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 263 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 73, Number 11 / August 1979

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A series of administrative publications of the University of California, Berkeley, published sixteen times a year: one issue in September; two issues in October; three issues in November; two issues in December; one issue each in January, February, March, and April; two issues in May, June, and July; three issues in August; four issues in September. Published in Berkeley, California. Printed in the United States of America. 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 (please see page 263 for ordering information).
In deciding where to go to college, you may find it useful to remember that an academic degree is worth no more than the quality of the skill and experience required to earn it. While reading this catalog, try to translate the dry list of facts into a mental picture of active academic programs—think about the skill and experience required to earn a degree at the University of California, Berkeley.
The kind of experience you have here is determined by many factors, the most important of which are yourself and the faculty. You should already know yourself, so let's discuss the other factor. One significant aspect of our 1600-member faculty is shown in a recent survey of graduating seniors who looked back across four years to proclaim that the faculty was comprised of top teachers. Another measure of the faculty was provided by the vice president of the American Council on Education, "Berkeley appears to be the best balanced distinguished university in the nation."
Ten members of the faculty have been awarded Nobel Prizes—81 are members of the National Academy of Sciences—36 are members of the National Academy of Engineering—and for 15 of the past 16 years, Berkeley has won more of the prestigious Guggenheim Fellowships than any other university in the country.

Such concentrations of academic excellence tend to focus attention on the campus proper, yet much of the study and research done here is based on work done at sites around the world.
Here are a few examples...

- In Greece, discovery of a 2300-year-old arched tunnel changes architectural history.
- In Africa, newfound fossils add a million years to our span of knowledge of human evolution.

Whether the work is done in the field or on campus, it provides the basis for new ideas and approaches to problems ranging from social theory through nuclear physics to molecular biology—from environmental design through dietetics to natural resources—from the humanities to the sciences and back again.
This is the faculty who determine the quality of your academic experience here. It is not an easy one, yet it is the toughness given the mind in earning an academic degree and not the degree itself that brings rewards to those who study at a great university.
Introduction

The University of California

History. The promise of a University of California was contained in the State's constitution, drafted in Monterey in the gold rush year of 1849. California was admitted to the Union the 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 Henry J. Haight signed the Organic Act, which officially created the University of California. The University's initial site was the Oakland campus of the College of California, which a year previously had offered 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 nearly 186 academic staff members who belong to the University Extension. University Extension is the organization and 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 1/2% of their classes; to graduates of out-of-state high schools in the top 5% of their classes; or to students who plan to undertake, and, in certain cases, high school juniors and seniors.

Admission. The organization and administration of the University is entrusted, under the State Constitution, to a corporative body, The Regents of the University of California. The Constitution provides for the Regents to be appointed by the Governor for terms of twelve years; seven, including the President of the University, are to be appointed by the Student Body Presidents' Council. A constitutional amendment provides that "Regents shall be able persons broadly reflective of the economic, cultural, and social diversity of the state, including ethnic minorities and women."

The President of the University is the executive head of the University and is responsible for the overall administration of the University on such matters as appointments, promotions, and budgets. Membership includes the faculty and a limited number of administrative officers. The Senate determines conditions for admission of students and for granting of certificates and degrees. 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 educational 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 of study represented on the Berkeley campus and provides additional programs that cut across departmental lines. Each academic year, about 50,000 men and women ranging in age from the college years through post-retirement enroll in UC Berkeley Extension.

Summer Sessions. An extensive offering of regular academic credit 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 U.C. Berkeley to complete the equivalent of a full quarter's work by attending Summer Session. The center of good standing at the University or at another collegiate institution are eligible for enrollment. Equally eligible are high school graduates, qualified adult applicants of sufficient maturity and aptitude for the work they plan to undertake, and, in certain cases, high school juniors and seniors.

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 varies with the number of units taken. Introductory and advanced courses for University credit are offered, and there are also 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, 112,000). Despite its growth, the campus retains much natural beauty, with verdant glens, meadows, and orange groves. 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, photographic, design, architectural, anthropological, and archeological 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 undergraduate. 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 undergraduates. The importance of these policies cannot be overestimated.

Admission

You may obtain a University of California Undergraduate Application Packet containing all necessary forms and instructions from California high school 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, 1979 for the Winter Quarter 1980; between October 1 and 31, 1979 for the Spring Quarter,
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 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) above, or 3.77 in courses after the ninth grade, you will be eligible to enter the University regardless of your scores on standardized tests. Students with grade-point averages below 3.3 but greater than 2.77 will be admitted to the University if they achieve specified scores on the standardized test described below. (See University of California Freshman Eligibility Index).

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

You may repeat 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. Examination by standardized test scores will remain an option for the student ineligible on the basis of high school record (see below).

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. High school graduation or a certificate of proficiency is required for students who qualify for admission by examination.

University of California

Freshman Eligibility Index

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*ACT is scored in intervals of 1 point from a minimum of 1 to 35 maximum.

**SAT is scored in intervals of 10 points from a minimum of 400 to 1600 maximum.
Admission of Nonresident Applicants. The admission requirements for nonresidents differ from those for residents in that the required grade-point average is higher. For freshmen, the average is 3.4. Admissions procedures and examination requirements are the same as for California residents described above except that to be admitted by examination alone requires the same total score on the Scholastic Aptitude Test of 1,100 but a higher total score on the three Achievement Tests of 1,730 or better, with no score less than 500 on an individual Achievement Test.

For detailed information on the requirements, and admission by examination alone, consult the publication Information for Prospective Students or the Undergraduate Application Packet, obtainable from the Office of Admissions and Records, 120 Sproul Hall.

Additional Requirements for Admissions in 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 Information for Prospective Students 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 of admission 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 potential to benefit from higher education. Financial aid, counseling, tutoring, and housing aid are available under the program.

To be admitted to the EOP, you must apply to the Office of Admissions and Records of the campus you have chosen and complete a regular undergraduate application for admission. If your application is received, you will be notified of your admission status.

Special Admission Circumstances

Certain rules apply for special applicants not included above.

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

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

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

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 filing 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 request for additional transcripts or confirmation of academic work in progress.

6. Receive from the Office of Admissions and Records request for additional transcripts or confirmation of academic work in progress.

7. Return your statement of intention to register, and the Circular for New Undergraduates.

8. Return your statement of intention to register, plus nonrefundable fee of $50.

9. Receive from the Office of Admissions and Records a notification of admission, a statement of your intention to register, and the Circular for New Undergraduates.

10. Receive from the Office of Admissions and Records, just prior to the opening day of the quarter, a second registration packet consisting of: Study List, Registration Card, enrollment cards, etc.

11. File your Study List after you have planned your program of study with the aid of this catalog, the Schedule of Classes, and your assigned adviser.
General Rules and Regulations

Registration

Registration is the means by which you officially become a student at the University. It includes the payment of fees and the filing of a study list.

New and re-entering students receive information and instructions for registering by mail in advance of the quarter for which they have been admitted. The instructions include a mailing deadline which should be carefully observed. Continuing students must pick up their first set of registration forms at locations and dates indicated on bulletin board placards 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 by 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 lateness 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 $800 for the quarter or $1200 for the semester. The residence determination date is the day instruction begins at the last of the University of California campuses to open for the quarter, and for schools on the quarter system, the day instruction begins for the semester. For additional information on California residency and the nonresident tuition fee, please see Appendix.

Students from Other Countries

An applicant from another country should request the brochure, Information for Prospective Students from Other Countries, designed to answer questions about admission to the University, visas, special examinations, fees and expenses, housing, and travel. Prospective undergraduate students 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 1979-80 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-), U (unsatisfactory), 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 F 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, D, or F, plus (+) grades carry three-tenths of a grade point per unit, and minus (-) grades three-tenths of a grade point less per unit. 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. In 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>18.5</td>
</tr>
<tr>
<td>C</td>
<td>5</td>
<td>8.5</td>
</tr>
<tr>
<td>D</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>F</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 20 45 Average 2.250

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 earned 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 without a request for 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 in which the grade was assigned, and the student was notified. 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 I grade, the instructor is required to specify the reasons to the Department Chairperson and to the Office of Admissions and Records.

For students in good academic standing, 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 I grade will remain on the record until the work is made up and will be removed by repetition. However, if the original course was taken for a letter grade, no grade points will be assigned to the repeated course without the prior written 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 School may extend the period of time in which an I grade may be completed by undergraduates 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 assignment may not 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.

