How to Use This Catalog

You will find that this catalog like most catalogs represents an attempt to gather into one publication as much information as possible about the academic and administrative programs of the campus.

But even as encyclopedic a volume as this will not necessarily answer all your questions. Therefore, you will find scattered throughout these pages references to other publications which deal with specific subjects and which are available on request. Finally, on page 267 there is a list of major publications showing their titles and prices, and how to obtain them.

As a first step in getting familiar with this book, examine the Table of Contents, and turn to that part of the Courses and Curricula section which deals with the area of your own particular interest. Then you should read carefully the front section to learn what the Berkeley campus has to offer you, both in and out of the classroom. Pay special attention to those sections giving information on the requirements and the procedures related to your admission, registration, and enrollment in the University. Also, read those areas which are of specific interest to you, such as housing, services to students, facilities, etc.

This is not a book to be read in one sitting. Rather, it is one to have close at hand, to go back to again and again as new questions arise in the ever-changing experience of being a student on a large university campus.
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UNIVERSITY OF CALIFORNIA BERKELEY

Volume 72, Number 13 / August 1978

A series of administrative publications of the University of California, Berkeley 94720. Second-class postage paid at Berkeley, California. Published sixteen times a year—three issues in February, March, and April; two issues in May, June and July; three issues in September; four issues in August.

Care is taken to ensure the accuracy of information contained in this publication; the information is susceptible, however, to unintended error and is subject to changes or deletions without notification.

Telephone: (415) 642-6000

Cable Address: UNIVCAL

All qualified students, regardless of race, sex, color, creed, handicap or national origin, are welcome. (Please see Appendix for further information.)

Price: $1.50; $2.50 by mail (see page 267 for ordering information)
The University of California is contained in the State's constitution, following year, although almost twenty years were to pass before the hope for a public university was realized. On March 23, 1868—Charter Day—Governor

The University's initial site was the Oakland campus of the College of California, which a year later admitted its buildings and land to the state on condition that a "complete University" be established for the teaching of the humanities, agriculture, mining, and mechanics. The University moved to its first permanent campus, Berkeley, in 1873. As the Berkeley campus grew, other campuses were added throughout California: San Francisco in 1873, Davis in 1905, Riverside in 1907, San Diego in 1912, Los Angeles in 1919, Santa Barbara in 1944, and Santa Cruz and Irvine in 1961. Today each campus maintains a separate administration, organization, and style of academic life, but all adhere to the same admission regulations and high scholastic standards.

Students. The inaugural enrollment of fewer than 200 students at the University of California has now grown to approximately 125,000. Nearly 90% are residents of California, with the remainder from other states and about 100 foreign countries. Nearly one third are studying at the graduate level. Students have considerable freedom in choosing courses, although colleges, schools, and departments provide a broad framework of minimum general requirements and specific major requirements.

Despite the University's size—the nine campuses offer about 10,000 courses—classes are as small as possible: nearly 70% of instruction is conducted in groups of 25 or less, and large classes are generally supplemented by small study groups. Students are encouraged to confer privately with instructors.

With certain exceptions, admission to the University is limited to graduates of California high schools in the top 12 1/4% of their classes, to graduates of out-of-state high schools in the top 1/4% of their classes; to students transferring from other colleges and universities whose academic records meet University requirements; and to graduate students with distinguished records.

Faculty and Instruction. The faculty of the University of California is internationally noted for its distinguished academic achievements. The University leads all universities in the world in the number of Nobel Laureates on its faculty. It also has 179 academic staff members who belong to the National Academy of Sciences. In 1978, its faculty received 42 Guggenheim Fellowships out of a national total of 292—more than any other university in the nation. For the fourteenth time in the past fifteen years, more than one-third of the faculty at the UC Berkeley campus received more of the prestigious fellowships than scholars at any other single institution.

One of the University's unique resources is its small roster of University Professors. This title is reserved for distinguished faculty members who are recognized as scholars and teachers of exceptional ability. Each University Professor has a home campus but may hold a joint appointment on another campus. All are available to other UC campuses for limited or extended visits, primarily for teaching or lecturing. The high quality of the University's programs was reaffirmed by the American Council of Education in its most recent evaluation of graduate schools in the United States. The ACE ranked Berkeley as the top graduate school in the country. Twenty-five graduate departments were ranked as the first, second, or third best in the nation. Eight departments were top-ranked.

Research. The distinction of the University's faculty is complemented by the quality and scope of its 150 statewide research facilities. Each campus maintains research units that include laboratories, museums, centers, and institutes. There are also research stations, field stations, and other research facilities in more than 80 locations throughout California. Continuing research is financed by University funds, private endowments, and grants from the federal and state governments. These funds provide research fellowships and assistantships for faculty and outstanding graduate students.

The libraries of the University are a valuable resource for research and instruction. The major collections are at the Berkeley campus, with more than 5,000,000 volumes, and at the Los Angeles campus, with more than 4,000,000. The other campuses also maintain extensive library collections. To minimize duplication, each campus collection is concentrated in a different area of interest. Interlibrary loans are arranged with ease.

Administration. The organization and administration of the University is entrusted, under the State Constitution, to a corporate body, the Regents of the University of California. The Constitution provides for twenty-six Regents: eighteen to be appointed by the Governor for terms of twelve years; seven, including the President of the University, to serve without salary; and a Student Regent to be elected each year from a list of names submitted to the Board by the Student Body Presidents' Council. A constitutional amendment provides that "Regents shall be able persons who shall reflect the economic, social, cultural, and social diversity of the state, including ethnic minorities and women."

The President of the University is the executive head of the University in all its departments and on all campuses. The Regents appoint the President, who is directly responsible to them. Each of the nine campuses of the University has a Chancellor as its chief administrative officer. The Chancellor is responsible for the organization and operation of the campus, including academic, student, and business affairs.

The Academic Senate participates in the administration of academic affairs and advises the University on matters as appointments, promotions, and budgets. It authorizes and supervises all courses in the colleges and schools.

University Extension. University Extension is the continuing education arm of the University, and serves as a bridge between the nine campuses and the surrounding communities of the state. It is a major channel for the dissemination of University research to professional groups and the general public. UC Extension ranks among the top university-level extension programs in the United States in size, scope, and quality of instruction.

Each campus provides an Extension program that reflects the resources of its campus and community and serves the needs of the public in its area. UC Berkeley Extension offers continuing education courses in nearly all fields available on the Berkeley campus and provides additional programs that cut across departmental lines. Each academic year, about 42,000 men and women ranging in age from the college undergraduate to the retirement age are enrolled in UC Berkeley Extension.

Summer Sessions. An extensive offering of regular academic courses and special programs is available each summer through University Summer Sessions. All campuses offer a wide variety of courses for which students may receive University credit. While admission to Summer Sessions does not constitute regular admission to the University, it is possible at some campuses to complete the equivalent of a full quarter's work by attending two Summer Sessions. Students in good standing at any campus of the University or at another college or university 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.

Courses, schedules, and fees vary among the campuses. While some campuses base their fees on the number of units or courses a student takes, other campuses have a set fee for a given session. At the Berkeley campus the tuition and fees vary 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.

The Berkeley Campus

The Berkeley campus is surrounded by wooded, rolling hills and by the business and residential districts of the town of Berkeley (population, 111,000). Despite its growth, the campus retains much natural beauty, with verdant glens, spacious plazas, and picturesque Strawberry Creek running westward through the length of the campus. The Berkeley hills afford a panoramic view of much of the San Francisco Bay Area, a nine-county region widely acclaimed for its panoramic vistas and cultural activities.

One is impressed by the vitality of the campus. Students advocating social change and political activism at Sproul Plaza rallies that make the news are, of course, a major part of the story. A host of other features—public lectures and concerts, campus-sponsored forums and seminars; clubs and workshops; dramatic presentations; international festivals; art, photograph, design, architectural, anthropological, and archaeological exhibits and displays; and dozens of bookstores within one square mile—all of these make Berkeley one of the most intellectually stimulating communities in the country.

Enrollment at Berkeley now numbers about 29,000 students, two-thirds of whom are undergraduates. There are more than one hundred academic departments and interdepartmental groups, and most offer instruction at both the undergraduate and graduate levels. 
Undergraduate Admissions

This section offers a summary of admission policies for undergraduate. The importance of these policies cannot be underestimated. Additional information may be found in the Circular for New Undergraduates, which is sent each quarter to all newly admitted students.

Admission

You may obtain application packets containing all necessary forms and instructions from California high school and community college counselors or from the Office of Admissions and Records, 120 Sproul Hall, University of California, Berkeley, California 94720. This office accepts completed applications between July 1 and 31, 1978 for the Winter Quarter 1979; between October 1 and 31, 1978 for the Spring Quarter, 1979; and between November 1 and 30, 1978 for the Fall Quarter, 1979. After the indicated filing period, applications are accepted only until application quotas are filled.

You must include with your completed application forms a fee of $20 (not refundable).

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 subject, scholarship and examination requirements described below.

Subject Requirement

You must complete certain high school courses with at least a grade C in each semester of each course in the subject areas listed below. This course sequence is often called "a to f" pattern. Your courses 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.

(a) History. 1 year. 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. 3 years (4 years, beginning with applications for Fall 1981). Three years of university preparatory English composition; not more than one year will be accepted from the ninth grade.

(c) Mathematics. 2 years. Two years of subjects such as mathematics, algebra, geometry, trigonometry, calculus, elementary functions, and mathematical analysis. Nonacademic courses such as arithmetic and business mathematics may not be used.

(d) Laboratory Science. 1 year. A year course in one laboratory science, taken in the tenth, eleventh, or twelfth grade.

(e) Foreign Language. 2 years. Any foreign language with a written literature is acceptable.

(f) Advanced Courses. 1 (or 2) years. This 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 subsequent to the laboratory science used for (d) above.

Elective Courses. The subject requirement can be fulfilled with 10 or 11 units. Grades in these courses are the only grades used in calculating the grade-point average. However, the University requires all applicants (except those with a certificate of Proficiency—see below) to complete at least 15 units. Thus, 4-5 units can be taken in elective courses, which provide an excellent opportunity to strengthen 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. A fourth year of English, including composition skills, is highly recommended for all students—and will be required of applicants for Fall 1981 and succeeding quarters.

Scholarship Requirement

If you attain a grade point of 3.3 in courses listed in a to f, above, 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 between 3.3 but greater than 2.77 will be admitted to the University if they achieve specified scores on the standardized test described below. (See University of California Proficiency 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 up to a total of two semester courses (or one year course), in which you received a grade of D or lower, in order to meet the subject and scholarship requirements. The grades you earn in repeated courses, however, will not be counted higher than C in determining your scholarship average. 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. Entering students with grade-point averages below 3.3 but greater than 2.77 with grades of C or better in the subject areas listed below 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 eligible to enter the University if they achieve specified scores on the standardized test described below. (See University of California Proficiency Eligibility Index)

Examination Requirement

All freshman applicants must submit test scores as described below. If you are applying for admission to the Fall quarter, you should take the tests preferably by December and no later than January 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 the social studies or foreign languages, 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 twelve 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.) The required total score on the Scholastic Aptitude Test is 1,100. Your total score on the three Achievement Tests must be 1,650 or higher, with no score less than 500 on an individual Achievement Test.

The required total score on the Scholastic Aptitude Test is 1,100. Your total score on the three Achievement Tests must be 1,650 or higher, with no score less than 500 on an individual Achievement Test.

Admission of Nonresident Applicants. The admission requirements for nonresidents differ from those for residents in that the required

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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 1 point from a minimum of 400 to 1600 maximum.
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 1,100 but a higher total score on the three Achievement Tests of 1,750 or better, with no score less than 500 on an individual Achievement Test.

For detailed information on these requirements, and admission by examination alone, consult the Undergraduate Admissions Circular or the Undergraduate Application Packet, obtainable from 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 to advanced standing.

Admission in Advanced Standing

The requirements for admission to advanced standing vary in accordance with your high school record. Regulations applying to admission in advanced standing are as follows: (1) those eligible for admission from high school, but who attended another collegiate institution, must present from that institution a statement of good standing and a grade-point average of 2.0; (2) those ineligible for admission from high school because of subject deficiencies may establish eligibility by completing at an accredited college the required courses, and by maintaining an average of 2.0; (3) those ineligible for admission from high school because of grade-point deficiency, may establish eligibility by taking, at an accredited college, a minimum of 56 acceptable semester units or 84 quarter units, with an average of 2.4 or better.

Subject deficiencies of not more than 2 units may be waived for those who present the 56 or more semester units or 84 quarter units and the 2.4 grade-point average mentioned above. Deficiencies in excess of 2 units must be satisfied. Any high school subject requirements must be satisfied by appropriate college courses.

Admission in Advanced Standing for Nonresidents. The admission requirements for nonresidents differ from those for residents in that the required grade-point average is 2.8 rather than 2.0. Admissions procedures and all other requirements are the same as for California residents described above. Consult the Undergraduate Admissions Circular or the Undergraduate Application Packet.

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 $20 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.

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 the EOP. Prospective EOP students must show a need for financial aid in order to pursue a college degree. Admission is subject to approval by the University, which plans to provide financial assistance for academic courses; students will be admitted only to the Office of Admissions and Records, if redirected of applicant is necessary, a letter concerning redirection of the application to an alternate campus.

Steps to Becoming an Undergraduate Student at Berkeley

The following is a simplified outline of the steps you will take in becoming an undergraduate student at Berkeley, either as a freshman or in advanced standing. In many cases, the steps cover a period of approximately one year. The dates for completing each step will be clearly indicated in further information you will receive as you go through the process of admission, registration, enrollment (where necessary), and study list filing.

