Correspondence Directory

UNIVERSITY OF CALIFORNIA, BERKELEY, CALIFORNIA 94720

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Telephone: Area Code 415 642-6000

Cable Address: UNIVCAL

UNIVERSITY OF CALIFORNIA • BERKELEY VOLUME 65 NUMBER 9 MAY 17, 1971

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

Announcements herein are subject to revision. Changes in the list of Officers of Administration and Instruction may be made subsequent to the date of publication.
Admission to Undergraduate Status:
The dates listed are the dates application materials are first made available: they may, however, be requested six weeks in advance. All campuses observe these dates for the beginning of application filing. All applications filed during the first month of the filing period are accepted for consideration. After the first month the deadline will vary. Each college and school has enrollment quotas that limit the number of new freshmen and advanced standing students that may be admitted. Once quotas have been filled, additional applications cannot be accepted. At the request of the applicant, the application may be redirected to another University campus where enrollments are still open.

Admission and Readmission to Graduate Status:
Final date for filing credentials and applications with the Dean of the Graduate Division for admission or readmission to graduate standing.

Readmission to Undergraduate Status:
Final date for filing applications with the Registrar for readmission to undergraduate status.

 Registration of students, graduate and undergraduate, in departments at Berkeley. §

School of Law, registration of students.

School of Law, term begins.

Academic and Administrative Holiday.

School of Law, instruction begins.

School of Law, study-list filing.

Examination in English for foreign students.

School of Law, final date to register.

Quarter begins. §

Subject A Requirement

Late Registration begins. Fee $10. §

* Importance of Early Application. In order to give time for necessary correspondence and for due notice to applicants who may be required to take examinations for admission, applications and credentials should be forwarded to the Admissions Officer at the earliest possible date.

† Registration forms may be obtained beginning May 17 by students registered in the spring quarter who continue in the same status in the fall quarter. Students registered in the spring term in the School of Law who continue in the same status in the fall term may pick up registration forms beginning on May 11.

§ Except School of Law.

† Dates to be determined.
Prenrollment and assignment to sections.

School of Law, final date for students to file petitions to add or drop courses. Fee thereafter, $3. At the discretion of the Dean, grade F may be assigned in discontinued courses.

Final date for filing with the committees in charge the final form of dissertations for all doctoral degrees to be conferred in 1971-72.

Instruction begins.§

Study-list filing. See Instructions to Students received at time of registration for details. Fee for late filing, $10. §

Final date to register. §

Final date for filing applications in candidacy for all master’s degrees to be conferred in 1971-72: Office of the Dean of the Graduate Division, 1 California Hall. All signatures required upon these applications must be obtained in advance.

Last date for filing without fee announcements of candidacy for any bachelor’s degree or the doctor of optometry degree to be conferred 1971-72. Fee thereafter, §3.

Final date for filing applications.

Final date for filing applications in candidacy for all doctoral degrees to be conferred in 1971-72; Office of the Dean of the Graduate Division, 1 California Hall. All signatures required upon these applications must be obtained in advance.

Final dates for students to file petitions to add or drop courses. Fee thereafter, §3. At the discretion of the Dean, grade F may be assigned in discontinued courses. Also final dates to make changes in option of enrolling in courses on passed/not passed basis or letter-graded basis.

Undergraduates:

Graduates: §

Final date for filing with committees in charge the final form of theses for master’s degrees to be conferred in 1971-72.

Final date for filing dissertations with the Dean of the Graduate Division for all doctoral degrees to be conferred in 1971-72.

Academic and Administrative Holiday

Instruction ends. §

Final examinations in departments at Berkeley. §

§ Except School of Law.
Final date for filing applications for fellowships and graduate scholarships for 1972–73.

Final date for filing theses with the Dean of the Graduate Division for all master’s degrees to be conferred in 1971–72.

Quarter ends.§

School of Law, instruction ends.

*Academic and Administrative Holiday*

School of Law, final examinations.

Final date for filing undergraduate scholarship applications for 1972–73 or any quarter thereof.

School of Law, term ends.

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§ Except School of Law.

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Introduction

History of the University of California

The promise of a University of California is 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.

Impetus for the building of a university came from private citizens and the federal government as well as from the State. A forerunner of the University of California was the Contra Costa Academy, established in 1853 in downtown Oakland by a group of churchmen led by the Reverend Henry Durant. In 1855 that institution was incorporated as the College of California, and plans were made to purchase a new site north of Oakland. The community developing around this new site was given the name of Berkeley in 1866.

In 1853 Congress had bestowed upon the State 46,000 acres of public lands with the stipulation that proceeds of the sale of the land were to be used for a "seminary of learning." The Morrill Act of 1862 gave another grant of public lands to the State for the establishment of a college to teach agriculture and the mechanic arts.

The College of California offered its buildings and lands to the State in 1867 on condition that a "complete university" be created to teach the humanities as well as agriculture, mining, and mechanics. The legislature accepted, and on March 23, 1868—Charter Day—Governor Henry H. Haight signed the act that created the University of California.

The University, heir to the lands, buildings, library—and even alumni—of the old College of California, now came into being. The move to the new "College Site" in Berkeley came in 1873, when North Hall and South Hall (the latter still in service) were completed. These two Victorian-style buildings stood out prominently on an area that was barren except for a few farmhouses and barns. Students came to class from Oakland by horsecar, traveling up what is now Telegraph Avenue. Some traveled from San Francisco across the bay by ferry, then up to the campus by horsecar—about a two-hour trek. As enrollment increased at Berkeley, more buildings were added—first a mining and engineering building, a library, and a gymnasium; then mechanics, philosophy, agriculture, botany, and chemistry buildings—all before the turn of the century.