Note: The I grade is not physically replaced on or removed from the academic record. Completion of the work is reflected as a subsequent line entry on the record, and the units and grade points thus earned will be included in the grade-point computations at the close of the next session.

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 of IP (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 has no basis 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 to undertake letter-graded 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 as being offered only Passed/Not Passed or Satisfactory/ Unsatisfactory will be graded P/NP if undergraduates, and S/U if graduates.

A course which is required in or prerequisite to the major may be taken 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 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 class, provided that examination meets the foregoing description. The final result of the examination may be reported to the Office of Admissions and Records only as Passed or Satisfactor-
ry, 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 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 may obtain an unofficial copy of your academic record. This copy will, for students admitted after Fall Quarter 1975 and later, reflect all work undertaken on the Berkeley campus. For those students admitted prior to Fall Quarter 1975, the copy is at present partial, and will cover work undertaken Fall Quarter 1976 and later. It is anticipated that within a relatively 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 three to 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 requested at the same time. 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, through special privileges, eligibility for further registration in the University, recommendation for students for inclusion on the Honors List, and opportunity to be considered for some special honors programs. If you have an overall grade-point average of 3.5 you are accorded, through special privileges, eligibility for further registration in the University, recommendation for students for inclusion on the Honors List, and opportunity to be considered for some special honors programs. If you have an overall grade-point average of 3.5 you are accorded, through special privileges, eligibility for further registration in the University, recommendation for students for inclusion on the Honors List, and opportunity to be considered for some special honors programs.
In working for a degree, you should keep in mind the statuses 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 adviser.

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. Evidence of such proficiency is required of all undergraduates upon entrance to the University.

Students not satisfying the requirement must enroll in the Subject A Placement Examination (see English as a Second Language below) during their first quarter of residence at the University or in the 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 (CEEB)—this test must have been taken before the student enters the University;
2. Foreign students only: a score of 600 or above on the Test of English as Foreign Language (TOEFL);
3. A score of 3, 4, or 5 on the CEEB Advanced Placement Test in English;
4. A score of "Pass for Credit" on the California State University and Colleges English Equivalency Examination;
5. Completion with a grade of C or better of a Subject A Essay Examination administered by the Subject A department or the English as a Second Language program.

Students held for the requirement on the basis of a CEEB score between 599 and 450 must take the Subject A Placement Examination. Students scoring below 450 on the CEEB must enroll directly in a Subject A course. The 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 Bay Area high school seniors. On the basis of the examination, the department determines that students have satisfied the requirement or are held for its 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 satisfied the requirement (see paragraph 5 above).

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

English as a Second Language. Students whose native language is not English and who have had less than four years at an American high school fulfill the Subject A requirement 1) by demonstrating reading facility on the Subject A Placement Examination in English as a Second Language, or 2) by completing with a grade of C- or better one to three composition courses of 80 or more units each. On the basis of the Subject A (the number of courses determined by the results of the Placement Examination), followed by successful completion of the regular Subject A course. Students in these courses in successive quarters beginning with their first quarter in residence at the University.

American History and Institutions. 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 (may be taken Passed/Not Passed):
   b) Institutions Requirement: Conservation and Resource Studies 131; Political Science 1, 100, 106, 108, 110, 150, 170A, 171A, 181; Public Policy 170, 187; Sociology 120.
2. By presenting official evidence of completion of courses, taken from 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 Dwinnell 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 of English language and U.S. institutions. The examinations are based upon a reading list (three 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 Dwinnell Hall.
4. By completing the College-Level Examination Program (CLEP) Subject Exam in American History with a score of 50 or more, students may satisfy the American Institutions Requirement.
5. The American History requirement can be fulfilled by passing the Advanced Placement Test in American History with a grade of 3, 4, or 5. No advanced Placement Test currently exists in American Institutions; another option must be used to satisfy the American Institutions Requirement.
6. By mixing the above alternatives for either requirement. You may choose examinations in either or both subjects, or mix the course in either one, or submit evidence of equivalency for either one.

The requirements will be waived for foreign students who, in the course of their registration, have submitted to the Office of Admissions and Records for inspection travel documents certifying that they hold a non-immigrant visa (F student and J exchange visitor being the most common). Those who wish to verify that the waiver has been granted may call at the Office of Admissions and Records, 128 Sproul Hall, for confirmation, preferably no earlier than the close of their second quarter of attendance.

All students are advised that fulfillment of these requirements is the responsibility of the individual student, and preferably should be completed by the end of the junior year.

The Graduation Division

Graduate study embraces all study for degrees and certificates beyond the bachelor's degree—principally the master's and doctor's degrees—and is administered by the Graduate Division under the policies and regulations established by the Graduate Council of the Berke-
fied to enter the program, and selection procedures are designed to admit applicants in accordance with their relative merit and promise, for the particular program, among those at least minimally qualified. Therefore, the competition for admission is severe, and it is to the applicant's advantage to make early inquiry about the possibility of study at Berkeley.

Admission Requirements. The University requires of the applicant the following: (1) a valid degrees awarded by each of the professional colleges and schools on the Berkeley campus in recognition of a candidate's command of a comprehensive body of professional knowledge and the ability to organize and carry out investigation of significant problems in the field. (2) Academic—degrees awarded by the academic departments, and also some professional schools, in recognition of a candidate's command of a wide range of related subjects within an academic field, preparation in one or more foreign languages, and ability to pursue original research leading to a significant contribution to the ideas field of study.

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

Admission

Completed applications for admission, as well as all additional documents specified on the application form (including transcripts from each college-level institution previously attended), and an application fee of $20 (fees are subject to change), must be filed with the Graduate Admission/Fellowship Office by the established deadlines.

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

The final dates of the Graduate Division for acceptance of applications for admission for the 1980-81 academic year are: fall quarter, February 1; winter quarter, September 1, and spring quarter, November 1. The School of Law admits only for the fall term; the deadline is February 1. Under the Master Plan for Higher Education in California, there are limitations on enrollment at each public institution. Consequently each graduate program at Berkeley has a maximum enrollment that may not be exceeded. Almost invariably, this maximum is smaller than the number of persons who are at least minimally qualified to enter the program, and selection procedures are designed to admit applicants in accordance with their relative merit and promise, for the particular program, among those at least minimally qualified. Therefore, the competition for admission is severe, and it is to the applicant's advantage to make early inquiry about the possibility of study at Berkeley.

Admission Requirements. The University requires of the applicant the following: (1) a valid degrees awarded by each of the professional colleges and schools on the Berkeley campus in recognition of a candidate's command of a comprehensive body of professional knowledge and the ability to organize and carry out investigation of significant problems in the field. (2) Academic—degrees awarded by the academic departments, and also some professional schools, in recognition of a candidate's command of a wide range of related subjects within an academic field, preparation in one or more foreign languages, and ability to pursue original research leading to a significant contribution to the ideas field of study.

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

Graduate Record Examination. Applicants for graduate admission (with certain exceptions listed below) are required to take the Aptitude Test administered by the Graduate Record Examination and 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. In general, others applying from countries outside the United States need not submit GRE scores, unless their major departments require. A list of departments or groups that require the GRE of all their applicants is included in each departmental announcement and bulletin, and in the "Courses and Curricula" section of this catalog.

Graduate Admission/Fellowship Office by the established deadline date for the quarter in question.

Reactivation of Application. The Graduate Division keeps application materials on file for two years. Any person who has filed an application within the past two years but did not complete the application process, was denied admission, or was admitted but did not register, may reactivate the previous file by submitting a new application form by the established deadline date for the quarter in question.

Effective for applicants for the Fall Quarter 1979 and thereafter: If the application fee was paid at that time, it will not be necessary to pay the fee again for the first reactivation request. Thereafter, the fee will be required. A request for reconsideration (reconsideration) in another major field for the same quarter shall not constitute a reactivation of application.

Even if admitted once, a student will not automatically qualify for a later quarter. Admission cannot be deferred. After submission of a new application, along with supplementary transcripts of record covering any academic work completed since the initial application, it will be reviewed along with those of all other applicants for that quarter.