1. Obtain Undergraduate Admissions Packet from your high school or community college counselor, if a California resident, or from the Office of Admissions and Records, 120 Sproul Hall.
2. Return completed forms contained in Admissions Packet, (plus nonrefundable fee of $20) postmarked no later than the last day of the first month of the enrollment period for the quarter for which you are applying. Thereafter, applications will be considered depending upon space available.
3. Receive from the Office of Admissions and Records a card acknowledging that your application has been received.
4. Receive from the Office of Admissions and Records if redirection of applicant is necessary, a letter concerning redirection of the application to an alternate campus.
5. Receive from the Office of Admissions and Records for additional transcripts or confirmation of academic work in progress.
7. Return your statement of intention to register, plus nonrefundable fee of $50.
8. Receive from the Office of Admissions and Records a Registration Packet. Applicants admitted too late to register by mail will receive supplementary instructions concerning the registration procedure to follow.
9. Return completed forms and cards contained in the Registration Packet.
10. Receive from the Office of Admissions and Records, just prior to the opening day of the quarter, a second set of registration forms, including the student's validated Registration Card, and return them to the Office of Admissions and Records, with the requested information and fees, by the deadline indicated in the enclosed instructions. A second set of registration forms, including the student's validated Registration Card, is mailed to the student prior to the beginning of the quarter. It is your responsibility to complete registration prior to the deadline indicated in the enclosed instructions. Failure to do so may require that you register late (in person) at the beginning of the quarter and pay a late fee of $25. Late registration also increases your difficulties in obtaining a suitable program of classes. Your name is not entered on class rolls unless you have completed registration by filing a study list.

You may not register after the third week of classes. You may not plead illness as an excuse for neglecting assigned classwork—for which you are held accountable from the first day of classes.

Nonresident Tuition Fee

Students who have not been residents of California for more than one year immediately prior to the residence determination date for each term in which they propose to attend the University are charged, along with other fees, a nonresident tuition fee of $952.50 for the semester. The residence determination date is the day instruction begins at the University. For additional information on California residency and the nonresident tuition fee, please see Appendix.

Students from Other Countries

An applicant from another country should register the brochure, Information for Prospective Students from Other Countries, designed to answer questions about admission to the Universi-
ty, visas, special examinations, fees and expenses, housing, and travel. Prospective undergraduates should direct inquiries to the Office of Admissions and Records, and prospective graduate students should write to the Graduate Admissions Office. All nonimmigrant foreign students must check in at the Advisers to Foreign Students and Scholars Office, International House, as soon as possible after arriving in Berkeley.

Enrollment in Classes and Filing the Study List

You should purchase from the ASUC Bookstore, for 25 cents, the Schedule of Classes, listing all courses given for the quarter, their credit values, instructors, hours, locations, and final examination groups. From this booklet, and with the aid of your adviser and this catalog, which provides course descriptions and prerequisites, you can assemble your program. You may not choose two courses in the same examination group. Usually courses in the same group meet at the same hour, thus precluding such a problem. In order to complete your enrollment and receive credit for the work of a quarter, you must file your study list at the time and place designated by the Office of Admissions and Records. Students should arrange for conferences with advisers, review the program of studies they wish to undertake, and make their final choice of courses well in advance of the assigned dates for filing of their study lists. Students who fail to do this may be forced to file their study lists late and may become subject to the $10 late filing fee. The study list form is included in the packet issued to you when you register, along with instructions for completing it and filing it. There is a $10 fee for filing after the assigned date, and no study list is accepted after the third week of instruction. Unapproved withdrawal from, or neglect of, a course entered on the study list will result in the assignment of grade "F," "NP," or "U" as appropriate. If you wish to make any changes of program after filing the study list, you must do so by formal petition with the signed approval of the instructor involved and the dean of your college or school.

The Quarter System

The 1978-79 school year will consist of three ten-week quarters and one eight-week summer session. The summer quarter was replaced by Summer Session in 1970. This arrangement will continue until further notice. A student making normal progress toward the bachelor's degree attends three quarters per school year. If desired, progress may be accelerated by Summer Session attendance. For information about the Summer Session, write to the Office of Summer Sessions, 22 Wheeler Hall.

A student proceeding to the bachelor's degree in four years (twelve quarters) will normally complete a total of 180 units, or 15 units per quarter. This number may be slightly higher in some professional colleges and schools. Students are normally considered to have upper division or junior standing after completion of 90 units.

Courses and Units

Most University courses are assigned a unit value. One unit represents three hours of work per week by the student, including both class attendance and preparation. Laboratory, discussion, quiz, or review sessions may or may not be given unit value.

Grades of Scholarship

The work of all students on the Berkeley campus is reported in terms of the following grades: A (excellent), B (good), C (fair), D (barely passed), F (failure), P (passed at a minimum level of C-), NP (not passed), S (satisfactory or passed at a minimum level of B-). I (work incomplete, due to circumstances beyond the student’s control, but of passing quality), IP (work in progress; final grade to be assigned upon completion of entire course sequence). The grades A, B, C, and D may be modified by plus (+) or minus (-) suffixes.

A course in which the grade A, B, C, D (undergraduates only) or P is received is counted toward degree requirements. A course receiving the grade S is similarly counted unless otherwise specified in the course description. A course in which the grade F, NP, and U is received is not counted toward degree requirements. A course in which the grade of I or IP is received is not counted toward degree requirements until such time as the I or IP is replaced by grade A, B, C, D, P, or S.

Grade Points. Grade points per unit are assigned as follows: A=4, B=3, C=2, D=1, and F=0. When attached to the grades A, B, C, or D, plus (+) or minus (-) grades carry three-tenths of a grade point more per unit, and minus (-) grades three-tenths of a grade point less per unit than unsuffixed grades, except for the A-, which carries 4.0 grade points per unit as does the A.

Grade-Point Average. The grade-point average is computed on courses undertaken in the University of California, with the exception of courses undertaken in University Extension.
Grades A, B, C, D, and F are used in determining a student's grade-point average; grades IP, P, S, NP, and U carry no grade points and are excluded from all grade-point computations. Grade I, if assigned prior to fall 1973, is included and is computed as an F; an I grade assigned fall 1973 and later is excluded from the computations. For additional information, see "Repetition of Courses."

**Examples:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Units</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>B+</td>
<td>5</td>
<td>16.5</td>
</tr>
<tr>
<td>C-</td>
<td>5</td>
<td>8.5</td>
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<tr>
<td>P</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>I</td>
<td>5</td>
<td>0 (assigned spring 1973)</td>
</tr>
</tbody>
</table>

**Totals:**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>Average 2.250</td>
<td></td>
</tr>
</tbody>
</table>

**Repetition of Courses**

A student may repeat only those courses in which he or she received a grade of D-, D, D-, F, NP, U, or I. Courses in which a grade of D+, D, D-, or F has been received, and courses undertaken for a letter grade in which a grade of I has been received, may not be repeated on a Passed or Not Passed basis. Repetition of a course more than once requires approval by the appropriate Dean in all instances. Without this approval a course repeated more than once will not be included in the grade-point average, but a passing grade in the repeated course will be accepted in satisfaction of unit requirements for the degree. Degree credit for a repeated course will be given only once, but the grade assigned at each enrollment is permanently recorded. In computing the grade-point average of a student who repeats courses in which a grade of D+, D, D-, or F was received, the units are counted only once and only the most recently earned grades and grade points are used for the first sixteen units repeated. In case of further repetitions, the grade-point average is based on all grades assigned and total units attempted. If, however, a grade of I is awarded upon repetition of a course, the grade of D+, D, D- or F will continue to be computed in the grade-point average until the I grade is replaced. If an I in a letter-grade course is repeated, the units will be computed in the average, but no grade-points will be allowed without the specific approval of the student's dean. In effect, the grade-point penalty will be the same as for a grade of F, regardless of the grade earned.

**Changes of Grade**

All grades except I and IP (see below) are considered final when assigned by an instructor at the end of a term. An instructor may request a change of a grade when a computational or procedural error occurred in the original assignment of a grade; but a grade may not be changed as a result of re-evaluation of a student's work. No final grade except I may be revised as a result of re-examination or the submission of additional work after the close of the term. A final grade of F or NP may be challenged by a student, but only if it reflects other than academic criteria. A student wishing to contest a grade of F or NP on such grounds must file a petition with the Secretary of the Berkeley Division of the Academic Senate not later than the end of the term following in which the grade was received. The Secretary will set in motion
the required investigation and resolution of the challenge by the Committee on Courses.

Grade I (Incomplete)

The grade I may be assigned if the student’s work in a course has been of passing quality but is incomplete for reasons beyond the student’s control. Prior arrangements must be made with the instructor, because in assigning the grade, the instructor is required to specify the reasons to the Department Chairperson and to the Office of Admissions and Records. For graduate students, the method of replacement of the grade I by a final grade will be determined by the Dean of the Graduate Division and the Graduate Council. It is expected that graduate students will finish the course requirements as soon as possible. The grade I will remain on the record until such work is made up and a petition and the fee are filed with the Office of Admissions and Records. Graduate students should seek the advice of the Dean of the Graduate Division if they have further questions concerning I grades.

For undergraduate students, an I grade assigned fall 1973 and later can be replaced by a final grade within a period not to exceed thirteen months from the date on which it was assigned, subject to the following provisions:

On completion of the required work or deferred examination, grade points will be assigned if the student receives a grade of A, B, C, or D. The I grade may be assigned only upon approval of the student’s dean. Without this approval, the units will be included in all grade-point computations without any grade points to balance them, and the effect will be the same as if an F had been assigned, no matter what the earned grade may be. The Dean of the College or School may extend the period of time in which an I grade may be completed beyond the thirteen-month limitation. For undergraduates, except as noted below, any I grade which has not been replaced within thirteen months after it has been assigned will, at the end of that time, be converted to grade F (or NP) if taken passed/not passed). After that time, but not retroactively, the grade is counted in computing the grade-point average.

Exceptions: Within thirteen months of receiving an I grade, an undergraduate student may notify the Dean that he/she has not attempted completion and will not complete the work required for removal of the I grade, and may request that the grade not be replaced by an F (or NP). This procedure is limited to a maximum of two courses. Once the decision has been made, it is irrevocable. The course cannot thereafter be completed by any means, including repetition.

Also, if a degree is conferred before the end of the thirteen months following the assignment of an I grade, the grade will not be converted to an F (or NP), the student in the meantime retaining the option of removing the I grade within the thirteen months.

Any undergraduate student with 16 or more units of I on his or her record may not register unless permission to do so is granted by the Dean. If the student has registered by mail, the registration may be cancelled.

A student who received an I grade prior to fall 1973 must file a Petition for Grade Points in Incomplete Course, with appropriate endorsements; and all students who receive an I grade whenever assigned must file a Petition for Revision of Grade of Incomplete, available at the Office of Admissions and Records. The latter should be filed as soon as the date of completion of the course has been established by the student and the instructor. The filing fee is $5, payable at the Cashier’s Office, regardless of the number of courses listed on the petition. The final grade will not be recorded until this form is filed.

Grade IP (In Progress)

For a course extending over more than one term, where evaluation of the student’s performance is deferred until the end of the final term, provisional grades (IP or In Progress) are assigned in the intervening term(s). The provisional grades are replaced by one final grade if the student completes the full sequence. The grade IP is not included in the grade-point average. Effective with an IP assigned fall 1973 and later, if the full sequence is not completed as scheduled, the IP will be replaced by grade I when the instructor is assigned for assigning a grade for the term(s) completed. Further changes in the student’s record will be subject to the rules pertaining to I grades (see above).

Passed/Not Passed and Satisfactory/Unsatisfactory Grades

Undergraduates in good academic standing may elect credit for such courses on a Passed or Not Passed basis, and graduate students in good academic standing may elect to undertake letter-graded courses on a Satisfactory or Unsatisfactory basis and receive credit for such courses to a limit of one-third of the total units undertaken and passed on the Berkeley campus at the time their degrees are awarded. Included in this one-third are any units completed in an Education Abroad Program, or on another University of California campus in an inter-campus visitor or exchange program, or in a joint doctoral program. For graduate degree programs, grades of Satisfactory assigned in courses numbered 299 and in courses of the 300, 400 or 600 series are excluded from this computation. Students who enroll in a course announced only as Passed/Not Passed or Satisfactory/Unsatisfactory will be graded P/ NP if undergraduates, and S/U if graduate. A course which is required in or prerequisite to the major may be taken only on a P/ NP or S/U basis only upon approval of the faculty of the student’s School or College. Courses required in a graduate major are determined by the adviser.

Special or limited status students may take courses on a P/ NP basis at the discretion of the Dean of the College or School in which they are enrolled. Students may not repeat on a P/ NP basis a course which they have previously taken on a letter-graded basis.

The option of being graded P/ NP or S/U in a course may be cancelled if the student is found to be ineligible for such enrollment. If the course is offered on a P/ NP or S/U basis only, it may be deleted from the study list at the option of the student’s dean.

A student’s level of performance must correspond to a minimum letter grade of C- if a passed grade is to be assigned, and to a B- if a satisfactory grade is to be assigned.

These rules are subject to such other limitations as may be adopted by the faculties of the various Schools and Colleges and the Graduate Council.

Credit by Examination

A student may earn credit by examination by two methods:

1. On recommendation of the Board of Admissions, a new or re-entering undergraduate student may be allowed credit by examination for knowledge acquired since graduation from high school, either by independent study or at another institution, and for which advanced standing credit has not been allowed. Application for such credit should be made directly to the Office of Admissions and Records.

