plant and Soil Biology
108 Hilgard Hall
Committee in Psychoanalytic Studies of the Arts and Society

Professors Robin L. Lakoff and Joseph Lifschutz, Co-chairs
c/o Department of Linguistics
2337 Dwinelle Hall
(Advisory only—not a degree program)

Group in Range Management

Professor Randy E. Rosiere, Chair
c/o Department of Forestry and Resource Management
145 Mulford Hall

Group in Romance Languages and Literatures

Professor Jerry R. Craddock, Chair
c/o Department of Spanish and Portuguese
4236 Dwinelle Hall

Group in Romance Philology

Professor Suzanne Fleischman, Chair
c/o Department of French
4125 Dwinelle Hall

Committee for Certificate in Russian and East European Studies

Professor George W. Brestauer, Acting Chair
Center for Slavic and East European Studies
372 Stephens Hall

Group in Science/Mathematics Education

Professor Richard M. White, Chair
c/o Department of Electrical Engineering and Computer Sciences
231 Cory Hall

Group in Soil Science

Professor John G. McColl, Chair
c/o Department of Plant and Soil Biology
108 Hilgard Hall

Group in Wood Science and Technology

Professor Donald G. Arganbright, Chair
c/o Forest Products Laboratory
478 Richmond Field Station

Individual Doctoral Programs. To allow the student an approach to a field that, in its breadth, falls between that of the department and the interdisciplinary group, the Graduate Division has encouraged the informal establishment of ad hoc programs leading to the Ph.D. degree. Only students who have completed some graduate study here and are currently eligible for doctoral status may be considered for an interdisciplinary program. In such programs, the student may prepare a proposal for a course of study under the sponsorship of three faculty members. Final approval of every individual graduate program and admission of each student into such a program must be granted by the Graduate Council.

Degree requirements must be completed in accordance with Plan A of the Graduate Council policies and the degree is awarded in a field approved by the Council for the individual student.

Graduate Degrees

Academic degrees are the M.A., M.S., M.F.A., and Ph.D. All others are professional degrees. The J.D. in Law is the basic law degree. It is a graduate degree, and application is made directly to the School of Law.

Agricultural and Environmental Chemistry, M.S., Ph.D.

Agricultural and Resource Economics, M.S., Ph.D.

Anatomy, M.A., Ph.D.

Ancient History and Archaeology, M.A., Ph.D.

Anthropology, M.A., Ph.D.

Applied Mathematics, Ph.D.

Architecture, M.Arch., Ph.D.

Art, M.A., M.F.A.

Asian Studies, M.A., Ph.D. M.A. program emphases: East Asian, Southeast Asian, South Asian

Astronomy, M.A., Ph.D.

Biochemistry, M.A., Ph.D.

Bioengineering, M.S., Ph.D. (Joint program with San Francisco campus)

Biophysics, M.A., Ph.D.

Bioreadiology, M.Biorad.

Biostatistics, M.A., Ph.D.

Botany, M.A., Ph.D.

Buddhist Studies, Ph.D.

Business Administration, M.B.A., M.S., Ph.D.

Chemical Engineering, M.S., Ph.D.

Chemistry, M.S., Ph.D.

City and Regional Planning, M.C.P., Ph.D.

Classical Archaeology, M.A., Ph.D.

Classics, M.A., Ph.D. M.A. program emphases: Greek, Latin

Comparative Biochemistry, M.A., Ph.D.

Comparative Literature, M.A., Ph.D.

Comparative Pathology, M.S., Ph.D.

Computer Science, M.S., Ph.D.

Demography, M.A., Ph.D.

Design (Visual), M.A.

Dramatic Art, M.A., Ph.D.

Economics, M.A., Ph.D.

Education, M.A., M.A.T., Ph.D., Ed.D.

Education (Special Education), Ed.D., Ph.D. (Joint degree program with San Francisco State University)

Endocrinology, M.A., Ph.D.

Energy and Resources, M.A., M.S., Ph.D.


English, M.A., Ph.D.

Entomology, M.S., Ph.D.

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

Environmental Planning, Ph.D.

Epidemiology, M.S., Ph.D.

Folklore, M.A.

Food Science, M.S.

Forestry, M.F.

French, M.A., Ph.D.

Genetics, M.S., Ph.D.

Genetics, Ph.D. (Joint degree program with San Diego State University)

Geography, M.A., Ph.D.

Geology, M.A., M.S., Ph.D.

Geophysics, M.A., Ph.D.

German, M.A., Ph.D.

Greek, M.A.

Health and Medical Sciences, M.S. program emphases: Dual Degree Option, Genetic Counseling, UCSF-UCSF Joint Medical Program, Mental Health

Hispanic Literatures, Ph.D.

History, M.A., Ph.D.

History of Art, M.A., Ph.D.

Immunology, M.A., Ph.D.

Italian, M.A., Ph.D.

Journalism, M.J.

Jurisprudence and Social Policy, M.A., Ph.D.

Landscape Architecture, M.L.A.

Latin, M.A.

Latin American Studies, M.A., Ph.D.

Law, J.D., LLM., J.S.D.

Library and Information Studies, M.L.I.S., Ph.D., D.L.I.S.

Linguistics, M.A., Ph.D.

Logic and the Methodology of Science, Ph.D.

Mathematics, M.A., Ph.D.

Medical Anthropology, Ph.D. (Joint program with San Francisco campus)

Medical Physics, Ph.D.

Microbiology, M.A., Ph.D.

Molecular Biology, M.A., Ph.D.