Statement of Firm Intent to Register and Failure to Register. The admission notice to new (including reactivating) graduate students contains the application to register which must be filled out and returned to the Graduate Admission Office by the date indicated therein. Only the return of the form to the Graduate Admission Office indicating a firm intent to register will reserve the allocated registration slot for the successful applicant. Applicants wishing to retain a record of the return of their firm intent to register 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, as previously described, if they wish to attend any subsequent quarter. There is 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 com-
mand 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 five times a year and registration materials are available by writing directly to TOEFL Box 899, Princeton, N.J. 08540, U.S.A. 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" 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 and by each professional school. 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) endorsing applications for candidacy for higher degrees and for qualifying examinations, (4) acting on petitions by graduate students, (5) maintaining records of all graduate students enrolled under their jurisdiction, (6) supplying information requested by the Dean of the Graduate Division regarding a student's work and progress, and (7) assisting 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 scholastic performance. The graduate advisers are deputies of the Dean of the Graduate Division and the chief representatives of the department or school in all matters related to graduate study, and their signatures are recognized as expressing official decisions. Graduate students also have individual advisers; invariably after they have been advanced to candidacy for the doctorate, and frequently in the earlier stages of their training. The individual advisers may or may not be the same as the official Graduate Advisers who are the Dean's deputies. All graduate students should keep in close touch with their individual advisers and must make official Graduate Advisers of their department, school, or group and the Dean of the Graduate Division. A student who has registered by mail and decides to withdraw must file an Application for Withdrawal for this, including a request for a formal release in the form of a Notice of Withdrawal petition. Failure to obtain such a formal release constitutes voluntary withdrawal from the graduate program and termination of intent to proceed to the degree for which admission was granted. Withdrawal petitions are available from the Petitions Desk, Office of the Dean of the Graduate Division, and are filed with the same office. During the period of absence a graduate student is exempt from all fees and is expected, in turn, to maintain no connections with the University. The student may not use University facilities (except those uses accorded the general public) or place demands on faculty time. Withdrawal requires the endorsement of the student's department, school, or group and the Dean of the Graduate Division.

Cancellation of Registration by Mail. A student who has registered by mail and decides before the first day of the beginning of the quarter not to attend (consult the Academic Calendar in this Catalog for the appropriate date), must file an Application for Withdrawal by Mail form. Once the quarter has begun, students must apply for a formal withdrawal, except as above described if it becomes necessary to discontinue studies. Application forms are available from the Petitions Desk, Office of the Dean of the Graduate Division. Please note that students who cancel their registration must also apply for a formal withdrawal.

Readmission. A student who has withdrawn must file an Application for Readmission, obtainable from the Office of Admissions and Records, and must pay a nontransferable, nonrefundable Readmission Fee of two hundred dollars ($20). This fee must accompany the Application for Readmission when first submitted or the application will not be reviewed. Approval of readmission is not automatic. A formal review of the student's petition and academic record is made by the Graduate Division and the appropriate college, school, group, or department, and the student is notified whether the petition has been approved or denied.

Standards of Scholarship and Dismissal for Academic Deficiencies. Only courses graded A, B, C (with or without plus or minus signs) or S are accepted in satisfaction of degree requirements. Courses graded below C- do not yield unit credit toward a higher degree, irrespective of the overall grade-point average. Graduate students must maintain a minimum grade-point average of 3.0 in all upper division and graduate course work undertaken in graduate standing in the University of California or its exchange programs and must follow expeditiously the academic or professional program to which they were admitted or later officially transferred. Expedient full-time study 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 or the unit requirement 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. Effective with the Fall Quarter 1979, the fee will be $50.00 per unit; 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 registered the student fills out a study list, entering on it all courses or any other graduate work (courses in the 100 or 200 series). Fellowship holders and foreign students on nonimmigrant visas must carry courses classified as lower division or graduate courses in order to satisfy the academic residence requirement for higher degrees. (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 on nonimmigrant visas must carry a full program of study leading to a higher degree. (For information on courses in the "600-series" see page 36.)

Changes in the Study List. Graduate students may file petitions to add or drop courses entered on their study lists at any time throughout the weekly day of instruction. Discontinuation of a course after this time will normally result in a grade of F. After this period, a written statement from the Graduate Adviser must be submitted to the Dean of the Graduate Division for special approval of any changes in study lists. For those who receive approval, a $5.00 fee will be assessed for late changes in the study list.

The Nature of Graduate Instruction. A graduate course is a course at an advanced level 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 capability for critical analysis, or a specialization of research interests not normally appropriate to an undergraduate major. These courses may be conducted in a number of ways: (1) as advanced lecture courses, (2) as seminars in which faculty and students present critical studies of selected problems within the subject field, (3) as independent study or reading courses, or (4) as research projects conducted under faculty supervision. The main purpose of graduate study is to attain 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 entitle a student to enroll in a graduate course. These courses assume adequate preparation at the upper division level in the subject field. (A minimum of 18 units of upper division work basic to the subject matter of the graduate course; this basic work may be pursued in more than one department). Graduate students are encouraged, therefore, to take 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 an advanced 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 or technical work.

Course Credit by Examination. A graduate student in residence may petition to receive a limited amount of course credit toward the degree by passing examinations on material covered in certain courses in lieu of taking those courses. Laboratory courses or graduate seminar 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 single subject distinctly different from the field in which the original degree was attained. A professional degree is not regarded as duplication of an academic degree.

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

Degrees for Members of the Academic Senate. A voting member of the Academic Senate...
may be recommended for a higher degree by a Senate Division of which the recommended person is not a member, provided that all the requirements of that Division have been fulfilled. No voting member may be recommended for a higher degree by that person's 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 appropriate authority that all the requirements for the degree have been met. Such appointments may be retroactive.

University Extension

Concurrent Enrollment. Concurrent courses are those taken on the Berkeley campus under the instruction of a regular member of the Berkeley faculty. Upon recommendation of the Graduate Adviser and with special approval of the Dean of the Graduate Division, a student enrolled 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. Such credit will be awarded only if the student was in graduate standing at an institution other than U.C. Berkeley when the course work was undertaken. Berkeley graduate students should enroll in the course in the normal fashion.

The Master's Degree

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

Specific regulations governing the professional master's degrees are set forth in the individual Announcements of the colleges and schools. The present section will deal primarily with the academic degree, though the rules and procedures described will be of interest to candidates in all fields.

Residence Requirement. A minimum of threequarters 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 other institutions may be counted 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 reduce the minimum residence requirement or minimum requirement of graduate-level units. Course content of the units to be transferred should be equivalent to work normally offered within the student's program of study. A letter grade of B or better in the course is required for transfer credit. Requests for degree credit for such courses are not considered until a student has completed at least one-half of the master's degree and is applying for advancement to candidacy. The student's entire record must indicate superior scholarship. Credit for graduate work completed on other campuses of the University of California may be granted in excess of 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 then only if approved by the department or group.

Amount and Distribution of Work. Students working for academic master's degrees 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 18 of the units must be in graduate courses in the major subject. Course units are not granted for the thesis.

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 advisers regarding distribution of course work among the departments. Further requirements are specified by the major department.

Advancement to Candidacy. Admission to candidacy for a master's degree is not automatic upon completion of the degree requirements. It requires a formal application to the Dean of the Graduate Division that be 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 type-written form, double-spaced on medium weight, 8 1/2 by 11 inch paper of good quality, with a minimum left hand margin of 2 inches. Consult the Degree Staff in the Office of the Dean of the Graduate Division for required brands of paper. The thesis must be unbound and without perforations. The type must be adequate for photographic reproduction. Following approval by the student's thesis committee two copies of the thesis are filed with the Dean of the Graduate Division. Further information regarding the organization and format of the thesis is available from the Degree Staff, Office of the Dean of the Graduate Division.

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

The Doctor's Degree

Instruction 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. Professional degree programs are outlined in the individual Announcements of the colleges and schools offering them. The general procedures given in this section apply primarily to the academic 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
complection 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.

Normative Time. On September 15, 1978, the Regents of the University of California approved and funded a program to establish normative times to the Ph.D. and fee offset grants for students and instructional units to reduce the average amount of time taken to complete requirements for the Ph.D., to facilitate a greater degree of continuity in Ph.D. studies, and to provide a more equitable assessment of fees for Ph.D. students advanced to candidacy. After advancement to candidacy, eligible students will receive a special grant to offset the cost of the Educational Fee.