2. A student in good standing who is currently registered in a regular session may qualify for course credit by examination. Application for such credit must be presented on the form Petition for Credit by Examination, obtainable from the Office of Admissions and Records, to the dean of the college or school. You may apply for credit by examination in any course listed in the current General Catalog that pertains to the regular sessions at Berkeley. However, the subject in which the student seeks to be examined should be one in which, in the opinion of the instructor in charge and of the department, the student’s knowledge may properly be tested by an examination. A separate petition must be filed for each course; the fee for each is $5. In certain laboratory, field, or practice courses an examination either written or oral may not be a satisfactory test. Credit by examination is not available either (1) if such credit would duplicate credit presented by the student for admission to the University or (2) in elementary courses in a foreign language which is the mother tongue of the applicant. The examination must be a comprehensive examination, covering the entire course, and must be administered at one sitting, not to exceed three hours’ duration. It may be the regularly scheduled final examination for the course, or in the opinion of the instructor in charge and of the department, the examination meets the foregoing description. The final result of the examination may be reported to the Office of Admissions and Records by the instructor or the Dean of the College or School, according to the regulations governing the assignment of these grades. Further information concerning credit by examination may be obtained from the Office of Admissions and Records.

Midterm and Final Examinations

The number of midterm examinations varies at the discretion of the instructor. Final examinations, however, are mandatory in undergraduate courses, with the exception of courses listed in the Schedule of Classes as not requiring a final examination.

Final examinations are normally in written form and may or may not cover the entire course. You may, if you wish, inspect a file of sample examinations, listed by course, in the Moffitt Undergraduate Library. Examinations in non-laboratory courses may not exceed three hours. Any infringement of fair examination practice by a student is considered a serious offense subject to discipline.

You may be re-examined only to raise grade I to passing, not to raise any other grade.
Grade Reports and Transcripts of Record

At the close of each quarter, at a time and place designated by the Office of Admissions and Records and to be announced on bulletin boards on campus, you will obtain an unofficial copy of your academic record. This copy will, for students admitted Fall Quarter 1975 and later, reflect all work undertaken on the Berkeley campus. For students admitted prior to the Fall Quarter 1975, the copy is partial, and will cover course work undertaken Fall Quarter 1976 and later. It is anticipated that within a short time all record copies will reflect the work undertaken at Berkeley in its entirety. Official copies of the academic record—transcripts—are also available from the Office of Admissions and Records. After the last date for final examinations, transcripts for registered students must be held for inclusion of grades for the quarter and, therefore, will not be available for approximately 40 working days. Partial transcripts will not be issued. At times other than the close of the quarter, the normal period required for the processing and issuance of transcripts for both registered and former students is five working days. The charge for each transcript of every undergraduate, graduate, or separate summer session record is $2, and $1 for each additional copy of any record request. The total amount due must accompany the application.

Undergraduate Honors

Standards for honors status are set by the colleges and schools. Departments may, in addition, recommend students for inclusion on the Honors List. Honor students are usually accorded special privileges, including eligibility for honors programs. If you have an overall grade-point average of 3.5 you are accorded, through the Committee on Prizes, access to the Main Library in the Library Instruction Center. For details on undergraduate honors, please consult the college, school, or department.

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 separately of regular academic requirements, grade points earned in a University of California summer session or by removing grade I are not taken into consideration until the close of the student’s attendance.

Academic Probation. Except in the Colleges of Chemistry and Engineering, undergraduate students are placed on academic probation if at the end of any term their cumulative grade-point average is less than 2.0 (C average) computed on the total of all courses undertaken in the University.

Academic Dismissal. College of Chemistry and Colleges of Engineering, undergraduate students shall be subject to dismissal from the University (a) if during any term they fail to attain at least a C average in all courses for which they are enrolled, (b) if at the end of any term they have failed to attain at least a C average in all courses undertaken in the University.

College of Environmental Design, College of Letters and Science, College of Natural Resources, and School of Business Administration: undergraduate students are subject to dismissal (a) if their grade-point average falls below 1.5 for any term; or (b) if after one term on probation they have not achieved a grade-point average of 2.0 (C average) computed on the total of all courses undertaken in the quarter. All other Colleges and Schools: undergraduate students are subject to dismissal (a) if at the end of any term their grade-point average for that term is less than 1.5; or (b) if they have completed two consecutive terms on academic probation without achieving a cumulative grade-point average of 2.0 (C average) computed on the total of all courses undertaken in the University.

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 may petition the dean of the jurisdiction sought.

For regulations pertaining to graduate student scholarship standards, see "Standards of Scholarship and Dismissal for Academic Deficiencies" in Index.

Student Conduct

As a student enrolling in the University, you assume an obligation to conduct yourself in a manner compatible with the University’s function as an educational institution. Rules concerning student conduct are designed to promote learning and to ensure that the educational process is not disrupted by one student's misconduct. Violations of these rules 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 or 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 advisor.

College and School Requirements. Every college and school has established a program of requirements for the degree, which may be in addition to those of a field of concentration. These requirements may include: (1) preparatory subject requirements for admission; (2) preparatory college-level courses for your particular field of study; to be completed during your early period of residence in the college or school, or in some cases before entrance; (3) breadth requirements, courses outside the field of study, considered essential to a well-rounded curriculum; (4) the credit requirement, which is the total number of units to be completed, with specifications of how these credits are to be distributed; and (5) a minimum scholarship requirement. For information you should obtain a copy of the announcement of your school or college.

The Major and the Department. 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.

Declaration of Candidacy. Definitive procedures for announcing candidacy either for the bachelor’s degree (in any field of study) or for the single major in the optometry degree have not been determined for 1978-79. Specific instructions will be included in the registration packet for each term.

Residence Requirement for the Bachelor’s Degree. After 135 units toward the bachelor’s degree have been completed, at least 36 of the remaining units must be completed in residence in not less than three quarters in the college or school in which the degree is to be taken. These 36 units must be completed in the quarter in which 135 units are exceeded plus not fewer than two additional quarters. At least one of the final three quarters must be in residence. You should consult the announcement of your college or school for details concerning the senior residence requirement as it pertains to the summer sessions.

Progress Toward the Bachelor’s Degree

Declaration and Change of Major. Regulations concerning procedures for declaring a major vary for each college. You may, at any time up to the last quarter of residence, file a petition for a change of major. You must secure approval for this action from the dean or other authorized person in the college or department to which you are transferring.

Work Toward a Degree. At the close of each quarter, 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 or 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 advisor.

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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.

Two University Undergraduate Requirements

There are two requirements—beyond those set by the college, school, or department—which all undergraduates registered in the University must satisfy in order to graduate. Subject A and American History and Institutions are considered essential to your education, regardless of your academic or professional objectives.

Subject A. All University departments assume that students are proficient in reading and writing English, and understand how to compose an essay on an academic topic. For this reason, students are asked to demonstrate their writing ability (by the means shown below) on entering the University.

Any student who cannot meet the requirement must enroll in the Subject A Department's course "Introduction to Language" during his or her first quarter of residence at the University or in a preceding summer session.

The Office of Admissions and Records accepts the following as evidence of having fulfilled the Subject A requirement:

1. A score of 600 or above on the English Composition Test of the College Entrance Examination Board—this test must have been taken before the student enters the University;
2. A score of 3, 4, or 5 on the Advanced Placement Test of the College Entrance Examination Board—this test must have been taken before the student enters the University;
3. Completion with a grade of C- or better of a college-level course in English composition taken at another institution and judged acceptable by the Office of Admissions and Records;
4. A passing grade on an essay test administered by any of the Subject A departments within the University of California system. All students held for the requirement on the basis of a CEEB score below 600 must take the University's Subject A examination, given by the Subject A department. This essay examination, which may be taken only once, is administered at the following times: (a) on the first day of pre-enrollment for each academic quarter, including summer session (see Calendar for exact dates); (b) on the first Saturday in May, for students in Bay Area high schools. On the basis of the essay examination, the department recommends that students be released from the requirement or held for the course. In the second instance the examination is designed also to reveal students' individual writing problems. The same examination is used to determine the status of transfer students who have not been exempted from the requirement (see paragraph 3 above).
5. The American History part of the requirement can be fulfilled by passing the Advanced Placement Examination in American History or a CLEP Subject Exam in American History or Afro-American History with a score of fifty or more, students may satisfy the U.S. History Requirement. By completing the CLEP Subject Exam in American Government with a score of 50 or more, students may satisfy the American Institutions Requirement.

The American History and Institutions Requirement. The American history and institutions requirements are based on the principle that a U.S. citizen enrolled at an American university should have an understanding of (1) the history, and (2) the public institutions of the United States. These requirements may be met in any of the following six ways:

1. By completing one quarter (or Summer Session) of a course in each of the two groups given below:


   (b) Institutions Requirement: Afro-American Studies 115; Asian American Studies 145; Business Administration 111, 117, 154; Conservation and Resource Studies PENR 100C, Economics 1, 20, 121, 135, 136, 138, 155, 157; Education 195; Forestry 115; Journalism 141; Native American Studies 50, 100; Philosophy 118; Political Science 1, 100, 102, 103, 104, 106, 150, 157A, 157B, 170A, 171A, 181A, 184; Rhetoric 164, Social Welfare 110B, Sociology 118, 120, 124.

   Note: this is an approved course list for academic year 1976-77 only. Beginning in the Fall of 1978 a revised course list will take effect.

2. By presenting original evidence of completion of courses, taken at an accredited college or university, which are equivalent in scope and content to those on the approved U.C. Berkeley list. When making such a petition, students should present a photo-copy of the course description from the college catalog, and, if possible, a course syllabus to the American History and Institutions Office, Room 29 Dwinelle Hall. Students are encouraged to submit such course descriptions for approval prior to enrolling in the courses.

3. By passing two essay examinations, one in each of the subjects. The examinations are based upon a reading list (the same topics), are graded pass/not pass, and are offered on campus twice each quarter. If you wish to take either or both examinations, you may obtain the reading lists, sample answers, and test dates at the American History and Institutions Office, Room 29 Dwinelle Hall.

4. By completing the CLEP Subject Exam in American History or Afro-American History with a score of fifty or more, students may satisfy the U.S. History Requirement. By completing the CLEP Subject Exam in American Government with a score of 50 or more, students may satisfy the American Institutions Requirement.

5. The American History part of the requirement can be fulfilled by passing the Advanced Place-
Admission Requirements. The University requires the applicant to fulfill the following: (1) a valid 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. Since the methods of determining eligibility vary with each program, an extensive evaluation of the university record(s) and the supporting materials of each applicant is necessary.

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. Foreign applicants whose native language is English and those who have studied for one year or more in schools or universities where English is the language of instruction must take the Graduate Record Examination. Excepted from this requirement are applicants from universities in the United Kingdom that are participants in the University of California Education Abroad Program and who only wish to study at Berkeley for a year or two. 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.

Students holding M.D. degrees applying to the School of Public Health and applicants to the UCB-UCSF Joint Medical Program are not required to take the GRE. However, law students and students in other fields of study in the Graduate Division must take the Graduate Record Examination (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 in other fields of study 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 in a center outside the United States). Applications for the GRE examination are obtainable from the Educational Testing Service, Box 955, Princeton, N.J. 08540 or from their Western office at 14447 Sunset Blvd., Los Angeles, Calif., 90025.

Applications for the GMAT examination can be obtained from the Educational Testing Service, Box 966, Princeton, N.J. 08540, or from their Western office at 1447 Center Street, Berkeley, Calif. 94704.

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.

Notification of Action on Admission. Only a written notice from the Dean of the Graduate Division or a letter from departments or faculty, is valid proof of admission. Admission to graduate study is limited by the number of places available in the various schools, colleges, and departments of the university. Admission committees base recommendations for admission upon careful comparison of applicants; thus, there is frequently a considerable but unavoidable delay before action is taken. Applicants for admission and fellowship consideration will be notified on or about April 1 of the action on their applications. Applicants for admission only will be advised as soon as possible after a decision to admit or to deny admission has been reached. Normally, however, acceptance letters for applicants for admission only will be issued after March 1 for fall quarter, July 1 for the winter quarter, and October 1 for the spring quarter.

Reactivation of Application. Applicants who change plans and withdraw their applications from consideration for a particular quarter will have all of their materials kept on file for a maximum of two years following the first application. Applicants may reapply within the two-year period by notifying the Graduate Admission/Fellowship Office to reactivate their files prior to the application deadline date for the quarter in question, and by providing a current application together with evidence of any academic work completed since application was first made. Students reactivating their files should keep in mind that most departments consider applicants for admission only in the fall quarter. Reactivating applicants have no priority over other applicants by virtue of their previous application. It is not necessary to pay the $20 application fee a second time if reactivation is made within the two-year period. For applications after the two-year limit, a new application form must be filled (with the $20 fee) and a new set of records and supporting materials must be supplied. Fees and conditions of reactivation are subject to change.

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 signed. Failure to attend registration will result in the allocation of registration slot for the subsequent 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 registration reply card included in the admission notice indicating their 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 quarter in which they were admitted, must request reactivation of their application, which is described, if they wish to attend any subsequent quarter. They have no priority over other applicants for any subsequent quarter by virtue of their previous admission.

Foreign Applicants. In addition to the admission requirements previously mentioned, foreign students are expected to have an excellent command of English before beginning graduate study at Berkeley, as no student is admitted to graduate standing for the sole purpose of learning English. Since official evidence of English proficiency is a requirement for admissions consideration, and since the Test of English as a Foreign Language (TOEFL) is the only evidence accepted by the Graduate Division, (a score of 550 is required), applicants from countries whose official language is not English should register to take this test as soon as possible. The test is given throughout the world only four times a year and registration materials are available by writing directly to TOEFL, Box 899, Princeton, N.J. 08540. Applicants to the Graduate Admissions Office, Berkeley, must be indicated by the applicant as one of the recipients of the test scores.