Music, M.A., Ph.D.

Near Eastern Religions, Ph.D. (Joint degree program with the Graduate Theological Union)

Near Eastern Studies, M.A., Ph.D.

Neurobiology, M.A., Ph.D.†
Nutrition, M.S., Ph.D.†
Oriental Languages, M.A., Ph.D.
Paleontology, M.A., Ph.D.
Parasitology, M.S., Ph.D.
Philosophy, M.A.*, Ph.D.
Physical Education, M.A., Ph.D.
Physics, M.A., Ph.D.
Physiological Optics, M.S., Ph.D.†
Physiology, M.A., Ph.D.
Plant Pathology, M.S., Ph.D.
Plant Physiology, M.S., Ph.D.†
Political Science, M.A., Ph.D.
Psychology, M.A.*, Ph.D.
Public Health, M.P.H., Dr.P.H.
Public Policy, M.P.P., Ph.D.
Range Management, M.S.†
Rhetoric, M.A., Ph.D.
Romance Languages and Literatures, Ph.D. emphases: French, Italian, Spanish†
Romance Philology, Ph.D.†
Scandinavian Languages and Literatures, M.A., Ph.D.
Science/Mathematics Education, Ph.D.†
Slavic Languages and Literatures, M.A., Ph.D.
Social Welfare, M.S.W., D.S.W.
Sociology, M.A.*, Ph.D.
Soil Science, M.S., Ph.D.†
South and Southeast Asian Studies, M.A., Ph.D.
M.A. program emphases: Hindi-Urdu, Malay-Indonesian, Sanskrit, Tamil, South Asian Archaeology, and South Asian Civilization Ph.D. program emphases: Hindi-Urdu, Malay-Indonesian, Sanskrit, Tamil, and South Asian Archaeology
Spanish, M.A.
Statistics, M.A., Ph.D.
Wildland Resource Science, M.S., Ph.D.
Wood Science and Technology, M.S., Ph.D.†
Zoology, M.A., Ph.D.

Certificate in Russian and East European Studies. Students who have had substantial training in the Russian and East European Area in at least two departments and have had 11 semester units (or equivalent knowledge) of an East European language can, by taking a required number of additional courses in the area, obtain a Certificate in Russian and East European Studies. The certificate course requirements can be fulfilled either as part of a program leading to a higher degree in the social sciences or humanities or after receipt of such a degree.

Certificate of Completion of Graduate Curricula in Library and Information Studies. A certificate program has been established which is designed to meet the need for advanced studies beyond the first professional degree (M.L.I.S.) and short of the doctoral degrees (Ph.D., D.L.I.S.). Inquiries should be directed to the School of Library and Information Studies.

Certificate of Completion of Graduate Curriculum in Optometry. Students will spend nine to 18 months in graduate professional training and must have previously earned the Doctor of Optometry degree.

Master of Arts in Teaching. The degree of Master of Arts in Teaching is offered by the School of Education jointly with the Departments of Comparative Literature, English, French, and German. At the present time, it is limited to the four academic fields of study named above. Only the M.A.T. program with the Department of English and the Department of Comparative Literature will be offered in 1983-84. Candidates must satisfy all requirements to be certified to teach in the State of California in addition to completing academic training in one of the four subject fields. Inquiries should be directed to the appropriate academic department and to the School of Education.

Joint Doctoral Programs. There are two intercampus joint degree programs between Berkeley and the University of California, San Francisco: Bioengineering and Medical Anthropology. Students should apply to the campus most appropriate to their research interests but they will have access to facilities and faculty on both campuses through intercampus exchange registration. For information, write to the Department of Anthropology or the Group in Bioengineering.

Near Eastern Religions—A program leading to the Ph.D. degree has been established which will be conducted jointly by the Berkeley campus and the Graduate Theological Union. Applicants should make application both to the Graduate Admission/Fellowship Office on the Berkeley campus and to the Graduate Theological Union.

Special Education—A joint doctoral program in special education leading to either the Ph.D. degree or the Ed.D. degree is offered by the Berkeley campus and San Francisco State University. The program is interdisciplinary, including clinical experience as well as preparation in depth in the behavioral sciences and in statistics and research methods. For application material and additional information, write to: School of Education, UC Berkeley, or Department of Education, San Francisco State University, 1600 Holloway Avenue, San Francisco, CA 94132.

Genetics—A joint doctoral program in Genetics leading to the Ph.D. degree is offered by the University at Berkeley and San Diego State University. For application material and additional information, write to: Professor Kenneth Paigen, Department of Genetics, 345 Mulford Hall, University of California, Berkeley, Berkeley, CA 94720.

Concurrent Degree Programs. Concurrent degree programs provide an integrated curriculum of greater breadth between two disciplines. Inquiries should be directed to the departments or schools involved.

Architecture, M.Arch.—Engineering (Structural), M.S.
Business Administration, M.B.A.—Law, J.D. (Berkeley)
Business Administration, M.B.A.—Law, J.D. (Davis)
Business Administration, M.B.A.—Law, J.D. (Hastings)
Business Administration, M.B.A.—Public Health, M.P.H.
City and Regional Planning, M.C.P.—Law, J.D. (Berkeley)
City and Regional Planning, M.C.P.—Law, J.D. (Hastings)
City and Regional Planning, M.C.P.—Public Health, M.P.H.
Economics, M.A.—Law, J.D.
Journalism, M.J.—Law, J.D.
Journalism, M.J.—Asian Studies, M.A.
Library and Information Studies, M.L.I.S.—History of Art, M.A.
Library and Information Studies, M.L.I.S.—Law, J.D.
Library and Information Studies, M.L.I.S.—Near Eastern Studies, M.A.
Nutrition, M.S.—Public Health, M.P.H.
Public Health, M.P.H.—M.D. (School of Medicine, San Francisco)
Public Policy, M.P.P.—Law, J.D.
Public Policy, M.P.P.—Engineering, M.S.
Social Welfare, M.S.W.—Law, J.D.