Normative time is defined as the elapsed calendar time in years (calculated to the nearest third) that under normal circumstances would be needed to complete all requirements for the Ph.D., assuming that the student is engaged in full-time, uninterrupted study, and is making desirable progress toward the degree. The typical normative time for the majority of programs has been in the vicinity of five years with an additional one-year period of approved nonregistration.

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

1. Upon entry to a Berkeley Ph.D. program, a student proceeds with his/her course work in the normal fashion until all requirements for advancement to candidacy have been completed. During this period the student is registered continuously, except for quarters on approved withdrawn status as appropriate, and is liable for payment of all fees and applicable tuition.

2. Once the student has been advanced to candidacy for the Ph.D., he/she becomes eligible in subsequent quarters for a “fee offset grant” equal in amount to the Educational Fee (currently $120 per quarter).

3. The grant is awarded to the student quarterly until accrued time in graduate status exceeds the normative time set for that program of study. Accrued time is the number of quarters since first registration, less a maximum of three quarters of approved withdrawn status, and any other adjustments that may be approved by the Dean of the Graduate Division.

4. During the entire period of study, a Ph.D. student is required to be in continuous registration, except when on approved withdrawn status, or during the quarter when the Filing Fee is used in lieu of registration.

Students will be informed of their eligibility and the number of quarters of fee offset grant support available to them when they are advanced to candidacy. A student must attain formal candidacy for the Ph.D. prior to the first day of instruction of the quarter for which the first grant is awarded. In addition, a yearly application for renewal of the grant will be required from each student in the program. The deadline for this application will be June 1.
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 waiver 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. Bjeldanes, Chair
c/o Department of Nutritional Sciences
115 Morgan Hall

Group in Ancient History and Archaeology
Professor Leonard H. Leske, Chair
c/o Department of Near Eastern Studies
1229 Dwinelle Hall

Group in Asian Studies
Professor Charles A. Johnson, Chair
c/o Department of Political Science
210 Barrows Hall

Group in Biophysics, Biobiochemistry, and Medical Physics
Professor Cornelius A. Tobias, Chair
c/o Donner Laboratory

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

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

Group in Comparative Biochemistry
Professor J. A. Baseham, Chair
c/o Laboratory of Chemical Biodynamics

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

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

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

Group in Energy and Resources
Professor C. Bartlett McGuire, Chair
c/o Graduate School of Public Policy
2607 Hearst Avenue

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

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

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

Group in Food Science
Professor Leonard F. Bjeldanes, Chair
c/o Department of Nutritional Sciences
119 Morgan Hall

Group in Genetics
Professor Seymour Fogel, Chair
c/o Department of Genetics
345 Mulford Hall

Health and Medical Sciences
Professor Sheldon Margen, Chair
c/o Department of Nutritional Sciences
119 Morgan Hall

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

Sponsoring Committee for Latin American 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, Chair
c/o Department of Statistics
367 Evans Hall

Committee on Medieval Studies
Professor Daniel Meila, Chair
c/o Department of Rhetoric
2213 Dwinelle Hall

Group in Microbiology
Dr. James L. Hardy, Chair
c/o School of Public Health
19 Warren Hall

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

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

Group in Parasitology
Professor Deane P. Furman, Chair
c/o Department of Entomological Sciences
119 Morgan Hall

Sponsoring Committee for Russian and East European Studies
Professor Reginald E. Zelnik, Chair
c/o Center for Slavic and East European Studies
272 Stephens Hall

Group in Science/Mathematics Education
Professor Robert Karplus, Chair
c/o Department of Physics
366 LeConte Hall

Group in Soil Science
Professor Harvey E. Doner, Chair
c/o Department of Soils and Plant Nutrition
108 Hilgard Hall

Group in Wood Science and Technology
Professor Fred E. Dickinson, Chair
c/o Forest Products Laboratory
478 Richmond Field Station

Individual Doctoral Programs. To allow the student an approach to a field that, in its breadth, falls between that of the department and the interdisciplinary group, the Graduate Division has encouraged the informal establishment of ad hoc programs leading to the Ph.D. degree. Only students who have completed some graduate study here and 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 Plan A of the 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. The candidate must fulfill the foreign language requirement for the Ph.D. before advancement to candidacy and preferably before admission to the Qualifying Examinations. Students must consult the language departments to determine what languages are required for the degree. Each graduate program may have somewhat different foreign language requirements, not only with respect to the number of languages required but also with respect to the number of courses. 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) concerned, after 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 policies general policies respecting such sequences, including time limits beyond which they no longer carry credit, and authorizes 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 a command is tested under the direction of the Department.

In the above options the terms “language” and “languages” refer to any language certified to the Graduate Council by the department 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 Council. The whole committee, members of the Academic Senate, and guests of equivalent rank from other institutions, the dissertation serves (1) to make certain that Ph.D. candidates, having presented and defended a dissertation, have the right to be awarded the degree. Three members of the committee, members of the Academic Senate, and guests of equivalent rank from other institutions, constitute the minimum requirements for the degree. The dissertation, the product of independent investigation under faculty supervision, must be submitted to the committee in charge (see next page), and must receive both its approval and the approval of the Dean of the Graduate Council. The dissertation is the most important requirement for the doctoral program; the degree is in no case granted for completion of course work only, no matter how extensive.

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

Plan A: The Administrative Committee of the Graduate Council appoints a five-member committee which determines whether the candidate has met the requirements for the degree. Three members of this committee will be appointed by the Graduate Council. The student must be registered in the quarter the examinations are taken. No previous deficiencies in training must have been remedied, 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(s) must have been fulfilled.

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

After the dissertation has been approved by the candidate’s committee, the original is filed with the Dean of the Graduate Division on a date specified by that office. Along with the dissertation, an abstract of it in duplicate not to exceed 600 words, with one copy signed by the dissertation chairperson, is also filed with the Graduate Division. All of the procedures and regulations described above, and in the preceding section on master’s degrees, constitute the minimum requirements for the higher degrees, as set by the Graduate Division. Each academic department may adopt additional requirements, as approved by the Dean of the Graduate Division and the Graduate Council, according to the demands of a candidate’s field of study. Programs using Plan A and Plan B are listed below.

Plan A

Agricultural Chemistry
Agricultural and Resource Economics
Ancient History and Archaeology
Anthropology
Applied Mathematics
Architecture
Astronomy
Bacteriology
Biology
Botany
City and Regional Planning
Classics
Comparative Literature
Computer Science
Demography
Dramatic Art
Economics
Endocrinology
Engineering
English
Environmental Planning
French
Genetics
Geography
German
Hispanic Literatures
History
Immunology
Italian
Latin American Studies

Doctoral Dissertation. The format of the doctoral dissertation is similar to that outlined in the last section for the master’s thesis. Further information is available from the Dean of the Graduate Division.

The dissertation, the product of independent investigation under faculty supervision, must be submitted to the committee in charge (see next page), and must receive both its approval and the approval of the Dean of the Graduate Council. The dissertation is the most important requirement for the doctoral program; the degree is in no case granted for completion of course work only, no matter how extensive.

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

Plan A: The Administrative Committee of the Graduate Council appoints a five-member committee which determines whether the candidate has met the requirements for the degree. Three members of the committee should be from a department other than that of the student’s major subject, guide the candidate in research and just before the final oral examination. This committee may require any necessary conferences for elucidation of the subject treated in the dissertation. After presentation of the dissertation, but before final action is taken, the committee may, if deemed necessary, require the candidate to defend the dissertation in a formal oral examination.

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

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

Plan A: The Administrative Committee of the Graduate Council appoints a five-member committee which determines whether the candidate has met the requirements for the degree. Three members of the committee should be from a department other than that of the student’s major subject, guide the candidate in research and just before the final oral examination. This committee may require any necessary conferences for elucidation of the subject treated in the dissertation. After presentation of the dissertation, but before final action is taken, the committee may, if deemed necessary, require the candidate to defend the dissertation in a formal oral examination.

Plan B: The Administrative Committee of the Graduate Council appoints a committee of three members, one of whom must be from a department other than that of the student’s major subject, to guide the candidate in research and just before the final oral examination. This committee may require any necessary conferences for elucidation of the subject treated in the dissertation. After presentation of the dissertation, but before final action is taken, the committee may, if deemed necessary, require the candidate to defend the dissertation in a formal oral examination.
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 in one of the languages taught at the Defense Language Institute of the Presidio of Monterey. Application forms may be obtained from the Secretary, Language Training Advisory Committee, Merrill College, University of California, Santa Cruz, CA 95060.