As the Berkeley campus grew, other campuses were added throughout California: San Francisco in 1873; Davis (initially the University Farm) in 1905; Riverside (initially the Citrus Experiment Station) in 1907; San Diego (initially the Scripps Institution of Oceanography at La Jolla) in 1912; Los Angeles (UCLA, initially the Los Angeles State Normal School) in 1919; Santa Barbara (initially Santa Barbara State College) in 1944; and Santa Cruz and Irvine in 1961. The nine-campus University of California is now one of the largest in the world. Each of its campuses has a separate administration, organization, and style of academic life.

The University also maintains research stations, field stations, Extension
centers, and other facilities of research and instruction in more than 80 locations throughout California. With such extensive resources, the University enjoys a foremost position among state universities, offering advancement of knowledge in virtually every field of human endeavor in modern life, and continuing to serve as an indispensable force in the growth and development of our society.

**Students**  From an enrollment of fewer than 200, students at the University of California now number over 106,000 of the brightest young people of the college generation. Nearly 85% are residents of California, with the remainder from other states and from 100 foreign countries. Nearly one third are studying at the graduate level.

Admission to the University is limited to graduates of California high schools in the top 12½% of their classes; to graduates of out-of-state high schools in the top 6½% of their classes; to students transferring from other colleges and universities whose academic records meet University requirements; and to graduate students with distinguished records. Admission requirements are uniform for the eight general campuses, and students may transfer from one to another.

These students come to the University with a tremendous range and variety of educational goals. They seek bachelor’s, master’s, and doctor’s degrees in more than 100 fields of study, spanning the physical and biological sciences, social sciences, humanities, and arts. Many seek intensive professional education in such fields as architecture, engineering, law, medicine, public health, and social welfare, to name a few. In all cases, the University seeks to provide them the broadest and most complete education consistent with the demands of their prospective careers.

**Faculty and Instruction**  The faculty of the University of California is noted for its unusually high number of Nobel laureates, National Academy of Science members, and holders of other notable awards for distinguished academic achievement. The men and women who teach courses at the University of California are exceptionally able scholars in their fields. They add to their knowledge of their subject by continuing research. They bring to the classroom the excitement of discovery, whether the class is a seminar of nine students or a lecture hall of several hundred. The faculty places a strong emphasis on the relationship between teacher and student. While seeking to meet the growing demand which our society places upon the University for advanced research and other academic services, the faculty holds firmly to its traditional role as educators of the young. Classes are as small as possible—about 70% of instruction is carried on in groups of 25 or less—and students are encouraged to confer privately with instructors.

The quality of the University’s programs was reaffirmed by the American Council of Education in its evaluation of graduate schools in the United States in a report released in January, 1971. The ACE ranked Berkeley as the top graduate school in the country. Twenty-six of the thirty-five graduate departments were ranked as the first, second, or third best in the nation. Eight departments were top-ranked.

This **GENERAL CATALOGUE**, together with those of the other campuses of the University, embodies about 10,000 courses, covering the spectrum of man’s
knowledge. Students are given a considerable degree of freedom in choosing their courses, although their colleges and departments, or schools, provide a broad framework of minimum general requirements and major requirements. The student plans his program with the aid of an adviser and normally chooses a field of concentration by his junior year.

**Research**  The distinction of the University's faculty has already been noted. The University is also known for the quality and scope of its research facilities. Each campus maintains research units, including laboratories, museums, centers, and institutes—covering most of the broad fields of study. There are also research stations, field stations, and other facilities of research in more than 80 locations throughout California. Continuing research is financed by University funds, private endowments, and grants from the federal and State governments. These funds provide research fellowships and assistantships for faculty and outstanding graduate students.

The libraries of the University are a valuable resource to research and instruction. The major collections are at the Los Angeles campus, with more than 2,500,000 volumes, and at the Berkeley campus, with more than 3,600,000. The other campuses also maintain extensive library collections. Altogether, the University libraries cover virtually every research need. To minimize duplication, each campus has developed a specialized concentration of volumes. Interlibrary loans are arranged with ease.

**Administration**  Organization and government of the University is entrusted, under the State Constitution, to a corporate body, The Regents of the University of California. The Board of Regents is composed of twenty-four members, sixteen appointed by the Governor of California for sixteen-year terms and eight who are members because of the public offices they hold. These ex officio members are: the Governor, the Lieutenant Governor, the Speaker of the Assembly, the President of the State Board of Agriculture, the President of the Mechanics Institute, the President of the Alumni Association, the State Superintendent of Public Instruction, and the President of the University. The Regents have "full powers of organization and government, subject only to such legislative controls as may be necessary to insure compliance with the terms of the endowments of the University and the security of its funds."

The President of the University is the executive head of the University in all its departments and on all its campuses. He is appointed by The Regents and is directly responsible to them. Each of the nine campuses of the University has a Chancellor as its chief administrative officer. The Chancellor is responsible for the organization and operation of the campus, including academic, student, and business affairs. The President has delegated additional authority to the Chancellors, including appointment of faculty, department chairmen, directors of local instructional or organized research units, and certain other personnel.

The Academic Senate, consisting of the faculty and certain administrative officers, participates in the administration of academic matters. The Senate determines conditions for admission of students and for granting of certificates and degrees. It authorizes and supervises all courses in the schools and colleges.
University Extension  University Extension makes available a broad range of programs based on the following educational aims: (1) the intellectual and cultural development of adults; (2) the dissemination of new knowledge resulting from teaching and research activities within the University; (3) the continuing education of scientific, technical, and professional personnel; (4) the development of special educational programs for public and private organizations and agencies; and (5) public affairs education through programs designed to aid adults in meeting their responsibilities as citizens.