Medieval Studies. Please see Index for further information.

Teaching Credentials. Work leading to the Multiple Subject or Single Subject Teaching Credentials is given on the Berkeley campus. For details, please consult the Announcement of the School of Education.
It is extremely important that students carefully consider the total financing of their education, from the entering term to the completion of the degree objective. If financial help will be needed, beyond those funds which the student or the family is able to provide, the student should make the necessary applications for financial assistance well in advance of enrollment. Students should pay particular attention to early deadline dates of application for grants, scholarships, Work-Study, and National Direct Student Loans. While the needs and resources of each student differ, the University can provide a general list of fees and expenses normally encountered. Students should note that fees are subject to change without notice.

Part of the fees may be refunded to students who cancel their registration prior to the opening day of the semester or who withdraw before the beginning of the sixth week of classes of any semester. (See Index, Schedule of Refunds.) A separate circular on refunds, Student Fees and Deposits, is also available from the Office of Admissions and Records, 120 Sproul Hall.

### Table of Fees

At the time of registration, by mail or in person, the following fees are paid by each student:

<table>
<thead>
<tr>
<th>Student Category</th>
<th>Fall, Spring Semester 1983–84</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident Undergraduate</td>
<td>$ 680</td>
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<tr>
<td>Nonresident Undergraduate</td>
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<tr>
<td>Foreign Undergraduate</td>
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<tr>
<td>Resident Graduate</td>
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<td>Nonresident Graduate</td>
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<table>
<thead>
<tr>
<th>School of Law</th>
<th>Fall or Spring Term 1983–84</th>
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<tbody>
<tr>
<td>Resident Graduate</td>
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<tr>
<td>Nonresident Graduate</td>
<td>2405</td>
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<tr>
<td>Foreign Graduate</td>
<td>2480</td>
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</table>

### Required Fees

- **University Registration Fee**—$265 per semester. Paid by all students. Covers normal expected usage of such facilities as laboratories, gymnasiums, counseling and placement services, health services, etc.
- **Educational Fee**—Paid by all undergraduates at $396 per semester and by all graduate students at $426 per semester. Used to support a portion of the cost of the educational program. In exceptional circumstances the educational fee may be reduced by one-half for part-time undergraduate students. Approval of part-time undergraduate study is made only in exceptional cases. Criteria are related to occupation, family responsibility, and health. Application must be approved by the cognizant dean prior to the start of each term. A student may not enroll in more than two courses. Fee reduction will only be made under these circumstances.
- **Berkeley Campus Fee**—Paid by all students in the amount of $18.75 per semester. Provides support for a wide range of activities sponsored by the ASUC, including work with academic and administrative units of the campus, covers use of the Student Union, helps pay costs of construction of the Union building, and assists with the provision of ethnic studies on the Berkeley campus. There will be a one time compulsory fee added to the Berkeley Campus Fee to cover start up cost for the ASUC Recycling Project. Fall Semester campus fee will therefore be $19.50.
- **Nonresident Tuition**—$1680 per semester. At the time of registration, every entering student is classified as a resident or nonresident for tuition purposes. Only U.S. citizens and holders of immigrant visas can become qualified for resident classification. Under California law a student is classified as a resident for tuition purposes if the student has had residence in the state for more than one year immediately prior to the day instruction begins at the last of the campuses to open for a semester. Residence is the combination of physical presence within the state plus intent to reside in California permanently. Nonresidents must pay a nonresident tuition fee each semester. For detailed information regarding the establishment of California residence, see Appendix, or write to the Attorney in Residence Matters, 590 University Hall, University of California, Berkeley, CA 94720.
- **外国生健康保险**—has been included in foreign student fees—$75.00 per semester. Required of all students on nonimmigrant visas. Payment of the fee for two consecutive semesters covers the student for the full academic year, including summer.

### Additional Fees and Expenses

- **Late Registration**—$50. Students who register during the late registration period (see Calendar for dates) are liable for this fee.
- **Late Study List Filing**—$10. Students who file their Study Lists late (see Calendar for dates) are liable for this fee.
- **Reinstatement**—$10.
- **Athletic Privilege Cards**—$26, Student Football Season Ticket; $20, Basketball/All Sports Card. Both Optional. Permit free admission or reduced rates to most University athletic events.
- **Total Expenses.** The cost of attending the University varies according to individual circumstances. The expenses listed below are approximate costs for the nine-month academic year and should be used only as a guideline.

### Financial Aid

The Financial Aid Office is located at 201 Sproul Hall. By visiting or writing that office you may obtain information about the various types of student aid offered. Undergraduate students may apply to the Financial Aid Office for undergraduate scholarships (including Regents' Scholarships) and Supplemental Educational Opportunity Grants (SEOG). Both undergraduate and graduate students may apply for University Grants-Aid, Berkeley Fee Grants, National Direct Student Loans, University Loans, Guaranteed Student Loans, Work-Study Program, and other aid programs.