Regulations and Procedures for Graduates

General Rules and Regulations. Please see "General Rules and Regulations" in Index for information on rules and regulations that pertain to both undergraduate and graduate students.

Graduate Advisers. Graduate advisers are appointed by the Dean of the Graduate Division from nominations sent by each academic department and group to the Graduate Division and must be under the jurisdiction of the Dean of the Graduate Division. Graduates Advisers' names are announced before the opening of each quarter. The responsibilities of the graduate advisers include: (1) assisting graduate students in selecting a program of study toward a degree, (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) recommending a candidate for university fellowships and scholarships or other financial assistance, (4) recommending a candidate for candidacy for higher degrees and for qualifying examinations, (5) serving as permanent members of the graduate examination committee, (6) supplying information requested by the Dean of the Graduate Division regarding a student's work and progress, and (7) advising the Dean in the enforcement of all regulations applying to graduate study, particularly those relating to registration, admission to graduate courses and maintenance of acceptable academic performance. The graduate advisers are also responsible for the proper maintenance of their files and for administering the rules and regulations that pertain to graduate students. They have no priority over other applicants for any subsequent quarter by virtue of their previous admission.
peditious pursuit of the degree program implies full-time study unless a lesser program is approved by the Graduate Adviser. Successful completion of all course work required by the departmental or group program, passage of the required examinations and other requirements as specified for the program, and advancement to candidacy as specified for the various degree programs.

For a course extending over more than one quarter, where evaluation of the student's performance is deferred until the end of the final quarter, provisional grades of in progress (IP) may be assigned in the intervening quarters. The provisional grades are replaced by the final grade if the student completes the full sequence. If the full sequence is not completed, the Berkeley Division of the Academic Senate is authorized to regulate the award of credit.

With the consent of the department involved, graduate students may enroll in courses in the 600-series. Such courses are evaluated by means of the grades satisfactory and unsatisfactory (S and U). They prepare students for appropriate master's or doctoral examinations and do not count toward academic residence on the unit requirements for a higher degree. No credit is allowed for work graded unsatisfactory. For further information, see Grades of Scholarship in Index.

Graduate students are subject to dismissal for academic deficiencies at the discretion of the Dean of the Graduate Division under the policies and practices established by the individual faculties of departments, graduate groups, and professional schools and colleges, and under the policies established by the Graduate Council of the Academic Senate. Dismissal for academic deficiencies is normally effected by the Dean on the recommendation of the Graduate Adviser, but the Dean may also initiate dismissal after individually reviewing a student's record. Dismissal for academic reasons by the Dean may be appealed to the appropriate committee of the Graduate Council of the Academic Senate.

California Legal Residence. 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 he/she 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 quarter. 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 quarter. The present fee is $635.00 per quarter. For detailed information regarding the establishment of California residence, see Appendix, or write to the Attorney in Residence Matters, University of California, 590 University Hall, Berkeley, CA 94720. For information on waiver of the nonresident tuition fee for graduate students who are nonresidents, see page 25, Waiver of the Nonresident Tuition Fee.

Academic Residence. In order to meet the academic residence requirement for higher degrees—not to be confused with state residence, defined above—every graduate student must enroll in and complete a minimum of 4 units of upper division and/or graduate courses per required quarter of academic residence. Only courses in the 100 or 200 series satisfy this requirement. (Students should also familiarize themselves with the regulations on academic residence for the individual graduate degrees.)

The Study List and Study-List Limits. Each quarter in which a student wishes to be enrolled in a study list, entering on it all courses or any other graduate work, including thesis and/or research approved by the graduate advisor, to be undertaken for the quarter.

Courses are classified as lower division (numbered from 1 through 99); upper division (100–199); and graduate (200–299). Lower division courses are not counted as part of a full program of study leading to a higher degree. (For information on courses in the "600-series" see page 36.) Teaching assistants and research assistants must normally carry a minimum of 6 units of upper division or graduate work (courses in the 100 or 200 series). Fellowship holders and foreign students may also work for a course extending over more than one quarter, in school. Only courses graded S and U may be assigned in the intervening quarters. The provisional grades are replaced by the final grade if the student completes the full sequence. If the full sequence is not completed, the Berkeley Division of the Academic Senate is authorized to regulate the award of credit.
who receive approval, a $3.00 fee will be assessed for late changes in the study list. 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 or critical interest for 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 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 course work 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 permit 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 18 units of upper division work basic to the subject matter of the graduate course). Basic work may be purused in more than one department). Graduate students are encouraged, therefore, to take any upper division work that 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 the master's degree. Courses in the 300 and 400 series, which are professional in nature, are designed to meet the requirements for the various certificates and 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 test work. Course Credit by Examination. A graduate student in residence may petition to receive a limited amount of course credit toward the degree for examinations of material covered in certain courses in lieu of taking those courses. Laboratory courses or graduate seminars or research courses are excluded. The petition is obtainable from the Office of Admissions and Records. Approval to take such examinations must be given by the Dean of the Graduate Division and by the course instructor, or, where no instructor is designated, by the departmental chairperson. 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 a previously earned 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 field as the first master's degree (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 project is not a member, provided that all the requirements of the degree are met. No voting member may be recommended for a higher degree by that person's own division unless, prior to the date of final action on the appointment to a rank carrying the voting privilege, the Dean of the Division has certified to the Dean of the Graduate Division that all the requirements for the degree have been met. Such appointments may be retroactive. University Extension Upon recommendation of the Graduate Adviser and with special approval of the Dean of the Graduate Division, a student in a master's program may be permitted to transfer up to six units earned in University Extension concurrent courses toward the unit requirement for the degree. Concurrent courses are those courses taken in the University Extension concurrent extension division for the instruction of a regular member of the faculty. The Master's Degree The Master's Degree 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. The present discussion is concerned with the academic master's degree, though the rules and procedures described will be of interest to candidates in all fields. Residence Requirement. A minimum of three quarters of academic residence (as defined earlier under Academic Residence) is required for the master's degree. Specific subject requirements are set by the schools and departments. Transfer of Credit from Other Institutions. Up to 6 quarter units (or 4 semester units) of courses previously taken at another institution 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. Requests for degree credit for such courses are not considered until a student has completed the major portion 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 work beyond the minor requirements at other graduate institutions in the United States may be granted in excess of 6 units, and under certain circumstances up to one-third of the academic residence requirement may be transferred. Requests are handled on an individual basis. Satisfactory Grades. No more than one-third of the master's program may be fulfilled by courses graded Satisfactory and, therefore, need not be identified or reviewed by any department or group. Amount and Distribution of Work. Students working on the Berkeley campus will pursue one of two plans, as determined by the individual department (departments may adopt either or both plans, and will, in the latter case, designate which plan is to be followed by each student). Plan I requires at least 30 quarter units of upper division and graduate courses and a thesis. At least 12 of these units must be in graduate courses (200 series) in the major subject. Course units are not granted academic degree. Plan II requires at least 36 quarter units of upper division and graduate courses, followed by a comprehensive final examination administered by the student's department or group. At least 18 of the units must be in graduate courses in the major subject. Students under both plans are guided by their graduate adviser regarding selection of course work among departments. Further requirements are specified by the major department. Advancement to Candidacy. Admission to candidacy for a master's degree is 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 of the quarter 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, 8 1/2 by 11 inch paper of good quality, with margins of at least one inch on all sides, written on both sides of the paper. 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. Written in the hands of the committee members rests with the student. 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 for permanent record in the 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 after 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 The Doctor's Degree is offered on the Berkeley campus leading to both academic and professional degrees as listed in the Index under Graduate Degrees Offered on the Berkeley Campus. Pro-
fessional 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 doctor's degree, though the information will be of interest to candidates in all fields.

The Doctor of Philosophy degree is not granted at the University of California 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.

Residence Requirement. A minimum of two years or six quarters of academic residence (as defined earlier under 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 termination of candidacy for the degree is likely to occur. The department or the Graduate Division should be consulted for the time permitted in candidacy.

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. As noted earlier, University policy requires continuous residence 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.

Interdisciplinary Groups. The University 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. New chairpersons are appointed throughout the year as necessary.

Group in Agricultural Chemistry
Professor Leonard F. Bieldanes, Chairperson
C/o Department of Nutritional Sciences
119 Morgan Hall

Group in Ancient History and Archaeology
Professor Leonard H. Lesko, Chairperson
C/o Department of Near Eastern Studies
1229 Dwinelle Hall

Group in Asian Studies
Professor Chaimers A. Johnson, Chairperson
C/o Department of Political Science
210 Barrows Hall

Group in Biophysics, Biomedical, and Medical Physics
Professor Thomas Hayes, Chairperson
C/o Donner Laboratory

Group in Botany
Professor E. L. Scott and C. L. Chiung, Co-Chairpersons
C/o School of Public Health
19 Warren Hall

Group in Buddhist Studies
Professor Lewis R. Lancaster, Chairperson
C/o Department of Oriental Languages
104 Durant Hall

Group in Comparative Biochemistry
Professor J. A. Bassham, Chairperson
C/o Laboratory of Chemical Biodynamics

Group in Comparative Pathology
Professor Stewart H. Martin, Chairperson
C/o School of Public Health
19 Warren Hall

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

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

Group in Energy and Resources
Professor C. Bartlett McGuire, Chairperson
C/o Graduate School of Public Policy
2007 Hearst Avenue

Group in Environmental Health Sciences
Professor Robert C. Cooper, Chairperson
C/o School of Public Health
19 Warren Hall

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

Group in Folklore
Professor William Bascom, Chairperson
C/o Department of Anthropology
232 Kroeber Hall

Group in Food Science
Professor Leonard F. Bieldanes, Chairperson
C/o Department of Nutritional Sciences
119 Morgan Hall

Group in Genetics
Professor Seymour Fogel, Chairperson
C/o Department of Genetics
345 Moffitt Hall

Health and Medical Sciences
Professor Sheldon Margen, Chairperson
C/o Department of Bacteriology and Immunology
3573 Life Sciences Building

Group in Immunology
Professor Phyllis B. Blair, Chairperson
C/o Department of Bacteriology and Immunology
3573 Life Sciences Building

Sponsoring Committee for Latin America Studies
Professor Woodrow W. Borah, Director
C/o Department of History
3229 Dwinelle Hall

Group in Logic and the Methodology of Science
Professor David Blackwell, Chairperson
C/o Department of Statistics
367 Evans Hall

Committee on Medieval Studies
Professor John T. Noonan, Jr., Chairperson
C/o School of Law
225 Beale Hall

Group in Microbiology
Dr. Terrance Leighton, Chairperson
C/o Department of Microbiology and Immunology
3573 Life Sciences Building

Group in Neurobiology
Professor Frank S. Werbin, Chairperson
C/o Department of Electrical Engineering and Computer Sciences
231 Cory Hall

Group in Nutrition
Professor Sheldon Margen, Chairperson
C/o Department of Nutritional Sciences
119 Morgan Hall

Group in Parasitology
Professor Deane P. Furman, Chairperson
C/o Department of Entomological Sciences
157 Giannini Hall

Group in Physiological Optics
Dean Monroe J. Hirsch, Chairperson
C/o School of Optometry
101 Minor Hall

Group in Plant Physiology
Professor Louis Jacobson, Chairperson
C/o Department of Soils and Plant Nutrition
108 Hilgard Hall

Group in Range Management
Professor John W. Menke, Chairperson
C/o Department of Forestry and Conservation
115 Moffitt Hall

Dean Monroe J. Hirsch, Chairperson
C/o School of Optometry
101 Minor Hall

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 have already been admitted to a doctoral program will be considered for an interdisciplinary doctoral 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 Graduate Council policies and the degree is awarded in a field stipulated by the Council for the individual student.

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 must fulfill the foreign language requirement for the Ph.D. before advancement to candidacy and preferably before admission to the Qualifying Examinations (see seventh paragraph below), 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. Although the Graduate Council has granted variances to the general legislation of the Academic Senate for some programs, the overall requirement of knowledge of foreign languages may, in general, be satisfied by one of the following options in accordance with the Academic Senate Regulation 2001, June, 1971:

1. Demonstration of a reading knowledge of two languages by passing an examination in each, set by the department(s) concerned. The department(s) determine(s) whether a dictionary may be used; the length of the passage and the time allotted are subject to regulation by the Graduate Council. For one of these examinations, the student may, subject to the approval of the department(s) concerned, substitute a five-quarter (or equivalent) sequence of courses in that language, of University grade, passed with an average of C or better. The Graduate Council establishes general policies respecting such sequences, including time limits beyond which they no longer carry credit, and authorize the Dean, upon recommendation of the department(s) concerned, to accept language courses taken at another institution.

2. Demonstration of an exceptionally thorough reading knowledge and an adequate knowledge of the grammatical structure of a single language. Such command is tested under the direction of the Graduate Council.

In the above options the terms “language” and “languages” refer to any language certified to the Graduate Council by the departments concerned.

Students who by virtue of background have a native speaker's command of a certified language will be considered to have met the language requirement as specified in 2, above. Standards for evidence of background will be established by the Graduate Council.

Noncredit courses for graduate students are offered by the various language departments to prepare students for reading examinations.

Notice of Intended Candidacy. Notice of intention to proceed to candidacy for a doctoral degree should be given by students to the department or group for review and decision by the Graduate Adviser as early as possible in their graduate career, preferably by the end of the second quarter of residence. Qualifying Examinations. Before admission to candidacy, students must pass a series of qualifying examinations administered by a five-member committee appointed by the Graduate Council. 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 course work undertaken in graduate status must have been maintained, and the language requirement must have been fulfilled.

Advancement to Candidacy. Application is made on a form furnished by the Graduate Division, no later than the quarter 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.