The Berkeley Campus

The Berkeley campus is surrounded by the business and residential districts of Berkeley (population, 121,000), at the foot of the wooded Berkeley hills. Despite a rapid and intensive construction program, the campus retains much natural beauty, with wooded glens, spacious plazas, and picturesque Strawberry Creek running westward through the length of the campus. The Berkeley Hills afford a panoramic view of the San Francisco Bay Area, a nine-county region widely acclaimed for its cultural activities.

One is impressed by the vitality of the campus. Political tables and noontime speeches that make news are, of course, part of the story. A host of other features—public lectures and concerts; campus-sponsored forums and seminars; clubs and workshops; dramatic presentations; international folk-dance festivals; art, photographic, design, architectural, anthropological, and archaeological exhibits and displays; recitals; lectures and more than twenty bookstores within one square mile—all of these make Berkeley what it is. In this environment, scholars of all ages gather to share ideas, information, and experience in a mood of exchange, toleration, and creativity.

Enrollment at Berkeley has reached its limit of 27,500, including 18,000 undergraduates. About 3,200 students live in University residence halls, and the remainder in privately owned or cooperative housing, or fraternities and sororities. There are more than eighty academic departments, and most offer instruction at both the undergraduate and graduate levels.

Many changes are taking place on the Berkeley campus: classic buildings share ground with modern steel and glass designs; the Venetian-style Campanile at the center of the campus, long a landmark of the West, now looks down upon a new landmark, the modern Student Center complex at the south entrance of the campus; the undergraduate lecture-hall session, long a part of the student's curriculum, now shares time with the seminar, preceptorial, and tutorial. Oldest of the nine campuses, the Berkeley campus is adapting to new needs and new trends, in an effort to make the experience of higher education one of the most exciting, meaningful, and thorough of human experiences.
Admission and registration carry the greatest number of problems for students. This chapter is a summary of admission and registration procedures for the University. Further information may be found in the UNDERGRADUATE ADMISSIONS CIRCULAR, the CIRCULAR FOR NEW UNDERGRADUATES, and the REGISTRATION CIRCULAR.

Admission

You may obtain application packets containing all necessary forms and instructions from the Office of Admissions, 127 Sproul Hall, University of California, Berkeley, California 94720. This office accepts completed applications on or after the opening dates for filing: Winter Quarter 1972—July 1, 1971; Spring Quarter 1972—October 1, 1971; Fall Quarter 1972—November 1, 1971.

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

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

(a) History 1 year. This must consist of one year of United States history or one-half year of United States history and one-half year of civics or American government.
(b) English 3 years. These must consist of three years of English composition, literature, and oral expression.
(c) Mathematics 2 years. These must consist of two years of subjects such as elementary algebra, intermediate and advanced algebra, geometry, trigonometry, calculus, elementary functions, matrix algebra, probability, statistics, or courses combining these topics. Arithmetic and such nonacademic subjects as shop mathematics and business mathematics are excluded.
(d) Laboratory Science 1 year. This must consist of a year course in one laboratory science, taken in the tenth, eleventh, or twelfth grade.
(e) Foreign Language 2 years. This must be in one language. Any foreign language with a written literature is acceptable.
(f) Advanced Courses 1 (or 2) years. This must be chosen from the following: Mathematics, a total of one year of second-year algebra, solid geometry, trigonometry, or other certified advanced courses. Foreign language, either one additional year in the same foreign language offered under e or two years of another foreign language. Science, a year course in any laboratory science completed subsequent to the laboratory science used for d above.

If you are a graduate of a California high school, these courses must appear on a list that your high school principal has certified meet the course descriptions above and that he has placed on file with the Director of Admissions. Additional elective units are also required to complete the minimum of 15 standard entrance units.

You must have at least a B (3.0) average in those courses taken after the ninth
year which are used to meet the subject requirements. Subject requirements are satisfied only by courses in which a grade of C (2.0) or higher has been assigned.

If you are applying as a freshman or if you are an advanced standing applicant who has earned less than 12 units of college credit subsequent to high school graduation, you must submit scores from the following examinations of the College Entrance Examination Board: (1) The Scholastic Aptitude Test; and (2) three Achievement Tests, which must include (a) English composition, (b) social studies or foreign language, and (c) mathematics or science. If your scholarship average in the required high school subjects is 3.00 to 3.09 inclusive, you must score a minimum total of 2500 on the examinations.

For detailed information on these requirements, admission by examination alone, and the special scholarship requirements for nonresident applicants, consult the Undergraduate Admissions Circular.

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

If you are registered in a junior college, a four-year college, a university, extension classes of college level, or any comparable institution since graduation from high school, you are subject to regulations governing admission to advanced standing. You may not disregard your college record and apply for admission to freshman standing. You must present from the last accredited college or university attended a statement of good standing and an academic record with a grade-point average of C (2.0) or better.

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:

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.

Those ineligible for admission from high school because of subject deficiencies may establish eligibility by taking, at an accredited college, the required courses, and by maintaining an average of 2.0.

Those ineligible for admission from high school because of grade-point deficiency, may establish eligibility by taking, at an accredited college, a minimum of 56 acceptable semester units or 84 quarter units, with an average of 2.4 or better.

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

Admission in Advanced Standing for Nonresidents

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

**Intercampus Visitor** Students enrolled on one campus who wish to visit another campus for one quarter only may apply for an Intercampus Visitor application at the Office of the Registrar on the campus where they are currently enrolled. After the quarter is completed, the visitors return to their home campus as continuing students. The deadlines are the same as the admissions application deadline given on page 2.