All financial aid except honorary scholarships and prizes are granted on the basis of financial need. Financial need is the different between the parents' expected contribution plus the student's own resources and the allowable education expenses. Prizes are awarded on the basis of competition or outstanding ability in some area of creative or scholarly achievement. Undergraduate scholarship awards are made on the basis of scholarship and financial need, except Regents' and Alumni Honorary Scholarships which are awarded in recognition of outstanding achievement.
### 1983–84 Student Budgets (Projections)

<table>
<thead>
<tr>
<th></th>
<th>Commuter</th>
<th>Dorm</th>
<th>Off-Campus</th>
<th>Married&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Single Parent&lt;sup&gt;1&lt;/sup&gt;</th>
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<tbody>
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<td>Housing &amp; Utilities</td>
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<td>2231</td>
<td>3835&lt;sup&gt;4&lt;/sup&gt;</td>
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<tr>
<td>Food</td>
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<td>1621</td>
<td>2910</td>
<td>2831</td>
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<tr>
<td>Books &amp; Supplies</td>
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<td>364</td>
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<td>906</td>
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<td>1739</td>
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<tr>
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<td>234</td>
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<tr>
<td>Fees (Rounded)</td>
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<tr>
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<td>Budget Totals (Rounded)</td>
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<td>$10,947</td>
<td>$10,868</td>
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</table>

<sup>1</sup>Add $1760 for each additional dependent to the budget total. Add $224 extra food allowance for each dependent over 12 years old.
<sup>2</sup>Dorm housing and Utility figure includes regular meals. Dorm figure for Law Students is $3685.
<sup>3</sup>Food figure covers vacation and break costs for dorm residents.
<sup>4</sup>Add Non-resident tuition of $3360.
<sup>5</sup>Law budget total includes an extra $159 book allowance.
<sup>6</sup>Will adjust to actual costs for students living in Family Student Housing.

and promise. Complete information concerning all of these programs except prizes is contained in the Financial Aid Handbook 1983-84 which may be obtained from the Office of Financial Aid. A separate booklet describing the various prizes offered is also supplied on request by the Committee on Prizes, 205 Sproul Hall.

Financial Aid application information for entering undergraduate students is in the Admission Packet. Financial Aid Application forms for entering graduate students are in the Graduate Admission Application. Application forms for continuing undergraduate and graduate students are available in 201 Sproul Hall. The deadline for submitting these forms will be announced during the Fall Semester.

Information and application materials concerning graduate fellowships and graduate scholarships may be obtained separately from the Graduate Division, 1 California Hall. The application is normally due by December 1.

Cal Grants A (California State Scholarships) are awarded by the State and are open for application to undergraduates and, in some years, to graduates. They range in value from $300 to $800 and apply toward the registration and educational fees. Cal Grants B (College Opportunity Grants) are also awarded by the State and are open to undergraduates who can demonstrate exceptional financial need. The awards range from $1100 to $1905 per academic year.
Student Services

This section offers general information on student services available on the Berkeley campus. Further information may be obtained directly from the appropriate office.

Student Activities and Services. This office is located in 102 Sproul Hall. The staff provides general information, advice, and referral for specialized assistance.

The Office also operates an orientation program for new students in the summer (CaISO) and at the start of each semester. On-the-spot information and advice are provided to new students to assure a quick and easy adjustment to life at UC Berkeley. During pre-enrollment and the first week of the semester, the Center operates a Help Center in the Student Union for both new and continuing students who need assistance in arranging their class schedules. Trained student counselors coordinate this program with the support of professional staff.

Among other services provided are: the Student Handbook, covering general information about student life at Berkeley; emergency information; handling of complaints of a nonacademic nature; administrative assistance in withdrawals, blocked registration, and reinstatement; a Notary Public service for students in University-related matters.

The staff also works closely with students and staff in their initiation, planning, and implementation of activities programs, and events to meet the needs of students and the University community. Sponsored groups include honor societies, service organizations, sororities, and fraternities. Assistance is given in registering student groups for their use of facilities, in dissemination of information regarding campus rules and regulations, and in administering funding for sponsored activities and programs, e.g., UC Marching Band, UC Jazz Ensembles, SMA-Vocal, Forensics, Model United Nations, and Committee on Publications.

A lawyer is available to provide legal advice and referral for representation.

Nondiscrimination Policy. The University of California, Berkeley does not discriminate on the basis of race, color, national origin, sex, or handicap in any of its policies, procedures, or practices in the areas of admissions, financial aid, programs, activities, services, and employment. Further information about this program, including information regarding Title IX (sex discrimination), and student grievance procedures may be found in the Appendix.

Office of the Ombudsperson. The Ombudsperson assists students and academic personnel with problems that seem insolvable by the usual procedures and agencies. If you have reached a procedural impasse or believe you have been treated unfairly in a matter affecting your academic status, there are two ombudspersons to try to help you effect a satisfactory solution. They are tenured faculty members who investigate the circumstances of complaints and make recommendations for their solution.

The Ombudspersons Committee also makes general recommendations for changes of the policies that produce unworkable or unfair regulations. The Committee is located in 326 Stephens Hall, 642-5754.

Student Health Service. Health services for Cal students are medical care for illness and injury and educational programs for self-care and health promotion. Most services are available at no additional cost to students paying the University Registration Fee.

Education programs begin each semester and are open to all students. Announcements appear in The Daily Californian and information is available by calling the Health Education Office, 642-7202. Programs include stress management, weight control, smoking cessation, menstrual pain, back care, and nutrition counseling. Selected students provide peer counseling and present educational programs on specific topics, such as alcohol use, contraception, and sexuality.