Group in Wood Science and Technology
Professor Fred E. Dickinson, Chairperson
c/o Forest Products Laboratory

The Graduate Division / 23
The Graduate Division. Each academic department may adopt additional requirements, as approved by the Dean of the Graduate Division and the Graduate Council, in order to test the 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**
- **Italian**
- **Logic and the Methodology of Science**

**PLAN B**

- **Agricultural Chemistry**
- **Agricultural and Resource Economics**
- **Ancient History and Archaeology**
- **Anthropology**
- **Applied Mathematics**
- **Architecture**
- **Astrobiology**
- **Bacteriology**
- **Biophysics**
- **Botany**
- **Business Administration**
- **Chemical Engineering**
- **Chemistry**
- **City and Regional Planning**
- **Classical Archaeology**
- **Classics**
- **Comparative Emphases: Greek, Latin**
- **Comparative Biology**
- **Comparative Pathology**
- **Computer Science**
- **Demography**
- **Dramatic Art**
- **Economics**
- **Education**
- **Endocrinology**
- **Engineering**
- **Engineering Science**
- **English**
- **Entomology**
- **Environmental Health Science**
- **Epidemiology**
- **French**
- **Genetics**
- **Geography**
- **Geology**
- **Geophysics**
- **German**

Exchange Programs

**Foreign Language Training.** When space is available, University 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 Secretaries of the Academic Senate, Committee, Merrill College, University of California, Santa Cruz, CA 95060.

**Accommodation of Postdoctoral Fellows and Visiting Scholars.** A prospective fellow or scholar should communicate with the chairperson of the department, school, or research unit to which affiliation is desired to determine whether the facilities required are available and whether eligibility requirements are met for an honorary appointment. With rare exceptions, visiting scholars must hold the doctoral degree or its equivalent. Visiting scholars may not be students enrolled at another institution from another institution of higher education, candidates for a graduate degree, or employees of any University of California campus. Foreign fellows or scholars should apply through the Adviser for Foreign Students and Scholars Office, International House, to determine that they hold the proper visa to assume an appointment.

**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. The student must have the approval of the Dean of the Graduate Division and must be granted leave of absence by 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 quarter.

Application forms for the Intercampus Exchange Program must be filed with the Dean of the Graduate Division on the home campus at least three weeks before the opening of the quarter of enrollment in the program.

It is anticipated that this privilege will be used by graduate students who seek the opportunity for association with certain scholars or with 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 shown.

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 regular academic program. 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 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, in accordance with approval of the Graduate Division and the departments, 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 Stanford students who wish to take courses at Berkeley. Further information and application forms may be obtained from the Office of the Dean of the Graduate Division, Room 1, California Hall.

**Exchange Programs 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 College, 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. Normally, students will be enrolled for only one course per quarter 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.
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 the other campus, subject to the appropriate academic approvals. Applications and deadline dates can be obtained from the Petitions Desk in the Graduate Division, Room 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's 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.

Study Abroad for Graduate Students

Graduate students who have been admitted for study toward a higher degree may, under certain conditions, be granted permission to study abroad. Such study may consist of independent thesis study or participation in University-sponsored programs. 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 all of the study centers under the Universitywide Education Abroad Program. A student must obtain the approval of both the department and the Dean of the Graduate Division.

Intensive language study is offered in Arabic in Cairo, in Japanese at Tokyo, and in Mandarin Chinese at Taiyuan.

Internship/Study Opportunities in Professional Studies Program in India. The Professional Schools at Berkeley conduct a program in New Delhi. A student earns credit for internship work in local government agencies appropriate to his or her professional interest, and enrolls in an Indian University.

For additional information on all the above programs, write to the Office of International Education, 2538 Channing Way, Building D, Room 104, University of California, Berkeley, CA 94720.

Financial Aid and Employment Opportunities for Graduate Students

Fellowships and Graduate Scholarships. Awards at Berkeley vary with student stipends. Some awards are given beginning graduate students or to specific departments but most are available in open competition.

Funds for these awards are made from endowments held in trust by the University and given by interested friends and alumni; others are made available from annual donations from educational foundations, industry, government, and individual benefactors.

Fellowship Information. Information on awards available each year is issued early in the fall. Students should write for information in the fall of the year preceding the proposed enrollment at Berkeley. Requests for information should be addressed to the Graduate Admission/Fellowship Office, Room 1, California Hall.

The fellowship application is combined with the application for admission.

Fellowship Application Deadline. The fellowship application deadline for the 1979-80 academic year is December 1, 1978. Applications for all the fellowships and graduate scholarship award programs mentioned here are considered only once a year, and are for the academic year beginning with the fall quarter extending through the winter and spring quarters. No awards are made beginning with the winter (January) or spring (March) quarters.

Fellowship Application Procedure. New graduate students enrolling for the first time at Berkeley in a fall quarter apply for admission and for consideration for a fellowship or a graduate scholarship by completing the combined application for Admission/Fellowship, and filing it by December 1, 1978.

New foreign applicants fill out a separate application for admission to the university, not the combined form. As the applications for admission of new foreign graduate applicants are reviewed, departments may recommend individuals of high academic distinction to the Fellowship Committee for consideration for an award. This will be done entirely by departmental recommendation, not by the applicant's request. Those who do receive fellowship awards will be notified by the Graduate Admission/Fellowship Office on or about April 1. Foreign students not receiving an award will simply be notified of their admission or denial of admission when action has been taken on their application without reference to the April 1 date. Foreign students should not assume that admission carries any assurance of financial support or remission of fees.

Continuing or returning graduate students at Berkeley may obtain the necessary fellowship application material from the Graduate Admission/Fellowship Office. The application and the supporting materials must be filed with the department or program by December 1.

Announcement of Awards. Announcements are made on or about 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 the University of California. Institutions which are members of the Council of

THE GRADUATE DIVISION / 25

Graduate Schools in the United States or the Canadian Association of Graduate Schools require that anyone who accepts an appointment after April 15 must, in order to become eligible to fill a vacancy in a member institution, receive consent to do so from the university that first made the appointment.

Criteria of Appointment. The number of awards available is limited, and since several thousand new, continuing, and returning students apply each year, the competition is very keen. In assigning awards the Committee on Fellowships and Graduate Scholarships considers:

1. The extent and quality of previous academic work, the evidence of ability in research or other creative accomplishments, intellectual capacity, and the promise of productive scholarship.

2. The total resources available to the student as evidenced in the financial statement, and the determined need.

Supplementation of a fellowship by employment or any other means is possible only by the express consent of the Dean of the Graduate Division, and the amount of supplementation is strictly limited. Persons supplementing fellowships without such approval may face loss of the fellowship and a requirement to repay the fellowship funds disbursed to them.

Honorary Traveling Fellowships. Honorary traveling fellowships may be awarded to distinguished graduate students in any department. Such awards do not carry any stipend, but entitle the holder to official credentials from the University which may be of assistance in pursuit of studies and special inquiries in other states and foreign lands. Applications for honorary traveling fellowships must be received by the same date as for other fellowships, December 1.

Foreign Language and Area Studies Fellowships. Foreign Language and Area Studies Fellowships are available under Title VI of the National Defense Education Act in certain designated modern foreign languages. These awards are open only to students who are (1) U.S. citizens or have permanent resident status, and are (2) preparing to teach selected languages or related area studies in an institution of higher education or an elementary or secondary school in the United States. The fellowships are awarded to graduate students who have been admitted for study abroad, and must demonstrate a serious commitment to the study of modern foreign languages or related area studies in an institution of higher education or an elementary or secondary school in the United States.

Applications for these fellowships must be received, along with the required supporting materials, by the Fellowship Committee for consideration for an award. This will be done entirely by departmental recommendation, not by the applicant's request. Those who do receive fellowship awards will be notified by the Fellowship Office on or about April 1. Foreign students not receiving an award will simply be notified of their admission or denial of admission when action has been taken on their application without reference to the April 1 date. Foreign students should not assume that admission carries any assurance of financial support or remission of fees.

Continuing or returning graduate students at Berkeley may obtain the necessary fellowship application material from the Graduate Admisnission/Fellowship Office. The application and the supporting materials must be filed with the department or program by December 1.

Announcement of Awards. Announcements of awards are made on or about 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 the University of California. Institutions which are members of the Council of

Waiver of the Nonresident Tuition Fee. A very 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 higher 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 June 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 establishment of legal residence in the state of California, see Appendix.

There are also a limited number of Earle O. Anthony Tuition Scholarships covering the nonresident tuition fee for graduate 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 primary purpose of this program is to provide financial assistance to students from economically and educationally disadvantaged groups which have been underrepresented in graduate programs. Assistance is available for U.S. citizens only. Awards are based upon evaluation of academic promise, financial need, and availability of funds. Approximately 200 awards, ranging from $100 to $3200 stipends plus fees, are granted annually to incoming students. Awards are made for one year but are renewable on condition of satisfactory academic progress. Applications are available for prospective new students in the Graduate Division’s Application for Graduate Admission, Fellowship and Financial Aid. Continuing and readmitted students apply directly to the Graduate Minority Program office which is located in Room 1, California Hall. The deadline for filing is December 1 for the following academic year. All applicants are required to complete the Office of Financial Aid application for determination of need. The GMP award is not expected to meet the student’s entire financial need, and thus all are urged to apply for financial assistance from other sources.

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 three academic quarters. Reappointment may be recommended. Employment in the summer sessions may be additional and, in some titles, may be full-time. For teaching assistants and teaching fellows, payment is in nine equal installments (three installments per quarter). 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 or/and graduate work.

Teaching Assistantships. Many departments make teaching assistantships available to outstanding graduate students, providing them a salary of $598.00 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 chairperson 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 $472.00 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 $700.00 per month for a half-time annual appointment. Application is made to the individual departmental chairperson.

Associateships. The title “Associate” is assigned to teachers employed temporarily and not under consideration for appointment as Instructor or Professor. Services may be either full- or part-time. Associates are employed to give independent instruction in lower division courses. They may or may not be registered graduate students or candidates for degrees at this University. They must possess a master’s degree or equivalent training and have had at least one year of teaching experience (including that of a teaching fellowship or assistantship) in or outside of the University. Registered students, who are limited to half-time service, are in a monthly salary range of from $883 to $1,086. Application is made to the individual departmental chairperson.

Graduate Degrees Offered on the Berkeley Campus

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, although application is made directly to the School of Law, it is under the jurisdiction of the Graduate Division.

Agricultural Chemistry, 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.A., 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.
Bacteriology, M.A., Ph.D.
Biological Chemistry, M.A., Ph.D.
Biophysics, M.A., Ph.D. †
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.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.S., M.A., 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. †

*indicates established interdisciplinary group or field.
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 16 quarter 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 as part of a concept of such a degree.

Certificates of Completion of Graduate Curriculum in the School of Library and Information Studies. Three certificate programs have been established which are designed to meet the need for advanced studies beyond the first professional degree (M.L.S.) and short of the doctoral degrees (Ph.D., D.L.S.). The programs will be in the following fields: Bibliography, Library Automation and Information Science, and Library Management. Inquiries should be directed to the School of Library and Information Studies.

Interdisciplinary Groups. Please see page 22.

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, German, and Near Eastern Studies. At the present time, it is limited to the five academic fields of study named above. Candidates must satisfy all requirements to be certified to teach in the State of California in addition to completing academic training. In some of the four subject fields, inquiries should be directed to the appropriate academic department and to the School of Education.

Joint Doctoral Programs. An inter-campus joint degree program has been established between the Berkeley and San Francisco campuses of the University of California. Medical Anthropology—This program leads to the Ph.D. in Medical Anthropology. Admission to the program is obtained by application to the department in the campus where the student expects to do research for the dissertation. 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 of 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 University at Berkeley 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: 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 Francisco State University. For application material and additional information, write to: Professor James W. Fristrom, Department of Genetics, 345 Mulford Hall, University of California, Berkeley, CA 94720.

Concurrent Degree Programs. Concurrent degree programs have been established in the disciplines listed below. The aim of these programs is to provide an integrated curriculum of greater breadth between the two disciplines. Inquiries for additional information should be directed to the departments or schools involved.

Architecture.

Business Administration.

Economics.

Library Science.

Nutrition.

Public Health.

Services and Facilities

This section offers a general outline of the services and facilities available at the Berkeley campus. Services include the Student Health Service, Counseling Center, Career Planning and Placement Center, Housing and Child Care Services, Office of Financial Aid, and many others; facilities include libraries, Study Abroad Programs, the Lawrence Hall of Science, the University Art Museum, gymnasiums, student organizations and activities, and many others. Further information may be obtained by writing directly to the appropriate office.

Services

Student Health Service. The Student Health Service offers preventive, educational and treatment services that are designed to support the good health of students. Most of the routine services are provided to fully registered students at no additional cost. These services include doctor and nurse practitioner visits, contraceptive examinations, pregnancy counseling, and educational programs such as weight control groups, smoking groups and health information. Some outpatient services such as allergy shots, travel immunizations, premarital exams, physical exams, dental services and prescription drugs are available for a small fee.

Hospitalization, surgery and other non-SHS emergency care require insurance payment. Students should bring appropriate information about any insurance coverage they have when coming to campus. Full details about SHS insurance and optional insurance for student de-
Graduate Division, 1 California Hall. The application is due by December 1, 1978.

Cal Grants A (California State Scholarships) are awarded by the State and are open to applicants to undergraduates and, in some years, to graduates. They range in value from $300 to $700 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 $100 to $1800 per academic year.

The cost of attending the University varies according to individual circumstances. Approximate costs for the nine month academic year are listed under Fees and Expenses.

Counseling and Psychological Services. Counseling and Psychological services include the Counseling Center, Psychiatry, and Student Advising and Assistance.