Intercampus Exchange Program. A graduate student registered on any campus of the University may go to another campus of the University as an Intercampus Exchange Graduate Student with the approval of the Dean of the Graduate Division on the student's home campus. To avoid penalties for late filing of the study list, the application form should be completed and filed 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 selected by the exchange student are available to meet the student's needs. This privilege will be granted where evidence of serious and high-quality scholarship is available.

Although the Intercampus Exchange Student registers and pays fees on the home campus, such a student has library, infirmary, and other student privileges on the host campus. The exchange student should make arrangements with the Dean of the Graduate Division and 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 for Graduate Students may be obtained from the Dean of the Graduate Division on the student's home campus. To avoid penalties for late filing of the study list, the application form should be completed and filed at least three weeks before the opening of the quarter of enrollment in the program. The extent and quality of previous academic work, the evidence of ability in research or other work, the promise of productive scholarship.

Financial Aid and Employment Opportunities for Graduate Students

Fellowships and Graduate Scholarships. Awards at Berkeley carry varying stipends. Such stipends vary annually, depending upon the number of graduate students who apply each year. Stipends are available from annual donations from educational foundations, industry, government, and individual benefactors.

Fellowship Application. The fellowship application is combined with the application for admission and for financial aid. The fellowship application deadline for the 1980-81 competition is December 1, 1979. Applications for all the fellowship and graduate scholarship award programs mentioned here are considered only once a year, and are for the fall quarter only, beginning with the next fall quarter. 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 will be considered for admission and for consideration for a fellowship or a graduate scholarship by completing the combined application for admission/Fellowship/Financial Aid and filing it by December 1, 1979.

Graduate students who have been admitted for the fall quarter may apply for a fellowship or graduate scholarship by completing the fellowship application form. Fellowships are awarded in the Graduate Division, Room 1, California Hall.

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 university-wide Education Abroad Program in the United States and the Canadian Association of Graduate Schools require that anyone who wishes to do so from the university that first made the appointment.

Announcement of Awards. Awards are announced by April 1, and must be accepted or refused, in writing, by April 15. The acceptance of a fellowship or graduate scholarship carries with it the presumption that the student will devote full time to graduate study and research at the University of California. Institutions which are members of the Council of Graduate Schools in the United States or the Canadian Association of Graduate Schools require that anyone who resigns an accepted appointment after April 15 must, in order to become eligible to fill a vacancy in the same institution, receive the 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 graduate students may 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.
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 limited. Persons supplementing fellowships without such approval may have loss of the fellowship and a requirement to repay the fellowship funds disbursed to them.

Honoraty Traveling Fellowships. Honoraty 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 honoraty traveling fellowships must be received by the same date as for other fellowships, December 1, 1979.

Foreign Language and Area Studies Fellowships. A number of 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 (2) are fluent in two foreign languages or related area studies in an institution of higher education or an elementary or secondary school in the United States, or preparing for employment in a governmental, private professional, or technical capacity which would contribute to the welfare of the nation. In order to be considered for these awards, students apply through the regular University fellowship competition.

Waiver of the Nonresident Tuition Fee. Certain graduate schools have established interdisciplinary group or fields. These are awarded 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 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.

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 and/or graduate work.

Teaching Assistantships. Many departments make teaching assistantships available to outstanding graduate students, providing them a salary of $986.00 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 student's academic advises or has formally withdrawn from a graduate 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 receive 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 admitted 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 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 be employed by a department or non-student who meets the basic qualifications of having a master's degree or equivalent training and at least one year of teaching experience (including that of a teaching fellowship or assistantship) in or outside of the University. A graduate student must register full-time to hold this title unless he/she has completed the degree objective or has formally withdrawn from a graduate program. 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 application is made directly to the School of Law.

Agricultural Chemistry, M.S., Ph.D.
Agricultural and Resource Economics, M.S., Ph.D.
Anatomy, M.A., * Ph.D.
Ancient History and Archaeology, M.A., Ph.D.
Anthropology, M.A., * Ph.D.
Applied Mathematics, Ph.D.
Architecture, M.Arch., Ph.D.
Art, M.A., M.F.A.
Asian Studies, M.A., Ph.D. † M.A. program emphases: East Asian, Southeast Asian, South Asian, Astronomy, M.A., * Ph.D.
Bacteriology, M.A., * Ph.D.
Biochemistry, M.A., Ph.D.
Biophysics, M.A., Ph.D.
Biology, M.Biop. †
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.
Comparative Pathology, M.A., Ph.D.
Comparative Pathology, M.A., Ph.D.
Comparative Pathology, M.A., 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.
Economics, M.A., M.A.T., Ph.D., Ed.D.
Economics (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.

†Indicates established interdisciplinary group or field.

*Students are not admitted to work for the M.A. degree, although it may be awarded to students pursuing work toward the Ph.D. degree after fulfillment of the appropriate requirements.
Indicates established interdisciplinary group or field.

* Students are not admitted to work for the M.A. degree, although it may be awarded to students pursuing work toward the Ph.D. degree after fulfillment of the appropriate requirements.

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Entomology, M.S., Ph.D.

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

Environmental Planning, Ph.D.

Epidemiology, M.S., Ph.D. †

Folklore, M.A. †

Food Science, M.S. †

Forestry, M.F.

French, M.A., Ph.D.

Genetics, M.S., Ph.D.

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

Geography, M.A., Ph.D.

Geology, M.A., Ph.D.

Geophysics, M.A., Ph.D.

German, M.A., Ph.D.

Greek, M.A.

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

Hispanic Literatures, Ph.D.

History, M.A., * Ph.D.

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

Immunology, M.A., * Ph.D.

Italian, M.A., Ph.D.

Journalism, M.J.

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

Landscape Architecture, M.L.A.

Latin, M.A.

Latin-American Studies, M.A., Ph.D. †

Law, J.D., LL.M., J.S.D.

Librarianship, M.L.S, Ph.D., D.L.S.

Linguistics, M.A., Ph.D.

Logic and the Methodology of Science, Ph.D. †

Mathematics, M.A., Ph.D.

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

Medical Physics, Ph.D. †

Microbiology, M.A., * Ph.D. †

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

Music, M.A., Ph.D.

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

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

Neurobiology, M.A., Ph.D. †

Nutrition, M.S., Ph.D. †

Oriental Languages, M.A., Ph.D.

Paleontology, M.A., Ph.D.

Parasitology, M.S., Ph.D. †

Philosophy, M.A., * Ph.D.

Physical Education, M.A.

Physics, M.A., Ph.D.

Physiological Optics, M.S., Ph.D. †

Physiology, M.A., * Ph.D.

Plant Pathology, M.S., Ph.D.

Plant Physiology, M.S., Ph.D. †

Political Science, M.A., Ph.D.

Psychology, M.A., * Ph.D.

Public Health, M.P.H., Dr.P.H.

Public Policy, M.P.P., Ph.D.

Range Management, M.S. †

Rhetoric, M.A., Ph.D.

Romance Languages and Literatures, Ph.D. †

Emphases: French, Italian, Spanish

Romance Philology, Ph.D. †

Scandinavian Languages and Literatures, M.A., Ph.D.

Science/Mathematics Education, Ph.D. †

Slavic Languages and Literatures, M.A., Ph.D.

Social Welfare, M.S.W., D.S.W.

Sociology, M.A., * Ph.D.

Soil Science, M.S., Ph.D. †

South and Southeast Asian Studies, M.A., Ph.D. M.A. program emphases: Sanskrit, Modern Indo-Aryan; Hindi and Urdu; South Asian Civilization Ph.D. program emphases: Sanskrit, Modern Indo-Aryan; Hindi and Urdu; South Asian Archaeology Spanish, M.A.

Statistics, M.A., Ph.D.

Wildland Resource Science M.S., Ph.D.

Wood Science and Technology, M.S., Ph.D. †

Zoology, M.A., Ph.D.