Medical services at Cowell Hospital are provided by physicians and nurse practitioners. Students are encouraged to establish an on-going relationship with a clinician who can coordinate their care through their years here. The services that they provide include examination and treatment, contraception services and pregnancy counseling, in-patient care, 24-hour emergency care, and treatment by medical specialists. Laboratory, x-ray, pharmacy, and physical therapy services are also provided at Cowell.

The Student Health Service is organized to provide the best possible medical care for problems that have developed while at the University, in order to minimize the disruption of a student's education caused by illness or injury. The SHS is not responsible for the care of chronic medical problems or for the continuing care of problems diagnosed prior to registration at Berkeley. Referrals will be made for care in the Berkeley community upon request.

Students should bring with them to campus information about their medical insurance coverage. The Health Service does not pay for hospitalization, surgery, or other non-emergency care that is not provided by the SHS or authorized in advance.

Students enrolled for the Summer Session pay a health fee which entitles them to out-patient medical care at SHS during the session. After the session is over, they may use the health service on a fee-for-service basis. Continuing students who are not registered for a given semester or for Summer Session may also use the health services on a fee-for-service basis.

For information about services and how to use them, visit the Student Health Service or phone 642-2000.

Housing. Admission to the Berkeley campus does not guarantee housing reservations. You should acquaint yourself well in advance of your enrollment with the various living arrangements. Undergraduates check the appropriate section of the Application for Admission to receive descriptive material; graduate students should write directly to Housing, Child Care, and Food Services, 2401 Bowditch Street, Berkeley, CA 94720, to receive descriptive material. The office also maintains listings of rentals in the community, but you must visit the office after you arrive on campus to make use of files, which change daily.

More than 3000 men and women live in University residence halls. An equal number live in fraternities, sororities, and co-operatives. There are apartments for 1022 in University Family Student Housing. Early application to living groups is recommended. The remaining students live in rooms and apartments in the community.

International House. International House is a coeducational residence and
program center for American and international students, primarily at the graduate level. Cultural and social events, home hospitality, and tours and visits around California are designed to promote better understanding and friendship among all nationalities. For application and further information, write or call the Residence Office, International House, University of California, Berkeley; Berkeley, CA 94720; 642-9470 or 642-9490.

Career Planning and Placement Center. The Center provides students and alumni with assistance in defining their career objectives based on factual information about the world of work and an understanding of interests and skills acquired through education and life experience; teaches job search skills that assist in finding employment consistent with career objectives; provides extensive on-campus interviewing opportunities for students seeking both summer and permanent employment; and lists opportunities for full-time, part-time, summer employment, internship, and casual employment.

Advisers are available by appointment to assist students and alumni with any aspect of the career planning and placement process. An adviser is available in 111 Wheeler Hall to provide specialized assistance to disabled students and alumni.

Workshops and programs are conducted throughout the year on a variety of career development topics. Examples include "Career/Life Planning," "Identifying Your Marketable Skills," "Job Search Strategies," "Resume Writing," "Interviewing," and "Summer Jobs.

A Career Library (T-6, second floor) provides many valuable reference materials including occupational information, job market studies, directories of employers, and past job listings. A computerized career information system is available for help in career exploration.

Students and their spouses seeking part-time, temporary, odd-job, internship, or summer employment should go to 111 Wheeler Hall. (Students interested in Work-Study positions should go to the Office of Financial Aid, 207 Sproul Hall.) Individuals seeking positions in business, industry, government, social services, and nonprofit organizations should go to Building T-6, 111 Wheeler Hall, or 26 Barrows Hall.

Individuals seeking careers in education should go to the lower level of Building T-6.

The Career Planning and Placement Center supports and subscribes to all state and federal equal opportunity employment practices.

Cooperative Education Internship Program. The Cooperative Education Program is a unique opportunity for undergraduate and graduate students to integrate classroom study with supervised practical and professional experience in the field. Students may work with government, industry, business, or non-profit organizations in positions related to their academic and/or career objectives prior to graduation. These positions may be paid or non-paid, full- or part-time, and may last for one semester or as long as two years, depending upon the type of internship desired.

Two offices constitute the campus-wide cooperative education program: SCOPE and the Engineering Cooperative Work-Study Program. Each program office has separate application procedures and requirements. Interested students should contact the appropriate program for specific information.

SCOPE. Liberal Arts, Sciences, Natural Resources, and Business Administration majors may apply through this office. Positions are varied in nature: paid or non-paid, full- or part-time, lasting for one semester or as long as two years. For general requirements, contact the SCOPE Office, Career Planning and Placement, upper level, Building T-6, 642-1532.

Engineering Cooperative Work-Study Program. All Engineering, Computer Science, and Chemical Engineering majors may apply through this office. Positions offered are full-time, paid, for a minimum of one semester. For general requirements, contact the Engineering Co-op Office, 209 Mclaughlin Hall, 642-6385.

Disabled Students' Program. 2515 Channing Way, 642-0518, 642-6376 (TDD). This office serves permanently or temporarily disabled students, e.g., blind, deaf, orthopedic, mobility, learning disabled and functionally disabled, with provision of interpreters, readers, auxiliary aides, attendant referral, transportation, wheelchair repair, advocacy, housing assistance, pre-enrollment, and orientation to campus.

Fraternities and Sororities. Membership in a fraternity or sorority is by invitation after a period of "rushing." If you are interested, apply through the Interfraternity Council for men, or the College Panhellenic Association for women, both located in 102 Sproul Hall. Each will supply general information regarding programs and costs.