Counseling Center. Located in Building T-5, the Counseling Center is available to regularly enrolled students who wish to talk with professionals about academic performance, choice of a major, personal adjustment, assessing interests and aptitudes, or exploring long range career opportunities. Group counseling in social skills, problem solving, test anxiety, vocational exploration and decision making, weight problems, and graduate oral and thesis anxiety problems is also available. Psychological and aptitude testing is performed as part of the counseling process. All communications between students and counselors are treated confidentially.

The Counseling Center maintains a library of reference materials, professions, careers, opportunities, and student activities publications. The Counseling Center is a guidance service that helps students to realize their potential and achieve academic success at Berkeley. Counseling and psychological services include:

- Student Advising and Assistance (SAA). This office, located in 400 Eshleman Hall, provides assistance 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 as well as assistance with applications and letters of recommendation to the schools of their choice.

- Optometry Clinic. The School of Optometry offers complete optometric services (including contact lens fitting). The clinic is open to students, faculty, and the general public. Form of information or appointments, 642-5761 to 642-5763, or come to the Optometry Clinic located in Minor Hall across from Cowell Hospital. Patients over 20th year optometric interns under the supervision of the clinic faculty.

- Student Learning Center and EOP/Affirmative Action Counseling. Located in Building T-6, the Center offers a wide range of group and individual programs designed to aid students in achieving academic success at Berkeley. Counseling and psychological services include:

Learning Center. Learning Assistants provide individual services in a variety of undergraduate courses. There are also non-credit mini-courses in reading improvement, writing, and study skills available to both undergraduate and graduate students.

Handouts are available on specific study skills for a number of courses. Handouts are available on specific study skills in various disciplines. The lab has programs for improving reading, note-taking and vocabulary.

Office of the Ombudsperson. The Ombudsperson assists students and academic personnel with problems which seem insoluble by the usual procedures and agencies. If you have reached a procedural impasse or feel 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 resolution.

The Ombudspersons Committee also makes general recommendations for changes of the policies that produce unworkable or unfair regu-
located at 103 Sproul Hall, this office works closely with students and staff in their initiation, planning, and implementation of activities, programs, and events to meet the desires and needs of students and the University community. Participations in rooms and apartments can help students with physical, psychological, social, and financial difficulties, health care counseling, and advice on personal problems. Additionally, this office provides information on almost any topic that would be of special interest to foreign students or scholars. Located in International House, this office, also in International House (642-9460), plans trips to neighboring communities, industries, and places of geographical interest, cultural events, dances, parties, and slide shows, to enrich the extra-curricular life of foreign students and scholars, at UC Berkeley, and to introduce them to American institutions, customs, and families.

Career Planning and Placement Center. The Center is composed of three units in two locations: one is specifically oriented to career planning needs and employment of students and alumni. Students, and their spouses, seeking part-time, temporary, odd-job, internship, or summer employment should go to the office in 111 Wheeler Hall. Assistance is provided by helping students identify skills and determine those areas of work for which they are qualified. (Students interested in work-study should go to the Office of Financial Aid, 203 Sproul Hall. See page 25, Financial Aid.) Individuals seeking positions in business, industry, government, and non-profit organizations should go to the upper floor of Building T-6 or 111 Wheeler Hall. Advisers are available to assist students and alumni with their career planning needs. Weekly resume writing and interviewing workshops are held at the Center; in addition, a host of Career Information Programs and a variety of special projects related to career development are coordinated with other student service units and conducted by staff. These programs are held throughout the campus. A Career Information Library is available. During the summer, staff arrange group interviews with employer representatives for graduating seniors and graduate students. Individuals seeking careers in education should go to the floor of Building T-6. This staff provides information and counseling to persons from all academic fields. Students and alumni receive assistance in locating teaching, administrative, and other related positions at elementary and secondary schools, community colleges, and colleges and universities throughout the world. Advisers in the office also arrange employer interviews, establish employer liaison, and maintain up-to-date employment files. Resource materials and career information are also available in the office. The Career Planning and Placement Center supports and subscribes to all equal opportunity employment practices of both the State and Federal.

Living Accommodations. There is a wide selection of housing at the Berkeley campus. Admission to this campus does not guarantee housing reservations. You should acquaint yourself with the various living arrangements. Undergraduates and postgraduate students should write directly to the Housing and Child Care Services, 2401 Bowditch Street, Berkeley, CA 94720, to receive descriptive material. This office also maintains rental listings, but you must visit the office after you arrive on campus to make use of files, which change daily.

More than 3,000 men and women live in University residence halls. An equal number live in fraternities, sororities, and apartments. There are apartments for 1,022 in University Family Student Housing. Early application to living groups is recommended. The remaining students live in rooms and apartments in the community. Students consider their individual wishes and needs and select their own accommodations.

International House. International House is a coeducational residence and program center for American and foreign students, primarily at the graduate level. Cultural and social events, home hospitality, 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, CA 94720; veterans' number (area code 415) 642-9470 or 642-9490.

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 five years. Families with the lowest income are given the highest priority. Two hours weekly parent participation is required. Application deadline is August 18 for the academic year. Applications and information are placed on a waiting list. Applications and information: 2537 Haste Street, Berkeley, CA 94720; telephone: 642-1827. Address mail inquiries to Housing and 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, 120 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 the Veterans Affairs Section, Office of Admissions and Records, 120 Sproul Hall or 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 upon request at 120 Sproul Hall.

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. These 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: Enlisted, Reserve Officers Training Corps (ROTC) programs.

Pet Clinic. The Pet Clinic provides out-patient services, including diagnosis, minor surgery, and all vaccinations, for students' pets. For details, go in person to the Student Union Information Desk, and read the information on the Clinic appointment sheet.

Facilities

The University Library. The Berkeley campus library system consists of the Main Library, the Modern Undergraduate Library, the University Library, and numerous special libraries. The combined holdings of the libraries total more than 5,000,000 volumes, 97,000 current serial publications, 38,000,000 manuscripts, 857,000
The Gutenberg Express. The University Libraries of UC Berkeley and Stanford University provide interlibrary services to faculty and advanced graduate students and, in special cases, to undergraduates and to advanced undergraduates. Together the two libraries have about 9,000,000 volumes, a combined research collection that is one of the richest in the world. Transportation between the two libraries is available on the “Gutenberg Express,” a bus service that leaves each campus weekdays except holidays at 8:30 and 10:30 AM and at 1:15 and 3:15 PM.

The Main Library. Most of the UC Berkeley humanities and social sciences materials, and the central services for acquisition, cataloging, interlibrary loan, serial publications, and photographic materials are located in the Main Library. In addition to the bibliographical aids to research, provided by the General Reference Service, special services or specialized reference assistance is given by the Documents Department, Art History/Classics Graduate Service, Morison Room, Map Room, Newspaper and Microcopy Room, and Periodical Room.

The Bancroft Library. Located at the east end of the Main Library building, the Bancroft Library houses the major manuscripts and rare book collections of the Berkeley campus. Here one finds the Bancroft Collection, specializing in the history of western North America (including Mexico with a heavy concentration in California); the Rare Books Collection, emphasizing literature, fine printing, and the history of science and technology; the Mark Twain Papers, the largest extant archive of an American author; the Regional Oral History Office, housing records of interviews with prominent Californians; and the University Archives, containing the historical record of the university's administration and the Berkeley campus. Manuscripts are housed in quarters ranging in size from small offices to a special functions and student activities on campus, and an Office Coffee Service. To arrange for Catering or Coffee Service call (64) 2-3620. University Food Services also serves the campus community in the following locations: University Hall houses Ramona's (8:30AM-3:30PM). Ramona's features salad bar and a wide selection of pastries, snacks, beverages and made-to-order sandwiches.

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, a juice bar, Hof Brau sandwiches, grilled items and a variety of Ethnic and American foods; also included in this area is a Pizza Kitchen serving a variety of snacks and hot entrees in addition to fast food snacks and a variety of hamburgers and hot dogs.

The Golden Bear Restaurant (Upper Plaza, 11:00AM-1:00PM, 5:00PM-10:30PM) with table service including a menu selection of salad bar, Hot Brau sandwiches, grilled items and hot entree dishes.

The International Market Place (Lower Plaza off the Breezeway, 11:00AM-2:30PM). A newly-developed, interesting dining concept, featuring a variety of Ethnic and American foods; also included in this area is a Pizza Kitchen serving a variety of pizzas, whole of by the slice, plus other Italian entrees; for an additional variety in this area, is a soup and salad bar with a fare of delicious homemade soup, large tossed green salad and the Bar Area’s famous sourdough trench bread. Offers pleasant indoor and outdoor seating areas.

The Fence (Upper Plaza, 8:00AM-3:00PM). Fast food service of sandwiches, pizzas, coffee, pastries, cold beverages and popcorn.

Catering and Office Coffee Service. The Dining Commons also operates a Catering Service for special functions and student activities on campus, and an Office Coffee Service. To arrange for Catering or Coffee Service call (64) 2-3620. University Food Services also serves the campus community in the following locations: University Hall houses Ramona's (8:30AM-3:30PM). Ramona's features salad bar and a wide selection of pastries, snacks, beverages and made-to-order sandwiches.

The James K. Moffitt Undergraduate Library. An open stack core collection of 165,000 volumes and 500 serial titles, designed to provide a convenient point of entry into the complex library system for Berkeley's 20,000 undergraduates. It is available in the Moffitt Undergraduate Library. Reserve materials assigned for reading in most undergraduate courses as well as carefully selected materials in all subject fields are provided.

Branch Libraries. Branch Libraries are located near the departments whose faculty and students use them most. They include the Biochemistry, Biology, Optometry, and Public Health Libraries, Agriculture, Entomology, Forest Products, Forestry libraries, the Astronomology/Statistics/Computer Science, Chemistry, Earth Sciences, Engineering, and Physics. These include Anthropology, American Social Science, Library School, and Social Welfare libraries; and the East Asiatic, Education/Psychology, Environmental Design, and Music libraries.

Special Libraries. Among the most important Special Libraries are those of the Center for Chinese Studies, the Giannini Foundation of Agricultural Economics, the Institute of Governmental Studies, the Institute of Industrial Relations, the Institute of International Studies, the Institute of Transportation Studies, the School of Law, and the Water Resources Center.

Language Laboratory. The Language Laboratory is located in the basement of the southwestmost wing of Dwinelle Hall. The Laboratory has 165,000 volumes and 500 serial titles, designed for 11 more. The tape library has more than 10,000 reels in over eighty languages. Most are language lessons, but there are foreign literature readings as well. Facilities are normally closed for languages with large enrollments, but random listening is encouraged to the extent that materials permit. Some of the popular language lesson series are available in a lending collection for home study. Copies of some of the Laboratory's materials may also be bought at cost. Assistance to students wishing to study certain exotic languages is available by application at the Laboratory office.

Sports and Recreation. Harmon Gymnasium and Hearst Gymnasium are equipped with swimming pools, as well as squash, handball, volleyball, and tennis courts, athletic fields, and a variety of indoor activities. They are open throughout the year, free of charge, to students of the University, who may obtain, upon showing a current student registration card, a locker and free use of gym clothing and some equipment. Hours during which facilities are available for recreational use are posted in the gymnasium. A wide variety of instructional, intramural, extra-mural, intercollegiate, and recreational athletic programs and sports clubs are offered by the Department of Physical Education, Department of Intercollegiate Athletics, Department of Women's Intercollegiate Athletics, Department of Intramural Sports and Recreation, and the ASUC. Strawberry Canyon Recreation Area serves the entire University community with swimming pools, lounging, play, and picnic-barbecue areas. Further information may be obtained by calling Haas Clubhouse, 642-5575.

Dining. University Food Service facilities, which are located in the Dining Commons north of the Student Union on the upper and lower plaza levels, include:

- The Deli (Lower Plaza, 10:30AM-5:00PM). Made-to-order sandwiches, homemade soup, salads, desserts and beverages, including freshly ground coffees. Telephone orders accepted, call (64) 2-7314.
- The Ice Cream/Crepery Parlor (Lower Plaza near Zellerbach, Noon-5:00PM). 32 flavors of ice cream in sundae, shakes, milk, floats, cones, hard and soft specialties; dessert and entrees of all kinds; delicious espresso coffees.
- The Terrace (Upper Plaza, 7:30AM-2:30PM). Provides hot meals, breakfast and lunch; grilled or wrapped sandwiches; hot tasty soup and a selection of hot entrees in addition to fast food snacks and a variety of burgers and hot dogs.
vides 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; Computer Facilities Management, a service that can provide operational plans and hardware maintenance support for departments that operate their own computer facilities; and a small reference Library that houses computer science materials, hardware and software manuals, available applications programs and periodicals.

Computer Facilities and Operations provides computing hardware, software and operational services for instructional, research and administrative purposes. Operations manages computing facilities, such as a CDC 6400 batch system and seven remote job-entry stations. Unix time-sharing systems on several PDP 11/70’s (two are linked to the 6400), two PDP 11/34’s, and seven remote job-entry stations, Unix time-sharing and remote job entry extensions to U.C. San Francisco and U.C.L.A. Operations also assists users submitting computer jobs and use of unit record equipment. Systems Support maintains computer systems software including operating systems, database management systems and application programs of general utility. Additional support includes Production Control, Key Data Entry and Hardware Maintenance.

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

Lawrence Berkeley Laboratory. Stretching up the wooded hills of the Berkeley campus is Lawrence Berkeley Laboratory (LBL), a national scientific and engineering research facility. The Laboratory is named for its founder, the late Ernest O. Lawrence, who invented the cyclotron in 1929 and subsequently attracted to his lab an outstanding group of researchers who have gained world renown and eight Nobel Prizes. Three of the basic kinds of accelerators—the cyclotron, the linac and the synchrotron—were invented and developed at Lawrence Berkeley Laboratory. LBL scientists were involved in the discovery of most of the unstable elementary particles and all of the 14 known transuranium elements; the basic steps in photosynthesis were first unraveled at LBL; and the field of nuclear medicine was pioneered at this Laboratory.