Certificate in Russian and East European Studies. Students who have had substantial training in the Russian and East European Area in at least two departments and have had 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 after receipt 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, and German. At the present time, it is limited to the four 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 one 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 in Medical Anthropology. This program leads to the Ph.D. in Medical Anthropology. Admission to the program is obtained by making application to 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 on the Berkeley campus and to the Graduate Theological Union. Special Education—a joint doctoral program in special education leading to either the Ph.D. degree or the Ed.D. degree is offered by the Berkeley campus and San Francisco State University. The program is interdisciplinary, including clinical experience as well as preparation in depth in the behavioral sciences and in statistics and research methods. For application material and additional information, write to: Department of Education, San Francisco State University, 1600 Holloway Avenue, San Francisco, CA 94132. Genetics—a joint doctoral program in genetics leading to the Ph.D. degree is offered by the University at Berkeley and San Diego State University. For application material and additional information, write to: Professor 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.
tropics may be assisted by the Associates in Tropical Biogeography who among other objectives have that of serving as an advisory committee to the Dean of the Graduate Division. Please see listing under Biology 250 for more information.

**Teaching Credentials.** Work leading to the Multiple Subject or Single Subject Teaching Credentials is given on the Berkeley campus. For details, please consult the Announcement of the School of Education.

**Accommodation of Postdoctoral Fellows and Visiting Scholars**

A prospective fellow or scholar should communicate with the chairperson of the department, school, or research unit with which affiliation is desired to determine whether the facilities required are available and whether eligibility requirements can be 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 or on leave from another institution of higher education, candidates for a graduate degree, or employees of any University of California campus. Foreign fellows or scholars should communicate with the Advisers to Foreign Students and Scholars Office, International House, to determine that they hold the proper visa to assume an appointment.

**Services and Facilities**

This section offers a general outline of the services and facilities available on the Berkeley campus. Services include the Student Health Service, 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, gym-
Services

Student Health Service. The Student Health Service provides educational and preventive services that are designed to support the good health of students. Most of the routinely needed 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 outpatients 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 emergencies can be charged fee-for-service. Students should bring appropriate information about any insurance coverage they have when coming to campus. Full details about SHS insurance and information for student dependents are available in About Health Insurance and from the Appointments and Information Office, Room 104 Cowell Hospital.

The Student Health Service is located in Cowell Memorial Hospital on the east edge of the campus. Appointments may be made by phoning 642-5012 or by dropping by Room 104, Cowell Hospital. Information is available at the same location.

Since services and insurance information may change from year to year, it is important that students obtain copies of The Well Body Student Health Manual, All About Health Insurance, and Your Guide to Using the Student Health Service for current information.

The registration fee supported services do not include responsibility for ongoing care for chronic medical problems or for continuing care of problems diagnosed prior to registration at the University. Injuries sustained in the course of employment may be made by phoning 642-5012 or by dropping by Room 104, Cowell Hospital. Information is available at the same location.

Summer services and charges may be different. Students who are registered for summer session should consult either the Summer Sessions Bulletin or the SHS Appointments and Information Office for details. Continuing students who are not registered for summer session but who wish services will be charged fee-for-service. For additional information, consult the Appointments and Information Office, Room 104, Cowell Hospital or phone 642-5012.

Financial Aid. The Office of Financial Aid is located at 201 Sproul Hall. By visiting the office at any time to discuss matters of concern in any area of personal or campus life. Emphasis is on problems of living rather than "mental illness." An appointment can usually be arranged within a few days after a request, and students may utilize the service (once or twice or more) in individual, group or couple sessions. Information communicated during meetings in Psychology is held in professional confidence.

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

Student Learning Center and EOP/Affirmative Action Counseling. Located in Building T-5, the Counseling Center is available to regularly enrolled students who wish to talk with professional staff about scholastic performance, choice of a major, personal adjustment, assessment of problems diagnosed prior to registration at the University. Injuries sustained in the course of employment may be made by phoning 642-5012 or by dropping by Room 104, Cowell Hospital. Information is available at the same location.

Student Learning Center and EOP/Affirmative Action Counseling. Located in Building T-5, the Counseling Center is available to regularly enrolled students who wish to talk with professional staff about scholastic performance, choice of a major, personal adjustment, assessment of interests and aptitudes, or exploring long-range career opportunities. Group counseling in social skills, personal problems, test anxiety, vocational exploration or decision making, weight problems, and graduate oral and thesis anxiety problems is also available. Psychologically and aptitude testing are provided as part of the counseling process. Information provided between students and counselors are treated confidentially.

The Counseling Center maintains a library of reference materials on occupations, professions, career opportunities, and a comprehensive collection of college catalogs and directories of colleges, professional schools, and training programs. Students may use these reference materials even if not seeking counseling services.

Special testing for admission to graduate and undergraduate programs (except ETS and Psych. Corp.) is administered without cost.

Psychiatry (83 Cowell Hospital). Students may have an appointment with a staff member at any time to discuss matters of concern in any
helps students to realize their potential and achieve academic success at Berkeley. Counselors assist students with various problems that can affect academic performance, e.g., housing, financial aid, and personal concerns. The Ombudspersons Office is located in Room 220, Building T-8, 642-7224.

Special programs offered through EOF include: (1) the Summer Bridge Program, offered during the Summer Session to new EOF and Affirmative Action students to orient them to the University; (2) the Student Involvement Program, designed to aid new students in their social and personal adjustment to the University (new student orientation continues as long as they are major or by academic interests); and (3) Peer Advising Services, which are available to assist EOF and Affirmative Action students with peer counseling, registration, course selection, and other informational matters.

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 pose or feel you have been treated unfairly in a matter affecting your academic status, there are two ombudspersons to help you effect a satisfactory solution. These ombudspersons (located in Sproul Hall) 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 regulations. Located at 3250 Championships Hall, they may also be reached by telephone at 642-5754.

Office of Student Activities and Programs. Located at 103 Sproul Hall, this office works closely with students and staff in their initiation, planning, and execution of activities, programs, and events to meet the desires and needs of students and the University community. Participation in student activities can assist in the development of leadership ability, responsibility, and personal growth and can give opportunities to develop close friendships and to establish open communication on a large campus. Sponsored groups include honor societies, student service organizations, fraternities, and sororities. Assistance is given in registering student groups for their use of facilities, in dissemination of information regarding campus rules and regulations, and in administration and coordination of student musical activities (e.g., Marching Band, Jazz Ensembles, Choral division).

Physically Disabled Students Program. Located at 2515 Channing Way, Berkeley, telephone 642-0518, this office offers services to students with diverse disabilities, e.g., blind, quadriplegics, cerebral palsied, etc., either permanent or temporary. These services include assistance in locating housing, in pre-enrollment, orientation to campus and community, supplying keys to elevators and to study rooms, locating readers and teachers, and help in housing and financial problems.

Fraternities and Sororities. Membership in a fraternity or sorority is by invitation after a period of "rushing." If you are interested, apply through the Interfraternity Council for men, or through the Panhellenic Association for women, located at 224 Sproul Hall; each will supply information and counsel to persons interested in this experience in Berkeley. It offers a wide range of assistance services in such areas as financial aid, housing, financial aid, and personal concerns. If you are a veteran, or a veteran's dependent, you may secure the appropriate forms from the Veterans Administration Regional Office; 211 Indian Street, Berkeley, CA 94720; telephone number (area code 415) 642-1827.

Veterans Affairs. 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 from the Veterans Administration Regional Office; 211 Main Street, San Francisco, CA 94108. Information about application deadline dates is contained in the Veterans Affairs publication available upon request to 120 Sproul Hall.
Research Officers Training Corps. The University of California, as a land-grant institution, established by the Morrill Act of 1862, offers courses and programs in military training. This training is voluntary, and affords young people the opportunity for a commission as an officer in the Army, Marine Corps, Navy, or Air Force while completing their college education. Reserve Officer Training Corps (ROTC) courses are offered in three departments: Aerospace Studies (Air Force), Military Science (Army), and Naval Science (Navy and Marine Corps). The programs carry a monthly stipend in addition to tuition for up to two years, and additional financial aids are available to qualified students. Individual programs are described under Military Officers’ Education Program.

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 Moffitt Undergraduate Library, 21 branch libraries, and numerous special libraries. The combined holdings of the libraries total more than 5,000,000 volumes, 97,000 current serial publications, 108,000 pamphlets, 925,000 microform items, 264,000 maps, and 35,000 sound recordings. A student is entitled to use the libraries upon presentation of his/her registration card. However, borrowing privileges and access to the collections vary from unit to unit. For more information about the campus library system, please inquire at the General Reference Desk in the Main Library or at the Reference Desk in the Moffitt Undergraduate Library.