Counseling and Psychological Services. Counseling and Psychological Services include the Counseling Center, Psychiatry, and Student Advising—Pre-professional/Pre-graduate.

Counseling Center. Regularly enrolled students may talk in confidence with professional staff about scholastic performance, choice of a major, personal concerns, assessing interests and aptitudes, or exploring long-range career opportunities. Group counseling is also available. Psychological and aptitude testing is provided as part of the counseling process.

The Counseling Center maintains a library of information on occupations, professions, and career opportunities; a comprehensive collection of college catalogs; and directories of colleges, professional schools, and training programs which students may use, even if not seeking counseling services. Special testing for admission to graduate or undergraduate programs (except ETS and Psych Corp.) is administered at no charge. The Counseling Center is located in Building T-5.

Psychiatry Services are available to all Berkeley students. The highly trained professional staff includes licensed clinical social workers, clinical psychologists, and psychiatrists. The Psychiatry Department is open from 8 a.m. to 5 p.m., Monday through Friday; initial appointments usually are made in person. Appointments are possible prior to and during enrollment as well as during defined academic sessions. The service is located in 81 Cowell Hospital.

Student Advising—Pre-professional/Pre-graduate. Assistance is provided to students applying to graduate and professional schools. Students interested in careers such as dentistry, law,
medicine, nursing, pharmacy, or veterinary medicine can obtain comprehensive advising in these areas and assistance with applications and letters of recommendation to the schools of their choice. Advising is located at 2440 Bancroft Way.

Optometry. The School of Optometry offers complete optometric services (including contact lens fitting). The clinic is open to students, faculty, and the general public. For information or appointments, call 642-5761 or 642-5763, or come to the Optometry Clinic located in the addition of Minor Hall, near Cowell Hospital. Patients are seen by third and fourth year optometric interns under the supervision of the Clinic faculty.

Student Learning Center and EOP/Affirmative Action Counseling. Located in Building T-8, the Center offers a wide range of group and individual programs that aid students in specific courses and in developing effective general learning skills. Assistance for Educational Opportunity and Affirmative Action students is provided by a staff of counselors.

Learning Center. Learning Assistants provide individual service in a variety of undergraduate courses. There are also noncredit mini-courses in reading improvement, writing, and study skills. Other group sessions include preparation for graduate and professional school exams. The Center's Library-Lab contains books on study skills, learning materials for a number of courses, and programs for improving reading, note-taking, and vocabulary.

All students are welcome; the Center gives priority to individual assistance to EOP and Affirmative Action students, athletes, and students on probation. For additional information, or to register for any of the Center’s programs, see the receptionist, ground floor, Building T-8, 642-7332.

EOP/Affirmative Action Counseling. The Counseling Component is a guidance service that helps students to realize their potential and achieve academic success at Berkeley. Counselors assist students with housing, financial aid, and personal concerns. The Counseling Component is located in Building T-8, 642-7224.

Special programs offered through EOP include: (1) the Summer Bridge Program, offered to new EOP and Affirmative Action students to help orient them to the University; (2) the Student Involvement Program, designed to aid new students in their social and personal adjustment to the University; and (3) Peer Advising Services, which are available to assist EOP and Affirmative Action students with pre-enrollment, registration, course selection, and other matters.

Advisers to Foreign Students and Scholars. This office offers a wide range of services to foreign students, foreign scholars, and their families, including a foreign student orientation program, guidance on visa matters, help in solving financial problems, health care counseling, advice on personal difficulties, and information on almost any topic of special interest to foreign students and scholars. Located in International House, 2299 Piedmont Avenue, 642-2818, the office is open Monday through Friday, 9 a.m. to 4 p.m.

The Program Office, also in International House, 642-9460, plans trips to neighboring communities, industries, and places of geographical interest, organizes cultural events, dances, and slide shows to enrich the extracurricular life of foreign students and scholars and to introduce them to American institutions, customs, and families.

Child Care. The Child Care Program is available to registered students and provides care for more than 200 children between the ages of three months and nine years. Children from the lowest income are given the highest priority. Two hours weekly parent participation is required. The Fall Semester application deadline is July 25. Late applicants are placed on a waiting list. Applications and information: 2537 Haste Street, Berkeley, CA, 94720, 642-1827. Address mail inquiries to Child Care Services, 2401 Bowditch Street, Berkeley, CA, 94720.

Social Security Benefits. If you have questions regarding Social Security benefits, inquire at the Office of Admissions and Records, 37 Sproul Hall.

Aid to Veterans and Dependents of Veterans. If you are a veteran, or a veteran’s dependent, you may secure the appropriate forms from Veterans Services, Office of Admissions and Records, 37 Sproul Hall, or from the Veterans Administration Regional Office, 211 Main Street, San Francisco, CA 94105. Information about application deadline dates is contained in the Veterans Affairs publication available in 37 Sproul Hall.

University Police. Police service is available at the University Police Station, 1 Sproul Hall, or by telephoning Emergency 9-911 from campus extensions or 911 from non-campus extensions; business calls 642-6760. The emergency number should be utilized to report any occurrence requiring immediate response, including fires or ambulance service. Other services are also available from the Police Department, such as providing assistance and counseling in crime prevention and personal protection 642-3185; Rape Prevention and Training 642-7310: Operation Identification, engraving of personal property to protect against theft; Bicycle Bureau, located in the old Art Museum at the end of Barrows Lane, issuing California bicycle licenses and advice on bike security (10 a.m. to 2 p.m., Tuesday through Saturday); Lost and Found service is located south of Sproul Hall (10 a.m. to 4 p.m., Monday through Friday, 642-4936). Night escort service is available if you are stranded on the campus; call 642-WALK. There are employment programs in the Department for UC students to work as police Aides.