Today, the Laboratory’s scope includes nine research divisions: Accelerator and Fusion Research; Biology and Medicine; Chemical Bio- dynamics; Earth Sciences; Energy and Environment; Materials and Molecular Research; National Resource for Computation in Chemistry; Nuclear Science; and Physics, Computer Science and Mathematics. Researchers in these divisions are carrying out basic and applied studies in nuclear physics and chemistry, high energy and medium energy physics; astrophysics; materials research; accelerator design; nuclear medicine diagnostics and treatment; basic biological processes in plants and animals; environmental pollutants and their effects on living systems; and new energy technologies, including fusion power, solar energy conversion, geothermal power, and production of clean fuels from coal and plants. Three of the Lab’s accelerators—the Super-ILLAC, the Bevalac, and the 88-Inch Cyclotron—comprise an international center for heavy ion research in both nuclear science and biology and medicine.

Over 3,000 people work at the Laboratory, which includes 54 buildings that cover more than 120 acres in the Berkeley Hills. Many UC faculty members in the physical, biological and engineering sciences and at least 600 students are involved in research and development projects at LBL. In addition, approximately 450 UC graduate students participate in research at the Lab annually. The Laboratory also attracts postdoctoral researchers from throughout the United States and foreign countries who spend from one to several years conducting research at LBL.

Lawrence Hall of Science. The Lawrence Hall of Science is both a public science center and a research unit in science education at the Berkeley campus. Its mandate is to increase the public’s awareness and understanding of science; its aim is to involve people with scientific concepts in a direct and personal way. Visitors to the Hall operate science demonstrations in astronomy, biology, chemistry, mathematics, or physics. They can use computer terminals for programming and logic games, and discover a pulsar in a simulated “sky window.” Planetarium shows enable the audience to participate in interdisciplinary approaches to astronomy education. Time-shared computer services are provided to educational institutions, from elementary school through college. Workshops and classes introduce thousands each year to scientific investigation and new technology. The school visit program brings over 8,000 children to the Hall during the academic year, and after-school classes are offered in mathematics, physical and life sciences, and computer science. General interest films are offered every weekend and daily during the summer months. A Thursday Evening Lecture series provides speakers from the University and the Bay Area on topics of general scientific interest.

Over fifty percent of the staff and budget are involved in research and development projects in science that emphasize active experimentation and investigation. Programs developed at the Hall in physical and life sciences, outdoor biology, and chemistry are used in every state in the country and in many institutions abroad. Teachers attending workshops and classes are involved in teacher development, assisting their students in curriculum development by exposing them to more confidence and competence in science and mathematics teaching.

The Hall is open seven days a week from 10AM to 4:30PM, and Thursday evenings until 9. Admission is free to UC students and members of the Lawrence Hall, for others, there is a small admission fee. For information call 642-5132.

University Art Museum. The University Art Museum, located on Bancroft Way at College Avenue, is the major art museum serving the university community. Facilities include eleven galleries, a fine arts bookstore, restaurant, sculpture garden, and the Museum’s film department, the Pacific Film Archive.

The Museum annually offers over 20 temporary exhibitions. Some are nationally-circulating shows; others originate at Free or inexpensive brochures accompany most exhibitions, and handbills depicting works of art in an exhibition or designed especially by the artist for
the museum showing are distributed free of charge. In addition, the Museum houses a permanent collection of Western and Asian art, which is on display on a rotating basis. A major benefactor of the Museum was the abstract expressionist Hans Hofmann, who included in his gift to the Museum a large group of his paintings. A changing selection of works from this collection is displayed in Gallery 6. Objects from other campus collections, especially from the Lowie Museum of Anthropology, are frequently exhibited in the Museum's galleries.

The MATRIX program, a changing exhibition of contemporary art, supplements the Museum's regular exhibition program. MATRIX presents to the University community exhibition and performance units offering a representative sampling of the wide range of ideas currently explored in contemporary art. An Artist's Sheet is provided free of charge with each unit, and the exhibitions are often supplemented with talks and slide lectures.

Special study collections are available to students and faculty; works in storage are made available for study upon request, and various exhibitions are prepared for university classes and seminars. In addition, the Museum has a developing program in which advanced students receive practical experience by assisting in curatorial work. This work can take the form of doing research, helping to prepare exhibitions for display, writing brochures and giving lectures.

The Museum offers free noontime lectures on art (some of these co-sponsored with other campus departments) as well as video programs, performances and exhibition-related projects.

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 3,000 prints and provides facilities and a media information service for both film study and research screening. Free film showing for classes is held several times weekly. In addition, the Pacific Film Archive offers over 800 public film programs annually. The programs are listed in the monthly calendar distributed free of charge at the Museum theater, at the Student Union Information Desk and at other locations in the East Bay and in San Francisco.

The University Art Museum Council offers membership to UC students at a reduced rate and general membership in several categories. Members' privileges include a discount at the Museum bookstore, invitations to preview receptions, and opportunities to join other art-oriented activities sponsored by the Council. Students, faculty and staff also sit on the Council Board of Directors. Museum hours are 11 AM to 5 PM, Wednesday through Sunday. Admission is free. For a taped message on the Museum's exhibition programs call 642-0808, for a taped message on the Pacific Film Archive program call 642-1124.

Lowie Museum of Anthropology. The primary purposes of the Robert H. Lowie Museum of Anthropology since its creation in 1901 have been the scholarly research by students and staff members and the training of undergraduate and graduate scholars. Qualified students in fields other than anthropology are especially encouraged to use the Museum's collections for independent research projects.

With its modern facilities in 103 Kroeber Hall, the Museum serves a number of academic departments both at Berkeley and at other University campuses. Educational institutions in the San Francisco Bay Region, as well as civic groups and qualified members of the general public, also utilize its facilities, although the Museum's primary responsibilities are to the University of California. Faculty members both within and outside the Department of Anthropology hold curatorial positions. Exhibits and collections are used for instruction and research over a wide range of scholarly disciplines.

There are currently 495,000 cataloged specimens in the Museum, which include 240,000 archaeological and ethnological specimens from California; 110,000 from other parts of the Americas; 45,000 from Oceania; 51,000 from Europe, Asia, and Africa; and 10,000 entries of human skeletal materials. In undergraduate teaching, small classes meet regularly in the study-collection area; for larger classes, specimens are laid out for examination. In study in other Museum areas or areas selected for demonstrations in classrooms. Exhibits are installed for class assignments, discussion, and individual study in the Museum's Exhibition Hall. Changing exhibits are maintained at other points on campus. The Museum is open to the public weekdays 10 AM to 4 PM, and weekends 12 noon to 4 PM.

Botanical Garden. The Botanical Garden was established in the early 1980's and transferred to its present location of 32 acres in Strawberry Canyon in 1928. Although relatively small in area, the Garden ranks with the world's leading gardens in the variety and quality of its plants. There are approximately 10,000 different species at present, most of which have been grown from seeds collected in the wild. Since 1963, plants from 9,000 native and exotic species have been planted and arranged according to the geographical origin of the plants, a walk through the Garden provides a sample of several of the world's major floristic zones. Less hardy collections are grown in greenhouses, several of which are open to the public. There is something in bloom every month of the year.

The largest collection is that of cacti and other succulent plants from new and old world desert areas. Many of the succulents are either on African Hill or in the New World Desert areas. The arrangement provides a unique opportunity to compare the morphologically similar but taxonomically different plants of Old and New World deserts. Native plants of California occupy the largest area devoted to a regional collection. Many of the plants are arranged to demonstrate the plant communities of the state such as chaparral woodland, coastal prairie, and pigmy forest. Special collections include: herbs and spices, palms, rhododendrons, gymnosperms, ferns, carnivorous plants, orchids, and economically important species.

The Botanical Garden is an important resource for instruction and research for the University and other educational and scientific institutions throughout the world. The Garden offers an educational program for the general public that includes docent conducted tours of the various plant collections. Group tours may be arranged for a nominal charge by phone 642-3352, Monday through Friday, 8 AM to 4 PM. The Garden is open to the public daily except Christmas, from 9 AM to 5 PM. There is no admission fee.

Student Organizations and Activities

The ASUC. The Associated Students of the University of California is the official organization for student government. The office of the Executive Director is located in 211 Eshleman Hall. This nonprofit organization, through its student-elected Senate, is responsible for directing a large variety of student activities and serves as official student spokesperson in University affairs. You are urged to make use of your ASUC votes to secure the representatives you feel will serve you capably and articulately. Graduate students also elect departmental representatives to the Graduate Assembly, which concerns itself with graduate affairs. The ASUC also coordinates student participation in all Registration Fee Committees; it also selects undergraduate and graduate students to serve as interns in units receiving registration fee funding for the purpose of reviewing and commenting upon the use of such funding. One of the many student activities is ushering: the University Box Office offers opportunities to students to usher at most legitimate theatre, symphony, and opera performances in San Francisco and the East Bay, thus providing an extremely popular way for University students to enjoy first-class entertainment at practically no cost. Another activity of the ASUC is the operation of the campus radio station, KALX-FM. In addition to its facilities in the Student Union complex, the ASUC owns and operates Cal Ski Lodge at Norden, California, and operates a bicycle parking lot at Moffitt Library on campus.

Graduate Assembly. The Graduate Assembly is the student governance organization that is primarily concerned with matters pertaining to graduate students. Graduate departments and interdisciplinary group programs 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 is funded by a fixed percentage of graduate student ASUC fees, by student Registration Fees, and by special instructional improvement funds. The Assembly elects
executive officers and representatives to both the ASUC Senate and the Graduate Council of the Academic Senate. The Assembly also 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 university-wide Student Body Presidents' Council, which makes policy for the UC Student Lobby. Members of the Assembly are organized into working committees, supported by Assembly staff, to concentrate on areas of interest. These committees have been concerned with such matters as academic advising, time to degree for doctoral programs, training for Teaching Assistants, affirmative action issues and reports, library facilities, job placement, housing, graduate student orientation, and the quality of masters and doctoral programs. The Assembly publishes The Berkeley Graduate, a graduate student 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 at 239 and 241 Campbell Hall, 642-2175 and 642-2307.

The Community Projects Office (CPO). This office, located in Eshleman Hall, serves as the ASUC clearinghouse for existing volunteer opportunities in the San Francisco Bay Area and as the 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, ideas and information on the 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 provides to student projects, administered through its office, various proposal writing and funding source workshops during the year. The CPO also works with various campus and outside agencies that provide similar services. The CPO has the necessary information for those students interested in starting new projects to better serve the community. The CPO employs some part-time students and often utilizes volunteers. For these students, the CPO provides a meaningful and relevant link to the community while at the same time giving the student an opportunity to combine his/her service learning experience with the campus and community peers.

SUPERB Productions. The Student Union Program, Entertainment, and Recreation Board, located in Eshleman Hall, 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 exhibits, cabarets, drama, movies, music and art festivals, and special programs providing several noon concerts on the Student Union Plaza each week open free of charge to the general public.

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. Examples are:
- *Primer* — a quarterly book which evaluates specific instructors and undergraduate courses in particular, and departments and educational programs in general. Located in 204 Eshleman Hall, *Primer* is designed to collect, evaluate, and disseminate information regarding instructors and courses that may be used by undergraduate students in their choosing of course curricula.
- *California Engineer* — a magazine of engineering and scientific topics, for both technical and general interests. Located at 9 North Gate Hall.


**Blue and Gold** — the campus yearbook. Located in 300 Eshleman Hall.

**Via** — a tri-lingual literary magazine (Spanish, Portuguese, and English). Located in Pelican Building.

**Escritores Chicanos** — a collection of Chicano writings. Located in 300 Eshleman Hall.

**Camera Obscura** — a film journal written by students. Located in Pelican Building.

**Lectures, Music, Drama, Dance, Debate** — The University offers a broad variety of extra-curricular activities in the humanities. These include:

- Committee for Arts and Lectures (CAL) — a year-round program of drama, music, dance, films, and lectures. Some events are open to students and to the University community with or without admission charge. For those events requiring tickets, a reduced rate is usually available for registered students. Brochures announcing Committee events may be obtained at the CAL Box Office, 101 Zellerbach Hall, or at the Information Desk of the Student Union. For information, or to make telephone reservations, call 642-2561.

- **Music** — a large selection of student groups, including the Student Concert Chorale, Student Chamber Singers, Octet, Decibelles, Jazz Ensemble, California Marching Band, and other groups in the Music Department, such as University Chorus, which students may join for academic credit. There are also weekly noon concerts, free of charge to the general public. San Francisco Symphony tickets are available to students at special prices. For additional information, contact the Office of Student Activities and Programs, 103 Sproul Hall.

**Theater and Dance** — The Department of Dramatic Art offers a series of play productions 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 in play and dance production.

**Debate** — Varsity Debate and individual events, 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. Many of these societies are open to students of outstanding scholastic 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 activities 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.

**Women's Center.** The Center for Continuing Education of Women (Women's Center) is located on the north end of campus, Building T-9, Room 100. Hours are 9AM to 5PM (including the noon hour), Monday through Friday. The Center offers workshops and individual counseling for academic and vocational planning, a library of resources for research about women, and several series of public programs, on current issues regarding women. The Center is open to all interested persons from the campus.