**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 satisfactory 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, his needs, and his plans, the conditions of his admission, subject to approval from the dean of the applicant’s college or school.

Admission is for a specified time, determined beforehand, and the student must maintain a prescribed scholastic average. There are no “special courses”; the student will be admitted only to those courses for which he is able to demonstrate, in the opinion of the instructor, satisfactory preparation. Remember that many courses in engineering and professional fields require extensive, and often highly specialized, preparation.

The applicant must submit transcripts of records from all schools attended since the eighth grade.

**Special Status** This includes students of mature years (minimum age 21) who have not had the opportunity to complete a satisfactory high school program or have not completed a substantial amount of college work, whose special attainments may lead them to take certain college courses toward a definite and limited objective. Similar rules apply as for students in limited status, discussed above. Applicants to special status directly from high school are not accepted. One may not be admitted to special status for the purpose of making up requirements for admission to regular status.

**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 Admissions Officer and of the dean of the college or school in which work is to be undertaken.
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.

Registration

Registration is the means by which you officially become a student at the University. It includes the payment of registration and other fees and the completion and filing of informational forms. It is accomplished by mail. New and re-entering students receive information and instructions for registering by mail some time in advance of the quarter for which they have been admitted. The instructions include a mailing deadline which should be carefully observed. Registration in person at the opening of the quarter may involve a late registration fee of $10. 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 according to regulations. You may not register after the second 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.

Medical Examination Requirements

If you are new to the Berkeley campus or are re-entering after an absence of more than five years, you are required to have a medical examination. Appointments for examinations at the Health Service are scheduled for the first week of the fall quarter only. During the winter and spring quarters, examinations are held on the second Saturday of the quarter. A $10 fee will be charged for examinations. Students wishing to have their examination by private physician may do so and present the completed University of California physical examination form at the time of their scheduled appointment. Appointments for the medical examinations are mailed within the month prior to the opening of the new quarter. Appointments are not mailed to addresses outside of the United States. If you do not receive one in the mail, report to Window 104, Cowell Memorial Hospital, to obtain one. New students must have had a smallpox vaccination within the past three years. Students missing their examination during the above periods must have the examination by a private physician at their own expense.

Nonresident Tuition Fee

Students who have not been legal residents of California for more than one year immediately prior to the opening day of the quarter in which they register are charged, along with other fees, a tuition fee of $500 for the quarter. Legal residence is the combination of physical presence in California and the intention of making it one's permanent home, coupled with the relinquishment of legal residence in any other state. The student who is within the state primarily for educational purposes does not gain the status of legal resident regardless of the length of his stay in California. In general, the unmarried minor (any per-
son under 21 years) derives legal residence from his father (or from his mother if the father is deceased) or, in the case of divorced parents, from the parent awarded legal custody by the court. The married woman derives legal residence from her husband from the date of marriage. (Government Code Section 244 and Education Code Sections 23054, 23055, 23057, 23058 and 23059.)

The attention of the following students is directed to the fact that presence in California for more than one year does not, in itself, entitle them to resident classification: (1) those under 22 whose parents are not California residents; (2) servicemen stationed in California who were not California residents at the time of entry into the military service; (3) alien students who first must qualify for permanent residence status according to the applicable laws of the United States.

Exemption from payment of the nonresident tuition fee is available to the unmarried minor whose natural or adoptive parent is in the active military service of the United States and is stationed in California on the opening day of the quarter for which he registers, or is stationed outside the United States immediately after having been stationed on active duty in California. This waiver is also available to the spouse of a member of the military service of the United States with an active duty station as described above.

New and returning students are required to fill out a Statement of Legal Residence, a form that is issued at the time of registration. Their status is determined by the Attorney in Residence Matters deputy who is located in the Registrar's Office. Inquiries from prospective students regarding residence requirements for tuition purposes can be made by writing to the Attorney in Residence Matters, 590 University Hall, University of California, Berkeley, California 94720. No other University personnel are authorized to supply information relative to residence classification.

Those classified incorrectly as residents are subject to reclassification as nonresidents. If incorrect classification results from false or concealed facts, the student is subject to University discipline and is required to pay all back fees he would have been charged as a nonresident. Resident students who become nonresidents must immediately notify the Attorney in Residence Matters or his deputy. Applications for a change in classification with respect to a previous quarter are not accepted.

Enrollment in Classes and Filing the Study List

You should purchase from the Registrar's Office, for 25 cents, the Schedule and Directory, 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 catalogue, which provides course descriptions and prerequisites, you may 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 Registrar's Office. 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 date 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 could result in disciplinary action. 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 1971–72 school year will consist of three ten-week quarters and two six-week summer sessions. There will not be a summer quarter in 1971. A student making normal progress toward the bachelor’s degree attends three quarters per school year.

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

All University courses (except Subject A and certain other 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 and Grade Points

Every student at the University will have his course work reported in terms of the following letter grades. Passing: A (excellent); B (good); C (fair); D (barely passing). Not passing: F (failure). Undetermined: incomplete, symbol I (student’s work of passing quality, but incomplete). Other symbols used: P (passed without definite grading at a level of performance corresponding to letter grade C– or better); S (satisfactory without definite grading); NP (not passed); U (unsatisfactory without definite grading); IP (in progress; final grade to be assigned upon completion of entire course sequence). For each unit of credit, grade A is assigned 4 grade points; B, 3 points; C, 2 points; D, 1 point; no grade points attach to other grades or symbols. The passing grades A, B, C, and D may be modified by plus (+) or minus (−) suffixes. “Minus” grades carry three-tenths grade point less per unit, and “plus” grades, three-tenths grade point more per unit, except for the A+ which carries 4.0 grade points per unit as does the A.