Reserve Officers Training Corps. The University of California, as a land-grant institution, established by the Morrill Act of 1862, offers courses and programs in military training. This training is voluntary and allows young people the opportunity to qualify for a commission as an officer in the Army, Marine Corps, Navy, or Air Force while completing their college education. Reserve Officer Training Corps (ROTC) courses are offered by three departments: Aerospace Studies (Air Force), Military Science (Army), and Naval Science (Navy and Marine Corps). The programs carry a monthly stipend in the junior and senior years, and additional financial aids are available to qualified students. Individual programs are described under Military Officers’ Education Program.

Student Organizations and Activities

Student Union and Student Center. The Student Union, located on Bancroft
Way at Telegraph Avenue, is a focal point of student activities and recreation. It contains lounges, meeting rooms, Pauley Ballroom, an art exhibit area, a games room, a meditation room, a check-cashing service, the ASUC Box Office, a complete travel service, the ASUC Store (a comprehensive book, stationery, special services, poster and print sales, and sundries supply store), an information center, a visitor center, bowling lanes, billiard tables, a Hair Care Center, a garage, a creative arts studio, the Bear's Lair Pub, and facilities for UC musical organizations. Operating costs of the Student Union are largely financed by revenues from ASUC enterprises and the Berkeley campus fee of $19.50 per semester.

Eshleman Hall, the student office building located on Bancroft Way next to the Student Union, houses the elected student officers, the Personnel Office for employment with the ASUC, Senate Chambers, and many student activities. Zellerbach Auditorium, the Dining Commons, Ludwig's Fountain, and the Lower Sproul Plaza complete the Student Center.

The ASUC. The Associated Students of the University of California is the official organization of Berkeley students. This nonprofit organization, through its student-elected Senate, is responsible for directing a large variety of student activities and serves as the official student spokesperson in University affairs. Graduate students also elect departmental representatives to the Graduate Assembly which meets regularly in Anthony Hall.

The ASUC offers a large variety of commercial services and facilities. The Student Union Building, located on the corner of Bancroft Way and Telegraph Avenue, houses the ASUC Store, Pauley Ballroom, and the ASUC Box Office. In addition, it contains many other services such as the bowling alley, the health food store the Bear's Lair Pub, and the hair care center.

The ASUC also provides a wide range of programs and activities. Each year, roughly $200,000 is distributed to student activity groups, ranging from the Undergraduate Psychology Association to the Cal Ski Club. The ASUC, moreover, sponsors vital programs such as Student Advocacy, Draft Counseling, Renters' Assistance Project, and SUPERB—to name but a few.

The basic goals of the ASUC are to enhance the quality of life for both students and the community as well as increase the avenues for student participation in education and campus operations. Other important goals of the ASUC are to protect full freedom of assembly and expression in the university community, and facilitate academic and social responsibility. You, the student, can make us realize these objectives. Make use of your ASUC vote to elect the representatives you believe will best serve student interests, or better yet, run yourself. Feel free to drop by Eshleman Hall anytime during office hours to visit with various ASUC officials, staff members, and activity groups.

The Community Projects Office (CPO). This office, located in 303 Eshleman Hall, serves as the ASUC's resource agency for the development of new student-initiated projects. If you are interested in starting a new student project or doing volunteer work of any type, the CPO provides orientation programs and information on various projects administered by CPO. A small foundation library is also kept in the CPO for references on funding sources, project administration, and contacts for proposal writing. The CPO also works with various campus and outside agencies that provide similar services. The CPO employs part-time students and often utilizes volunteers. For these students, the CPO provides a meaningful and relevant link to the community while providing them an opportunity to share their learning experiences with the campus and community peers.

SUPERB Productions. The Student Union Program, Entertainment, and Recreation Board, located in the Student Union, is responsible for developing and implementing an activities program for the ASUC to satisfy the cultural, educational, recreational, and social needs of the campus. Programs and activities planned include concerts, speakers, dances, exhibits, coffee hours, recreational exhibitions, cabarets, drama, movies, music and art festivals, and special presentations, including free noon concerts in the Student Union Plaza each week and the Annual UC Berkeley Jazz Festival.

CalPIRG. The California Public Interest Research Group (CalPIRG) is an independent, nonprofit corporation established by UC Berkeley students for research and advocacy of contemporary public issues. Students propose and conduct CalPIRG projects with the aid of professional staff, and policy is set by a nonpartisan student board of directors. The CalPIRG office is at 46 Shattuck Square, Room 11, 642-9952.

Student Publications. Several student publications provide opportunities for activities in all phases of publishing, writing, editing, reporting, art and design, advertising, sales, and general management. Interested students should inquire at 18 or 300 Eshleman Hall.

Special Interest Clubs. Besides regular ASUC-sponsored activities, there are more than 250 registered student organizations on campus serving special interests and abilities. In the spring and fall of each year, an Activities Fair is held in Sproul Plaza to acquaint you with many of the organizations and to give you an opportunity to join.

Academic and professional societies, including clubs organized by many of the schools and departments, as well as national professional fraternities, provide students with an opportunity for seminars, discussions, lectures, tutoring services (both giving and receiving), and communication with members of an academic or professional field. Honorary academic societies are open to students of outstanding ability. These groups include: Honor Students' Society; Phi Beta Kappa (a national society of historical renown, open by invitation to the top seniors in nonprofessional fields); Tau Beta Pi (a national society of upper division students in the College of Engineering and in Chemical Engineering); and various other groups within the several disciplines. Most of these groups offer tutoring services.