**Research at Berkeley**

The Berkeley campus is renowned for its programs of faculty and graduate student research, which are conducted within teaching depart-
General

The University Press. The University of California Press, located at 2223 Fulton Street, is one of the largest university presses in the country. It publishes scholarly books, books of general interest, about twenty monograph series, a line of quality paperbacks, and nine scholarly journals. Books and paperbacks number about one hundred and fifty each year. The press serves all campuses of the University equally; its publishing program carries the work of the faculty beyond the campuses themselves.

Office of Publications. Located at 2120 Oxford Street, the Office of Publications acts as publishing house to the Berkeley campus and provides professional services in the planning, writing, editing, designing, illustrating, and manufacturing of administrative and informational publications. The main body of work is in support of the educational mission of the University and includes the General Catalog, announcements of the schools and colleges, and the Schedule of Classes. These, together with over 300 other works in an average year for colleges, schools, departments, and diversified campus units, present information to such disparate readerships as past, present, and prospective students, faculty, and administrators on this and on other campus activities and general public.

The publishing program is characterized more by its function in support of teaching rather than by the method used in reproduction (offset or letterpress printing, xerography, serigraphy, and the like). Although books, syllabi, texts, and similar documents are not normally produced by the staff, consultation and assistance are available either in direct conference or by telephone. 642-0702.

The Alumni Association. For more than 65,000 former students of the University, membership in the California Alumni Association is a means of both keeping in contact with Berkeley and working for the benefit of the University and its student body. The Association administers the Alumni Scholarship program, which annually awards more than $125,000 to some 600 deserving undergraduates. (The funds are donated by individual alumni and by the University's Board of Regents and are channeled through the UC Berkeley Foundation.) The Association sponsors a series of career planning and information seminars and the annual Career Fair and Health Sciences Fair, and maintains a file of Career Information Aides who are available for counseling sessions with students. It offers free income tax counseling for students, presents orientation programs for new and prospective students and their parents, and develops summer job leads through the Cal Jobs program.

Among the many benefits enjoyed by Association members are the award-winning publication, California Monthly; free UC library and language laboratory privileges; access to the Lair of the Bear summer vacation center and to the "Berkeley Experience" summer program on campus; year-round charter flights and tour programs; and discounts on selected University Press books and on memberships in the University Art Museum and Lawrence Hall of Science. Through its awards program the Association recognizes distinguished alumni achievement and outstanding service to the University, its alumni, and the community. The Distinguished Teaching Awards for faculty are also sponsored by the Alumni Association. The alumni records department is the official campus office maintaining address information of former Berkeley students. A statewide network of Alumni Clubs helps members to stay in close touch with the University and with one another. Information on all Association activities, including young alumni and club programs, alumni events on Charter Day and Commencement, and special activities available at the Association's campus headquarters, Alumni House, where students and alumni are always welcome.

Study Abroad for Undergraduate Students. 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 of Ghana, Legon-Accra
- University College, Nairobi

Asia
- Chinese University of Hong Kong
- National Christian University, Tokyo, Japan

Central America
- National Autonomous University of Mexico, Mexico City

Europe
- Universities in France: Bordeaux, Grenoble, Marseilles, Montpellier, Paris (Film Program), Paul-Paris, Poillevres
- 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.S. Marini Music Conservatory, Bologna
- Universities in Berlin, Germany
- 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 in Lima, Peru

Requirements for participation are a grade-point average of 3.0, upper division standing, and sufficient language preparation. Nine quarters of Russian are required for U.S.S.R. The equivalent of six quarters of the host language is required for the centers in France, Germany, Mexico, Peru, and Spain. Three quarters of the host language or the equivalent are required for Brazil, Israel, Italy, Japan, and Scandinavia (if the student agrees to attend a required summer session immediately prior to the academic year program at additional cost). The centers in Africa, Egypt, Hong Kong, and the United Kingdom have no language requirements, but appropriate academic preparation is necessary.

Full credit is given for work taken overseas, but it is the student's responsibility to obtain the approval of their department or college for their study programs. The University supports a number of study programs abroad, which are intended primarily for juniors, but seniors may also participate. However, seniors should inform themselves of residency requirements and unit limits. University scholarships, loans, and grants may be used to finance the year abroad.

Berkeley also participates in several intercollegiate consortia for advanced language instruction: the Classics, Latin, French, German, Slavic, and Asian Studies. The University is a member of the California Language Program (a consortium of Institutions of Higher Education), the University of California-University of British Columbia International Consortium for Language Study, the Asian Studies Consortium, and the following intercollegiate groups. Students interested in these programs should consult with their academic advisor before proceeding.

General

degree of mission orientation may be appropriate.

Organized research units may bear the designation of Institute, Center, Laboratory, Museum, Station, or other titles, depending on the nature of the activity supported and the organization visualized when a particular unit was established. The units are grouped administratively according to the breadth of interest they represent. The grouping may be within the Graduate Division, a School, or a College. Specific administrative groupings are as follows:

School of Business Administration
Center for Research Management Science

College of Chemistry
Laboratory of Chemical Biodynamics

College of Engineering
Earthquake Engineering Research Center
Electronics Research Laboratory
Operations Research Center
Sanitary Engineering Research Laboratory
Sea Water Conversion Laboratory
Institute of Transportation Studies

College of Environmental Design
Center for Planning and Development Research

Graduate Division
Bodeg Law Laboratory
Institute of Business and Economic Research
Center for Real Estate and Urban Economics
Center for Studies in Higher Education
Institute of Human Development
Institute of Industrial Relations
Institute of International Studies
Center for Chinese Studies
Center for Japanese and Korean Studies
Center for Latin American Studies
Center for Slavic and East European Studies
Center for South and Southeast Asia Studies

Lawrence Hall of Science
Institute for the Study of Social Change
Space Sciences Laboratory
Survey Research Center
Institute of Urban and Regional Development

White Mountain Research Station

School of Law
Earl Warren Legal Institute
Center for the Study of Law and Society

College of Letters and Science
Archaeological Research Facility
Field Station for Behavioral Research
Cancer Research Laboratory
Institute of Developmental Studies
Jepson Herbarium
Institute of Human Learning
Lowe Museum of Anthropology
Center for Pure and Applied Mathematics
Museum of Paleontology
Institute of Personnel Assessment and Research Laboratory of Radio Astronomy
Seismographic Stations
Museum of Vertebrate Zoology

School of Natural Resources
Agricultural Experiment Station
Genius Foundation
Forest Products Laboratory
Wildland Research Center
International Center for Integrated and Biological Control

School of Public Health
Naval Biosciences Laboratory

Lawrence Berkeley Laboratory
Accelerator and Fusion Research Division
Biological and Medicine Division (Donner Laboratory)
Chemical Biodynamics Division (Laboratory of Chemical Biodynamics)
Earth Sciences Division
Energy and Environmental Division
Matter and Molecular Research Division
National Resource for Computation in Chemistry

Nuclear Science Division
Physics, Computer Science and Mathematics Division

In addition to the officially established organized research units, there are numerous special facilities for the support of faculty and student programs.

University Police. Police service is available twenty-four hours a day at the University Police Department located at 920 University Hall, by telephoning: Emergency (642)-3333, Business
Fees and Expenses

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, it is wise for the student or the family to be aware, 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 quarter or who withdraw before the beginning of the sixth week of classes of any quarter. (See Index, Schedule of Refunds.) A separate circular on refunds, Student Fees and Deposits, is also available. This circular is available from the Office of Admissions and Records, 120 Sproul Hall.

Table of Fees and Expenses

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, Winter, or Spring Quarter 1978-79</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident Undergraduate</td>
<td>$243.50</td>
</tr>
<tr>
<td>Nonresident Undergraduate</td>
<td>$878.50</td>
</tr>
<tr>
<td>Foreign Undergraduate</td>
<td>$908.50</td>
</tr>
<tr>
<td>Resident Graduate</td>
<td>$263.50</td>
</tr>
<tr>
<td>Nonresident Graduate</td>
<td>$896.50</td>
</tr>
<tr>
<td>Foreign Graduate</td>
<td>$929.50</td>
</tr>
</tbody>
</table>

School of Law

<table>
<thead>
<tr>
<th>Term 1978-79</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident Graduate</td>
<td>$400.25</td>
</tr>
<tr>
<td>Nonresident Graduate</td>
<td>$1552.75</td>
</tr>
<tr>
<td>Foreign Graduate</td>
<td>$1399.25</td>
</tr>
</tbody>
</table>

Explanation of Fees and Expenses

Required Fees

University Registration Fee — $131 per quarter ($38 of which is for health services and may be tax deductible); $196.50 per term ($57 of which is for health services and may be tax deductible)

for students in the School of Law. 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 $100 per quarter, by students in the School of Law at $180 per term, and by all other graduate students at $120 per quarter. Used to support 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.

Nonresident Tuition — $635 per quarter, $952.50 per term, School of Law

Foreign Student Health Insurance — $31.00 per quarter, $46.50 per term, School of Law. Required of all students on nonimmigrant visas. Payment of the fee for three consecutive quarters (two terms in the School of Law) covers the student for the full academic year, including summer.

Additional Fees and Expenses

Late Registration — $25. 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 due dates) are liable for this fee.

Reinstatement — $10.

Additional Costs

Athletic Privilege Cards — $12.50, Student Football Season Ticket; $12.00, Basketball/All Sports Card. Both Optional. Permit free admission or reduced rates to most University athletic events.

Books and Supplies — Approximately $200–$300 per academic year.

Living Expenses. Room and board in living groups will range from $2,200 to $3,200 for the nine-month academic year, with an average of about $2,700. Apartment housing (rent, utilities, and food). If shared with others for nine months, will have the same range. If leased for twelve months the cost, of course, will be higher.

Entertainment and Miscellaneous Costs. A student will need to take into account laundry, cleaning, transportation, and other personal expenses which will average from $600–$800 per academic year.

Total Estimated Expenses Per School Year. The cost of attending the University varies according to individual circumstances. The following expenses are approximate costs for the nine-month academic year and should be used only as a guideline.

Estimated Student Budget, 1978-79

<table>
<thead>
<tr>
<th></th>
<th>Single Student</th>
<th>Married Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rent and Food</td>
<td>$2745</td>
<td>$4365</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>252</td>
<td>252</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Transportation, clothing, recreation, health maintenance, etc.)</td>
<td>702</td>
<td>1386</td>
</tr>
<tr>
<td>Fees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate</td>
<td>$730</td>
<td>$730</td>
</tr>
<tr>
<td>Graduate</td>
<td>$790</td>
<td>$790</td>
</tr>
<tr>
<td>Nonresident</td>
<td>$1905</td>
<td>$1905</td>
</tr>
<tr>
<td>Tuition</td>
<td>$800</td>
<td>$800</td>
</tr>
<tr>
<td>Law</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$4429</td>
<td>$6733</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>$4489</td>
<td>$6793</td>
</tr>
<tr>
<td>Graduate</td>
<td>$6334</td>
<td>$8638</td>
</tr>
<tr>
<td>Nonresident</td>
<td>$6394</td>
<td>$8698</td>
</tr>
<tr>
<td>Tuition</td>
<td>$4499</td>
<td>$8903</td>
</tr>
</tbody>
</table>

(Students with dependents require an increased budget allowance.)

Colleges and Schools

For purposes of administration and instruction, the University is divided into a number of academic and administrative subdivisions, ranging from departments, colleges, and schools to a variety of research centers and institutes. At Berkeley, there are fifteen major academic subdivisions—the Graduate Division, five colleges, and nine schools.

Colleges

Chemistry

Environmental Design

Letters and Science

Natural Resources

Business Administration

Education

Journalism

Law

Library and Information Studies

Optometry

Public Health

Public Policy, Graduate

Social Welfare

A college accepts students directly from high school or as transfers from another institution and offers undergraduate instruction, normally as a four-year program, leading to the bachelor’s degree; however, departments in all the colleges offer programs of study beyond the bachelor's degree, in conjunction with the Graduate Division. The colleges are designed to provide students with a thorough background in one or more fields of study, and to give them some acquaintance both with allied fields and
with general fields of knowledge. Although students may take some courses in another college or school, their degree requirements are determined by the dean and faculty of the college in which they are enrolled. The College of Letters and Science emphasizes the study of the general academic areas for their own sake, whereas the other colleges emphasize the study of these areas in relation to applied arts and sciences.

A school normally begins instruction at the upper division or graduate level and is designed to provide a student with training preparatory to a specific profession. The school presumes its students to have acquired before entrance some background in general academic areas. The degrees offered by the schools are accredited by statewide and national boards and associations for the various professions, and normally allow the graduating student a direct entry into the field.

Each of the colleges and schools has its own administrative officials and its own regulations for earning degrees, and since all undergraduate students at the University belong either to a college or a school they are expected to satisfy requirements for the degree on three levels: University, college or school, and field of concentration. A broad survey of the colleges and schools and their degree programs is provided in the Courses and Curricula section of this catalog. For further information, see the individual school or college announcements.

Special Studies. The Special Studies provide innovative and interdisciplinary programs of study not within the colleges and schools. Students are encouraged to avail themselves of the courses offered in Special Studies which provide credits directly applicable to a University degree. The Special Studies are established upon a network of interrelationships on the campus among colleges, schools, and departments, and, in certain cases, in conjunction with community groups, other UC campuses, and other universities.

Key to Symbols

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

Faculty Roster

1 On leave, Fall, Winter, Spring
2 On leave, Fall
3 On leave, Winter
4 On leave, Spring
5 On leave, Fall and Winter
6 On leave, Winter and Spring
7 On leave, Fall and Spring
8 Recalled to active service

Course Listings

* Not to be given, 1978–79
^ To be given if a sufficient number of students enroll
* To be given even-numbered years (1978–1979)
& To be given odd-numbered years (1979–1980)
* Approved for one year only
b Approved for two years only
c Approved for three years only