The Bancroft Library. Located at the east end of UC Berkeley and Stanford University provide interlibrary services to faculty and graduate students. Together the two libraries have over 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 Saturday at 10:30 AM and 1:15 PM and 3:15 PM. Reservations are necessary and can be obtained from the Circulation Department Service Desk in the Main Library or by telephone (642-3403).

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 photography are located in the Main Library. In addition to the bibliographical aids to research offered by the General Reference Service, special service or specialized reference assistance is given by the Documents Department, Art History/Classics, Humanities Graduate Service, Memorial Library, Music, Optometry, Physics, Public Health, Social Sciences and Social Welfare.

Special Libraries. Among the most important Special Libraries are those of the Center for Chinese Studies, the Giannini Foundation of Agricultural Research, 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 on the second floor of the University Library. The laboratory has listening positions for 180 or more students at one time plus videocassette viewing positions 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 scheduled for languages with large enrollments, but random listening is encouraged to the extent that facilities permit. Some of the popular language lesson series are available in a lending collection. Research facilities 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 Language Laboratory.

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 facilities. Except for the summer months, when students are required to purchase a gym privilege card, these facilities can be used by registered University students free of charge. Hours during which facilities are available for recreation differ in the gymnasium. Interested individuals should contact the Intramural Sports and Recreation Office in Room 193 Harmon Gymnasium or call 642-3091.

A wide variety of intramural, extramural, intercollegiate, and recreational athletic programs and sports clubs are offered by the Department of Men’s Intramural Athletics, Department of Women’s Intramural Athletics, and Department of Intramural Sports and Recreation.

The Department of Physical Education offers intramural courses; opportunities in all varieties of sports, dance, and gymnastic activities and to maintain or develop physical fitness. All classes are open to both men and women. For more information refer to L & S, Physical Education.
and seven remote job-entry stations, UNIX time-sharing systems on five PDP 11/70’s (two are linked to the 6400), two PDP 11/34’s, an IBM 3031 for campus administrative use, a DEC-2040, a number of graphics devices, including 2 Tektronix 4052 terminals and also "one-on-one" personal computers (a Tektronix 4051 and an IBM 5100), and remote job entry extensions to U.C. San Francisco and U.C.L.A. Operations also assists users subscribe even more advanced computer jobs and use of unit record equipment. Systems Support maintains computer system software including operating systems, database management systems and computer 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, photocopying, 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 the cyclotron—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 Physics, Nuclear Science, Chemistry, Physics, Medical Sciences, Environmental Sciences, Earth Sciences, Energy and Environmental Sciences; Materials and Molecular Research; 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 nuclear physics; astrophysics; materials research; accelerator design; nuclear medicine diagnostics and treatment; basic biological processes in plants and animals; environmental protection; and safety research 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 SuperHILAC, 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 hold staff appointments 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 other 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 of students to scientific investigation and new technology. A school visit program brings over 8,000 children to the Hall during the academic year, and after-school classes are offered in physics, 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 related to the Hall's mission. The Hall is open seven days a week from 10 AM to 5 PM, 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. 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 its 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 nations abroad. Teacher training workshops actively involve teachers in curriculum development, assisting them to acquire more confidence and competence in science and mathematics teaching.

The Hall is open seven days a week from 10 AM to 5 PM, 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.

The Museum annually offers approximately 15 temporary exhibitions. Some are nationally-circulating shows; others originate at the Museum. Free or inexpensive brochures accompany most exhibitions, and hundreds of thousands of people visit the art in an exhibition or designed specially by the artist for the Museum showing are distributed free of charge. In addition, the Museum houses a permanent collection of American 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 gallery to visitors.

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 museum experience by assisting in curatorial work. This work can take
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 and study in other Museum areas or are selected for demonstrations in classrooms. Exhibits are installed for class assignments, discussion, and individual study in the halls and galleries. 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 1890'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 many collections are grown outdoors 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. 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 pygmy 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 to the public that includes docent conducted tours of the various plant collections. Group tours may be arranged for a nominal charge by phoning 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 student organization for student government. The office of the Executive Director is located in 211 Eshleman Hall. This nonprofit organization, through its student-elected Senate, has responsibilities 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 vote and to serve the campus as you feel this will serve you capably and artfully. Graduate students also elect departmental representatives to the Graduate Assembly, which concerns itself with student matters on campus. 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, opera, and dance 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 universitywide 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, student representation, 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 student group activities is available through the Assembly's Projects and Services program. The Assembly invites graduate students to use the Commons Lounge in 442 Stephens Hall; Assembly offices are located in the Pelican Building, 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 initiated volunteer work of any type, the CPO provides orientation programs; files and information on the various projects; administered by CPO; a small foundation may also be used to contact for proposal writing. The CPO also works with various campus and outside agencies that provide similar services. The CPO provides funding 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, student representation, 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 student group activities is available through the Assembly's Projects and Services program. The Assembly invites graduate students to use the Commons Lounge in 442 Stephens Hall; Assembly offices are located in the Pelican Building, 642-2175 and 642-2307.
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 exhibitions, cabarets, drama, movies, music and art festivals, and special presentations, including 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. Except where noted otherwise, all student publications are located in Eshleman Hall. Examples are:

- **Primer** — a quarterly book which evaluates specific instructors and undergraduate courses in particular, and departments and educational programs in general. Located in 18 Eshleman Hall, Primer is designed to collect, evaluate, and disseminate information regarding instructors and courses that may be used by undergraduates in their choosing of course curricula.

- **the Pelican** — the campus humor magazine.

- **California Engineer** — a magazine of engineering and scientific topics, for both technical and general interests. Located at 9 North Gate Hall.

- **Berkeley Poetry Review** — a collection of student poetry published quarterly.

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

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

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

- **Camera Obscura** — a film journal written by students.

- **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 the University community 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 University Box Office in the Student Union. For information, or to make telephone reservations, call 642-9988.
  - **Music** — a large selection of student groups, including the Student Concert Chorale, Student Chamber Singers, Octet, decibelles, Jazz Ensembles, 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, open 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, designing, 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 dance and production.

- **Debate** — Varsity Debate and Individual events, open to both veterans and novices, constitute the Forensics Program of the Berkeley campus. For additional information, contact the Office of Student Activities and Programs, 103 Sproul Hall.

For information about other campus events, please consult the Information Desk in the Student Union.

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

Academic and professional societies, including clubs organized by many of the schools and departments, as well as national professional fraternities, provide students with an opportunity for seminars, discussions, lectures, tutoring services (both giving and receiving), and communication with members of an academic or professional field. Honorary academic societies are open to students of outstanding 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 activity on campus, there are more than 35 churches and student religious clubs located within a few blocks of the campus. For additional information, contact the Office of Student Activities and Programs, 103 Sproul Hall.

**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 provides workshops and individual counseling for personal, academic, and vocational problems and 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 departments and organized research units. In some instances, special departmental laboratories have been established to provide essential services to instruction and research projects.

Organized research units are established and administered separately from the teaching departments. These units are designed to be interdisciplinary in nature and organized around the work of a group of faculty and graduate students whose research interests are more general in nature than can easily be encompassed in a single discipline. While the organized research unit aims primarily to support the research of faculty and to assist in graduate student training, public service and in some instances a 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. When a particular unit was established, these 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 in Management

**College of Chemistry**
Laboratory of Chemical Biodynamics

**College of Engineering**
Earthquake Engineering Research Center
Electronics Research Laboratory
Operations Research Center
Sanitary Engineering Research Laboratory
Seawater Conversion Laboratory
Institute of Transportation Studies

**College of Environmental Design**
Center for Planning and Development Research

Graduate Division
Boedeke Marine Laboratory
Institute of Business and Economic Research
Institute of East Asian Studies
Center for Chinese Studies
Center for Japanese and Korean Studies
Center for Studies in Higher Education
Institute of Human Development
Institute of Industrial Relations
Institute of International 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

**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 Governmental Studies
Jepson Library
Institute of Human Learning
Lowie Museum of Anthropology
Center for Pure and Applied Mathematics
Museum of Paleontology
Institute of Radio Astronomy
Research and Development Laboratory of Radio Astronomy
Seismographic Stations
Museum of Vertebrate Zoology
Virrus Laboratory
White Mountain Research Station

**College of Natural Resources**
Agricultural Experiment Station
Giannini 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
Biology and Medicine Division (Donner Laboratory)
Chemical Dynamics Division (Laboratory of Chemical Biodynamics)
Earth Sciences Division
Energy and Environment Division
Materials and Molecular Research Division
National Resource for Computation in Chemistry Division
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.