Hobby and recreational groups abound. While the University, as a state-supported institution, does not offer chapel services or religious activity on campus, there are more than 35 churches and student religious clubs located within a few blocks of the campus. For additional information, contact the Office of Student Activities and Programs, 103 Sproul Hall.
Graduate Assembly. The Graduate Assembly is the student governance organization primarily concerned with matters pertaining to graduate students. Graduate departments send representatives (one per department or group plus one additional representative for each 100 graduate students) to the Assembly meetings which are held monthly during the academic year. The Assembly nominates graduate student members to Committees of the ASUC and the Academic Senate and to advisory committees to the Chancellor. An Assembly officer sits on the Universitywide Student Body Presidents’ Council, which makes policy for the UC Student Lobby.

Services the Graduate Assembly offers to graduate students include an annual new graduate student orientation, T.A. training programs, funding for graduate groups and activities, a lounge and meeting room for general use, staff assistance for a variety of information and referral services. The Graduate Assembly is located in Anthony Hall (Pelican Building), 642-2175 or 642-2876.

The Assembly publishes "The Berkeley Graduate," a graduate newspaper, and makes funds available to departmental organizations for educational activities through its Departmental Funding program and Educational Improvement Grant program. Funding for a variety of graduate student activities is also available through the Assembly’s Projects and Services program. The Assembly invites graduate students to use the Commons Lounge in 442 Stephens Hall; Assembly offices are located in Anthony Hall (Pelican Building), 642-2175 and 642-2307.
Key to Symbols

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

**Faculty Roster**
- 'On leave, Fall, Spring
- *On leave, Fall
- 'On leave, Spring
- 'Recalled to active service

**Course Listings**

Colleges and Schools are presented alphabetically as indicated in the Table of Contents. Following the Colleges and Schools is a list of Special Studies. Departments are treated as subdivisions within Colleges, Schools, and Special Studies. If you are unable to locate the department of your choice, consult the Index.

Prerequisites for courses should be noted carefully, although they are sometimes waived at the discretion of the instructor.

Courses with double numbers (for example, English 1A-1B) are two-semester sequences normally beginning in the Fall Semester. Except as noted, each course in a sequence is normally prerequisite to one following, and a student may normally receive credit for completion of the first half of a sequence. Course numbers preceded by the letter H are special honors courses, subject to such general restrictions as may be imposed by the department.

The number in parentheses following the course title indicates the credit value; the abbreviation in parentheses indicates the semester in which the course is offered: (F) fall, (Sp) spring.

Course numbers are assigned as follows:
- 1-99. Lower division courses, including courses designated by a letter. Open to freshmen and sophomores; not acceptable for upper division credit.
- 100-196. Upper division courses. Ordinarily open to students who have completed at least one lower division course in the given subject or two years of college work.
- 197, 198, 199. Special Studies Courses. (See limitations listed below.) Effective Fall, 1983, no more than a total of 16 semester units of courses numbered 197, 198, and 199 may be used to meet requirements for the A.B. degree. Exceptions to this rule may be granted by the Committee on Courses of Instruction.

197. Field study (upper division). 197 courses are restricted to Passed/Not Passed grading; they are open only to students who have completed 60 units of undergraduate study and are in good academic standing (2.00 grade-point average or better). Exceptions to these rules may be granted by the Committee on Courses of Instruction.

198 and 199. These courses allow students to pursue study of special topics in groups or individually under the direction of a faculty member. Credit for independent studies or group studies in a single term may aggregate no more than four units.

198. Supervised group study (upper division). Each section of a 198 course must receive approval by the chair of the department, based upon a written proposal by the instructor who is to supervise the course. A copy of the approved proposal must be submitted to the Committee on Courses of Instruction. Students enrolled in 198 courses must have completed at least 60 units of undergraduate study and must be in good standing (2.00 grade-point average or better). Only a grade of Passed/Not Passed is to be assigned. The Committee on Courses of Instruction may, on the advice of the instructor and department concerned, authorize exceptions to the above limitations.

199. Supervised independent study (upper division). A student must have prior consent of the instructor who is to supervise the study, the student’s major adviser, and the chair of the department. This approval must be based upon a written proposal submitted to the Chair. The instructor shall indicate consent in writing—for example, by initialing the student’s study list adjacent to the 199 entry. Students enrolled in 199 courses must have completed at least 60 units of undergraduate study and must be in good standing (2.00 grade-point average or better). Only a grade of Passed/Not Passed is to be assigned. The dean of the student’s college or school, on the advice of the instructor, may authorize exceptions to the above limitations.

200-299. Graduate courses. Adequate preparation, subject to instructor’s approval, is normally 12 upper division units of work basic to the subject matter of the course.

300-399. Professional courses for teachers or prospective teachers.

400-499. Professional courses which, like teaching courses, are acceptable toward academic degrees only within the limitations prescribed by the various colleges or schools or the Graduate Division.

601. Special study for graduate students in preparation for the master’s examination.

602. Special study for graduate students in preparation for the doctoral qualifying examination.

Note: The University offers a number of experimental courses. Information on these courses is contained in this Catalog under (1) the Personalized System of Instruction, presented under Special Studies; (2) some of the Interdepartmental Studies courses, also under Special Studies; and (3) all courses numbered 91, 191, and 291 in departmental course listings throughout this Catalog.