The numerical values, or grade points, given above are intended to provide a more exact determination of a student’s scholarship. To compute the grade-point average for course work at the University of California, the point value of each grade is multiplied first by the unit value of the course to obtain a total
of all grade points earned. That total is then divided by the total units undertaken, exclusive of courses in which P, S, NP, U, or IP were assigned. The resulting figure is the grade-point average.

Only courses for which grades D, F, or not passed were received may be repeated for credit—and not more than once, unless authorized by the appropriate dean. On course repetitions, the units are applied toward a degree only once, but the grade assigned at each enrollment shall be permanently recorded. A course in which grades D or F were assigned may not be repeated on a passed/not passed basis.

In computing the grade-point average of an undergraduate who repeats courses in which he received D or F, only the most recently earned grades and grade points shall be used for the first 16 units repeated. In the case of further repetitions, the grade-point average shall be based on all grades assigned and total units attempted.

To replace a grade of incomplete, a student must take an examination equivalent to the final examination, or complete any other assignment required by the instructor. On the instructor's recommendation and the permission of the dean of his college, school, or division, the student may receive grade points upon successful completion of the course. He must obtain, therefore, before finishing the work, the petition forms from the Registrar; secure the required endorsements; and file the petitions as directed. The fee for filing the petitions is $5, regardless of the number of courses entered. The foregoing procedures also apply to former grade E.

**Minimum Scholarship Requirements**

Failure to maintain a minimum grade-point average prescribed by the college or school will normally result in probation or dismissal. Computation of the grade-point average includes courses graded incomplete. Since scholarship rules are applied only at the close of regular sessions, grade points earned in a University of California summer session or by removing grade I are not taken into consideration until the close of the student's next quarter of attendance.

**Academic Probation**

Except in the Colleges of Chemistry and Engineering, a student is placed on academic probation if at the end of any term his grade-point average for that term, or his cumulative grade-point average, is less than 2.0 (C average) computed on the total of all courses undertaken in the University.

**Academic Disqualification**

College of Chemistry and College of Engineering: A student shall be subject to disqualification from the University (a) if during any term he fails to attain at least a C average in all courses for which he is enrolled; or (b) if at the end of any term he has failed to attain at least a C average in all courses undertaken in the University.

College of Agricultural Sciences, College of Letters and Science, and School of Business Administration: A student is subject to disqualification (a) if his grade-point average falls below 1.5 for any term; or (b) if after one term on probation
he increases his grade-point deficit; or (c) if after two terms on probation he has not achieved a grade-point average of 2.0 (C average) computed on the total of all courses undertaken in the University.

All other colleges and schools: A student is subject to disqualification (a) if at the end of any term his grade-point average for that term is less than 1.5; or (b) if he has completed two consecutive terms on academic probation.

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

**Honors**

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

**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 and Directory as not requiring a final examination, and in the case of a student graduating at the end of the quarter who is being examined in his major by his department and may, at the department's discretion, be excused from finals in all courses within the department.

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 Reserve Book Room of the Library. Examinations in non-laboratory courses may not exceed three hours. Any infringement of fair examination practice by a student is considered a serious offense subject to discipline.

You may be re-examined *only* to raise grade I or E to passing, *not* to raise any other grade.

**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 student may be allowed credit by examination for knowledge he has acquired since graduation from high school, either by independent study or at another institution, and for which he has not been allowed advanced standing credit. Application for such credit should be made directly to the Admissions Officer at Berkeley.

2. A student in good standing who is currently registered may qualify for course credit by examination. Application for such credit must be presented on a form, obtainable from the Registrar, to the dean of the college or school. Credit by examination may be applied for in any course listed in the current General
Catalogue pertaining to the regular sessions at Berkeley, or in any other subject appropriate for inclusion in a University curriculum. 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. 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 if such credit would duplicate credit presented by the student for admission to the University; in elementary courses in a foreign language which is the mother tongue of the applicant; or in subjects for which the University has no competent examiner. Further information concerning credit by examination may be obtained from the Registrar.

Passed or Not Passed Credit

Effective with the fall quarter 1968, a student's level of performance must correspond to letter grade C- or better if a passed grade is to be assigned.

An undergraduate student must be in good standing in order to enroll in courses on a passed or not passed basis. Starting with courses included in the fall quarter 1970 study list, students enrolled in a bachelor's degree program must complete at least two-thirds of the remainder of all units they undertake prior to the award of the degree on a letter graded basis; the other one-third may be completed on a passed basis. Included in this one-third will be half-unit physical education and Music 400 series courses, as well as any units completed on another campus by a Berkeley student enrolled in an intercampus visitor program.

A course which is required in the major or which is prerequisite to the major may be taken on a passed or not passed basis only upon the approval of the faculty of the student's college or school.

A student enrolled in a summer session may take no more than one course on a passed or not passed basis. Half-unit courses in physical education and music are excluded from this restriction.

A special student or limited status student must obtain the approval of the dean of the school or college in which he is enrolled in order to take a course on a passed or not passed basis.

The option of being graded passed or not passed in a particular course may be withdrawn if the student is found to be ineligible to take the course on that basis.

These rules are subject to such other limitations as may be imposed by the faculties of the various schools and colleges.