**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, design, 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 campuses, and the general public.

The publishing program is characterized more by the 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 71,000 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 continued welfare of the University and its student body. The Association administers the Alumni Scholarship program, which annually awards more than $125,000 to some 800 deserving undergraduates. (The funds are donated by individual alumni and by the University’s Board of Regents and are channelled through the UC Berkeley Foundation.) The Association also sponsors a series of career planning and development programs, the annual Career Fair and Health Sciences Fair, and maintains a file of Career Information Aides who are available for individual consultations 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 Library 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 University community. Teaching Awards for faculty are also sponsored by the Association. The alumni records department is the official campus office maintaining address information for 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 your alumni and club programs, alumni events on Charter Day and Commencement, and special activities is available at the Association’s campus headquarters, Alumni House, where students and alumni are always welcome.

**Study Abroad for Undergraduate Students.** You may choose to study abroad, with the University of California credit while studying abroad. The Universitywide Education Abroad Program has study centers at the following universities:

- **Africa**
  - University College, Nairobi
- **Asia**
  - Chinese University of Hong Kong
  - International Christian University, Tokyo, Japan
- **Central America**
  - National Autonomous University of Mexico, Mexico City
- **Europe**
  - Universities in France: Bordeaux, Grenoble, Marseilles, Montpellier, Paris (Film, History, Literature), Pau-Parlis, Poitiers
  - Georg-August University, Gottingen, Germany
  - University of Dublin, Trinity College, Ireland (a part of The United Kingdom and Ireland program)
  - Universities in Italy: Bologna, Florence, Padua, Rome
  - University of Venice, Italy: Academy of Fine Arts, Venice; G.B. Martini Music Conservatory, Bologna
  - University of Bergen, Norway
  - Universities in Spain: Barcelona, Madrid
  - University of Lund, Sweden
  - State University of Leningrad, USSR
- **Middle East**
  - Universities in Israel: Haifa, Jerusalem (Hebrew University)
  - American University of Cairo, Egypt
- **South America**
  - University of Sao Paulo, Brazil
  - Pontifical Catholic University of Peru 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.R.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 South America. 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, 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 students’ responsibility to obtain the approval of their department or college for their study plans before departure. Undergraduate programs are intended primarily for juniors, but seniors may also participate. However, seniors should consult their academic advisor regarding 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 study (minimum 3 semesters of study in the country). The students are subject to the award-winning publication, California Monthly; free UC library and language laboratory privileges; access to the Library 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 University community. Teaching Awards for faculty are also sponsored by the Association. The alumni records department is the official campus office maintaining address information for 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 your alumni and club programs, alumni events on Charter Day and Commencement, and special activities is available at the Association’s campus headquarters, Alumni House, where students and alumni are always welcome.
or by telephoning: Emergency 9-911 from campus extensions or 911 from non-campus extensions, Business (64)2-6760. The emergency number should be utilized to report any occurrence requiring immediate response, including fires or ambulance service. Other services are also available from the Police Department, such as providing assistance and counseling in crime prevention and personal protection, (64)2-3185; Rape Prevention Education and Training (64)2-7202; Operation Identification, engraving of personal property to protect against theft; Bicycle Bureau, located in the Old Art Museum at the end of Barrows Lane, issuing State of California bicycle licenses and advice on bike security (10AM to 2PM, Tuesday through Saturday); Lost and Found service located across from Room 2, Sproul Hall (10AM to 4PM, Monday through Friday, telephone (64)2-4936). Night escort service is available if you are stranded on the campus, call (64)2-WALK. There are employment programs in the Department for UC students to work as Police Aides.

**Fees and Expenses**

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

Part of the fees may be refunded to students who cancel their registration prior to the opening day of the 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 1979-80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident Undergraduate</td>
<td>$243.50</td>
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<tr>
<td>Nonresident Undergraduate</td>
<td>1043.50</td>
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<tr>
<td>Foreign Undergraduate</td>
<td>1074.50</td>
</tr>
<tr>
<td>Resident Graduate</td>
<td>283.50</td>
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<tr>
<td>Nonresident Graduate</td>
<td>1063.50</td>
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<tr>
<td>Foreign Graduate</td>
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**School of Law**

<table>
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<th>Fall or Spring Term 1979-80</th>
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<tbody>
<tr>
<td>Resident Graduate</td>
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<td>Nonresident Graduate</td>
<td>1600.25</td>
</tr>
<tr>
<td>Foreign Graduate</td>
<td>1646.75</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 $150 per term, and by all other graduate students at $120 per quarter. Used to support a portion of the cost of the educational program. The Educational Fee may be reduced to $50 for undergraduate students who have received prior approval from the Dean of their College or School to enroll in a program of less than 9 units. Eligibility must be established no later than the end of the third week of classes.

**Berkeley Campus Fee** — Paid by all students in the amount of $12.50 per quarter and by students in the School of Law in the amount of $18.75 per term. Provides support for a wide range of activities sponsored by the ASUC, including work with academic and administrative units of the campus, covers use of the Student Union, helps pay costs of construction of the Union building, and assists with the provision of ethnic studies on the Berkeley campus.

**Nonresident Tuition** — $800 per quarter, $1200 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 dates) are liable for this fee.

**Reinstatement** — $10.

**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.

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<thead>
<tr>
<th>Estimated Student Budget, 1979-80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
</tr>
<tr>
<td>Married</td>
</tr>
<tr>
<td>Student</td>
</tr>
<tr>
<td>Student</td>
</tr>
<tr>
<td>Food</td>
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<td>$2745</td>
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<tr>
<td>$4365</td>
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<td>Books and Supplies</td>
</tr>
<tr>
<td>265</td>
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<tr>
<td>265</td>
</tr>
<tr>
<td>Miscellaneous</td>
</tr>
<tr>
<td>(Transportation, clothing, recreation, health maintenance, etc.)</td>
</tr>
<tr>
<td>774</td>
</tr>
<tr>
<td>1494</td>
</tr>
</tbody>
</table>

**Estimated Student Budget, 1979-80**

**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**

Check, Engineering, Environmental Design, Letters and Science, Natural Resources

**Schools**

Business Administration, Education, Journalism, Graduate, 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 bacherlor'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 gener-
al 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 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 undergraduates 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.

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

Courses with double numbers (for example, English 1A–1B) are two-quarter sequences beginning in the quarters indicated. Courses with triple numbers (for example, Mathematics 1A–1B–1C) are three-quarter sequences normally beginning in the fall quarter. Except as noted, each course in a sequence is normally prerequisite to one following, and a student may normally receive credit for completion of the first 1/3, 2/3, or 1/2 of a sequence. Course numbers preceded by the letter H are special honors courses, subject to such general restrictions as may be imposed by the department.

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

Course numbers are assigned as follows:

1–99

Lower division courses, including courses designated by a letter, Open to freshmen and sophomores; not acceptable for upper division credit.

100–196

Upper division courses. Ordinarily open to students who have completed at least one lower division course in the given subject, or two years of college work.

197

Field study (upper division). Effective fall 1973, the student is limited to ten units of credit for courses numbered 197, with a maximum of five units in any one quarter. This is not retroactive for any student who had accumulated more than ten quarter units of credit for 197 by the end of the spring quarter 1973, but such a student may not enroll in subsequent quarters for additional credit.

198

Directed group study (upper division). Students should not expect to use more than a total of ten units of 198 credit for a bachelor’s degree without the permission of their dean.

199

Supervised independent study and research courses for undergraduates (upper division), which may be graded only Passed or Not Passed. Students must be in good standing (2.00 grade-point average or better). They must obtain the prior consent of the instructor who is to supervise the study, the major adviser, and the chairperson of the department in which the study is to be conducted (or the equivalent). This approval must be based upon a written proposal submitted to the chairperson. The instructor shall indicate consent in writing—for example, by initialling the student’s study list adjacent to the 199 entry. The students shall show that their background is adequate for the proposed study, and must have completed at least 90 units of undergraduate work. The total units in any one quarter in 199 courses may not exceed 5. On the advice of the instructor or instructors concerned, the dean of a student’s college or school may recommend exceptions to the limitations listed.