Student Conduct

As a student enrolling in the University, you assume an obligation to conduct yourself in a manner compatible with the University's function as an educational institution. Rules concerning student conduct, student organizations, use of University facilities, and related matters are set forth in both University policies and campus regulations, copies of which are available upon request at the Office of Student Relations and Programs, 201 Sproul Hall, and at the Office of the Coordinator of Facilities and Regulations, 225 Sproul Hall. Particular attention is
called to the booklet *University of California Policies Relating to Students and Student Organizations, Use of University Facilities, and non-Discrimination* and to the standard of conduct set forth therein.

**Cancellation of Registration, Absences, Withdrawal, and Re-Entry**

A student who has registered and wishes to cancel his registration may do so provided he notifies the Registrar in writing prior to the first day of classes of the quarter. Cancellation of registration may not be accomplished by nonattendance at classes alone.

Responsibility for short absences is largely left up to you. For absences of five days or longer, you must apply to the Office of Student Relations and Programs for a Leave of Absence. Permission to withdraw entirely from the University, without scholarship penalty, is usually not granted after the first few weeks of the quarter, except under unusual circumstances. If circumstances prevent further class attendance, you should notify the Registrar in writing immediately. Upon written approval of the Office of Student Relations and Programs and also the dean of your college or school, provided you are eligible for further registration in the University and are not under disciplinary disqualification, you will be entitled to a statement of honorable withdrawal. You may also obtain a statement of honorable withdrawal at the close of any quarter, under the same circumstances. You must not discontinue schoolwork without formal notice. This may result in academic disqualification and loss of eligibility for readmission.

A student who has been disqualified for academic or disciplinary reasons is generally not eligible for readmission. If you have cancelled your registration, withdrawn, or have been absent for any quarter, you will be required to apply for readmission to the University for any future quarter you wish to attend. The Application for Readmission, which may be obtained from the Office of the Registrar, must be accompanied by a nontransferable, nonrefundable Readmission Fee of $10 ($20 effective winter quarter, 1972) when first submitted. It will not be considered until the fee has been paid.

**Progress Toward the Degree**

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

**Work Toward a Degree** At the close of each quarter, the courses, units, grades, and grade points earned are added onto your cumulative University record. From this record, you may determine your progress toward a degree. Also at the end of each quarter, a Grade Report which indicates the grade and grade points you received for each course you took is issued to you at a time and place designated by the Registrar.

Transcripts of the records—useful and usually necessary in applying to graduate school and for certain types of employment—are available from the Registrar. After the last date for final examinations, transcripts of record for registered students must be held for the inclusion of grades for the quarter and, therefore,
may not be available for approximately 15 to 20 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 four to five working days. The charge for each transcript of every undergraduate, graduate, or separate summer session record is $1, and the total amount due must accompany the application.

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

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

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

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

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

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

**Two General University Requirements**

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

**Subject A**  This requirement is based on the principle that a University student must demonstrate reasonable proficiency in English composition to succeed in college-level work. Satisfying the requirement is a prerequisite to many courses, including all first-year composition courses. All University departments assume that the student has mastered the elementary principles of composition and can write with a minimum of gross errors in sentence structure, grammar, punctuation, and spelling. The Subject A course is designed to help those students who are deficient in composition.

A student entering as a freshman will have taken the English Composition Test of the College Entrance Examination Board. If his score on this test is below 550, he must enroll in the course in Subject A during his first term of residence at the University. This is a noncredit course for which a fee of $45 is charged.

An entering freshman may also meet the requirement by presenting a score of 3, 4, or 5 on the College Board Advanced Placement Test in English.

Any student may meet the requirement by presenting evidence of completion of an acceptable college-level course in English composition taken at another institution, provided the grade is C or better.

Any entering student who has not met the Subject A requirement by these means may, prior to entering the University, make arrangements with the Educational Testing Service to take the English Composition Test of the College Entrance Examination Board at his own expense and to have the result sent to the Admissions Office of this campus. If the student achieves a score of 550 or above, he will be considered to have satisfied the Subject A requirement; if his score on this test is below 550 or if he does not take the test, he must enroll in Subject A during his first quarter at the University.

**American History and Institutions**  These requirements are based on the principle that an American student enrolled at an American university should have some acquaintance with (1) the history, and (2) the government of his country. These requirements may be met in the following six ways:

1. By passing two examinations, one in each of these subjects. If you wish to take either or both examinations, you should obtain details at the American History and Institutions Office, Room 204, Bldg. T—9.

2. By presenting official evidence of completion of the same two requirements at another college-level institution in California.

3. By completing one quarter of a course in each of the two groups given below (or, on approval of the Supervisor of American History and Institutions...
and dean of the college or school at Berkeley, any comparable courses offered at another college-level institution, or University Extension):


(2) **Institutions Requirement**: Political Science 1, 5, 33A, 33B, 33C, 106, 107, 108, 109, 110, 111A, 112, 157A, 157B, 157C, 160, 163, 181, 182, 184; Business Administration 111, 117; Criminology 116; Economics 1, 1A, 1B, 130, 131, 185; English 33A, 33B, 33C; History 33A, 33B, 33C; Journalism 165A, 165B; Social Welfare 110A, 110B, 110C; Sociology 118, 119, 120, 124. The normal course to satisfy this requirement for those other than Political Science majors will be Political Science 5.

4. By mixing alternatives 1, 2, or 3 for either requirement. You may choose an examination in either one, or complete a course in either one, or submit evidence of equivalency for either one.

5. By completing the first two quarters of the Experimental College Program dealing with American Studies.

6. The American History part of the 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 exists at this time in American Institutions, so this part of the requirement cannot be fulfilled by this means.

The requirements will be waived for foreign students who, in the course of their registration, have submitted to the Registrar for inspection travel documents certifying that they hold student (F) or visitor (J) visas. Those who wish to verify that the waiver has been granted may call at the Office of the Registrar, 120 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.

_Students wishing to complete the requirements by enrolling in courses should check the American History and Institutions Office prior to enrollment for possible policy changes made after this catalogue was printed._
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 Berkeley Division, a standing committee of the Academic Senate. Higher degrees fall into two broad categories: (1) Professional—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 his ability to organize and carry out investigation of significant problems in his 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, his preparation in one or more foreign languages, and his ability to pursue original research leading to a contribution of significant ideas to his field of study. For a list of graduate degrees offered, see page 44.

Admission to Graduate Study

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 a fee of $20, must be filed with the Graduate Admission/Fellowship Office by the established deadlines.

The final dates for acceptance of applications for admission for the 1972–73 academic year are: fall quarter, March 1; winter quarter, October 10; and spring quarter, January 10. The School of Law admits only for the fall term; the deadline is April 1.

Many departments have established earlier final application dates of their own, 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 packets.

Under the Master Plan for Higher Education in California, there are limitations on enrollment at each public institution. Therefore the competition for admission is severe, and it is to the student’s advantage to make early inquiry about application for study at Berkeley.

Admission Requirements The University requires of the applicant the following: (1) a valid degree from an accredited institution, comparable to the bachelor’s degree offered at Berkeley; (2) sufficient undergraduate training to undertake graduate study in his chosen field; and (3) a satisfactory scholastic average. Since the methods of determining eligibility vary with each applicant, an extensive evaluation of his college records and supporting materials is necessary. A satisfactory score on the Graduate Record Examination (administered by the
Educational Testing Service), though not required for admission to the Graduate Division, is required by some departments and schools on campus. If it is required, the score should be forwarded to the applicant's proposed school or department and not to the Graduate Admission/Fellowship Office.

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

Notification of Admission Only a written notice from the Dean of the Graduate Division, not letters from departments or faculty, is valid proof of admission. Notification is sent to the applicant after his records and supporting materials have been reviewed by both the Graduate Admission/Fellowship Office and the departmental selection committee. Normally this is approximately eight weeks after all the records and materials for the applicant's admission file have been received. It can take longer, however, depending upon the time of year and the meeting schedule of the selection committees. The bulk of the fall applications are screened in February with notification going out as soon as possible thereafter. Fellowship applicants normally receive notification on or before April 1.

Reapplication An applicant who changes his plans and withdraws his application from consideration for a particular quarter will have all of his materials kept on file for a maximum of two years following his first application. He may reapply for any quarter within the two years by notifying the Graduate Admission/Fellowship Office to reactivate his file prior to the application deadline date for that quarter and by providing a current application, if required, together with any records of academic work completed since he first applied. For application after the two-year limit, he will have to file a new application form (with the $20 fee) and supply a new set of records and supporting materials.

Foreign Applicants In addition to the admission requirements set forth previously, foreign students are expected to have an excellent command of English before beginning studies at Berkeley, since no student is admitted to the University for the purpose of learning English. Prior to arrival in Berkeley, and as a requirement for admission, applicants whose native language is not English must take either the Test of English as a Foreign Language (TOEFL), administered by the Educational Testing Service, or the test given by the American consular authorities abroad. Results must be forwarded to the Graduate Division Office. After arrival in Berkeley, these students may be required to take the University Examination in English for Foreign Students.

A special course in English for Foreign Students is normally offered each summer. Interested persons should write for information to the Office of English for Foreign Students, 2241 College Avenue, University of California, Berkeley, California 94720.
Accommodation of Postdoctoral Fellows and Visiting Scholars. A prospective fellow or scholar should communicate with the chairman of the department, school, or research unit with which he wishes to be affiliated to determine whether the facilities he requires are available and whether he would be eligible for an honorary appointment.

Intercampus Exchange Program A graduate student registered on any campus of the University may go to another campus of the University as an Intercampus Exchange Graduate student with the approval of his adviser, the chairman of the department in which study is proposed, the Dean of the Graduate Division on his 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 Office of the Dean of the Graduate Division on the student’s home campus.

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

Although he registers and pays fees on the home campus, the Intercampus Exchange Student will have library, infirmary, and other student privileges on the host campus. He should make arrangements with the Registrar to follow the enrollment procedures of the host campus so that grades obtained in courses he takes there will be transferred to his record on the home campus. An exchange student is considered a graduate student in residence on his home campus. He has not transferred his enrollment, and he is not admitted to the graduate school and department of his host campus as a graduate student of that campus. Unless specifically restricted, holders of fellowships may participate in the Intercampus Exchange Program.

General Regulations and Procedures

Graduate Advisers Graduate advisers are appointed by the Dean of the Graduate Division from nominations sent to him 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 adviser 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 his 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 ad-
mission to graduate courses and maintenance of acceptable scholastic performance. The graduate adviser is the deputy of the Dean of the Graduate Division and the chief representative of the department or school in all matters related to graduate study, and his signature is recognized as expressing their official decisions. All graduate students must confer with their graduate advisers at the opening of each quarter and obtain approval of their programs of study.

**Foreign Student Adviser** Foreign students must consult with the Foreign Student Adviser at International House as soon as possible after arrival in Berkeley.

**Registration** Every graduate student in good standing, unless granted a formal withdrawal or honorable dismissal by the Dean of the Graduate Division, will be required to register with the Registrar of his campus each quarter until the completion of all requirements for the degree for which he is working. Failure to register or to obtain formal permission to leave the University will constitute presumptive evidence that a student has withdrawn from the Graduate Division. No graduate student may leave the University without obtaining the form of release appropriate to his situation. In case of doubt, students should seek advice from the Graduate Division. The requirement of full-time continuous registration for graduate students is satisfied by attendance in the three quarters of an academic year. A student is required to be registered or pay the filing fee, whichever is applicable, for the quarter in which his degree is conferred. All holders of non-immigrant visas must be registered for fall, winter, and spring quarters of each academic year unless special permission has been obtained from the Immigration Service to do otherwise. Consult the Foreign Student Adviser for further information.

Consistent with these principles, graduate students must register in any quarter in which they are enrolled in formal courses of instruction, and they are, of course, subject to all registration fees.

If a student's studies or research require him to remain outside the State of California for the quarter, he must file a petition for this, including a request for reduction of the University Registration Fee, with the Office of the Dean of the Graduate Division, Room 1, California Hall.

**Student Conduct and Discipline** A student enrolling in the University assumes an obligation to conduct himself in a manner compatible with the University's function as an educational institution. Rules concerning student conduct, student organizations, use of University facilities, and related matters are set forth in both University policies and campus regulations, copies of which are available upon request at the Office of Student Relations and Programs, 201 Sproul Hall, and at the Information Desk in the Student Union. Particular attention is called to the booklet *University of California Policies Relating to Students and Student Organizations, Use of University Facilities, and Non-Discrimination* and to the Standard of Conduct set forth therein.

**Leave of Absence and Withdrawal** If a student wishes to withdraw from the University, or if he finds it necessary to discontinue his studies before the close of the quarter, he must apply for formal withdrawal. Petitions for this purpose are
available from the Petitions Desk, Graduate Division, Room 1, California Hall, and are filed with the same office. During his absence, a graduate student is exempt from all fees, and is expected in turn to maintain no connection with the University—he may not use University facilities or place demands on faculty time.

Any withdrawal is a privilege requiring the endorsement of the student’s department or school and the Dean of the Graduate Division. Students who plan to leave the campus permanently should apply for honorable dismissal.

Readmission A student who is absent for one quarter or more must file an Application for Readmission, which may be obtained from the Office of the Registrar, and must pay a nontransferable, nonrefundable Readmission Fee of twenty dollars ($20). This fee must accompany the Application for Readmission when first submitted; the application cannot be considered until the fee has been paid.

Medical-Physical Examination Requirements Students who are new to the Berkeley campus and those students reentering after an absence of more than five years are required to have a medical examination. Students who have been accepted for admission are mailed medical examination appointments within the month prior to the opening of the new quarter. Appointments, however, are not mailed to addresses outside the United States. Students who do not receive an appointment by the opening date of the quarter are advised to obtain one immediately at Window 104, Cowell Memorial Hospital. Medical examinations at the Health Service are given only during the first week of the fall quarter; for subsequent quarters, the examinations are held on the second Saturday following the beginning date of the quarter. The fee for failure to keep an appointment is $10.

Students reentering the University after an absence of five years or less must report to Window 104, Cowell Memorial Hospital to complete a supplementary medical history form, undergo tuberculosis screening and, in some instances, may be required to have a physical examination if indicated by their Student Health Service Record.

Summer session students who are subsequently admitted to a fall, winter, or spring quarter must have a physical examination prior to the opening of that first quarter of regular attendance.

Reduced fee program students* (new and reentering only) are not required to complete a medical examination, but must report to Cowell Hospital, Window 104, for tuberculosis screening and smallpox vaccination clearance.

Tests for tuberculosis are a part of the examination and evaluation of all new and reentering students.

A smallpox vaccination within the past three years is required of new students, and should be obtained before they come to the campus. A charge will be made for vaccinations given at Cowell Hospital to complete the entrance requirement. International Certificates, Armed Services immunization records, Public Health Department certificates and statements by private physicians are acceptable in lieu of the University form.

* This regulation does not apply to advanced graduate students who have secured permission to pay reduced fees while residing outside the State of California for an entire quarter.
Registration at the University may be invalid without completion of medical examination or evaluation requirements.

All students who have paid the University Registration Fee are eligible for health service from the first day of the quarter in which they register to the last day of the quarter, or to the date of official withdrawal if they withdraw prior to the end of a quarter.

**California Legal Residence** California state laws define legal residence as physical presence in the state with the intention of remaining indefinitely. To be considered for classification as a legal resident, a graduate student must meet this condition for at least one year immediately preceding the quarter in which he registers. Nonresidents must pay a nonresident tuition fee for each quarter. Those in doubt about their status should consult the deputy in charge of residence matters in the Office of the Registrar, or write: Attorney for The Regents in Residence Matters, 590 University Hall, University of California, Berkeley, California 94720. Only U.S. citizens and persons on immigrant visas can qualify for legal residence in the State.

**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 quarter (courses in the 100 or 200 series).

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

Courses are classified as lower division (numbered from 1 through 99); upper division (100–199); and graduate (200–299). Lower division courses are not counted as part of a full program of study leading to a higher degree. (For information on courses in the “600-series” see Standard of Scholarship on page 32.)

Teaching assistants and research assistants must normally carry a minimum of 6 units of upper division or graduate work. Fellowship holders, foreign students on nonimmigrant visas, and students subject to selective service regulations must carry a full program of study, the minimum range in such cases being from 8 to 12 units in upper division and/or graduate courses, although cognizance is taken of the amount of individual study being pursued in the form of language preparation, comprehensive and qualifying examination preparation, etc., for the Ph.D. degree. In these cases reduced unit loads are accepted as full programs with the consent of the faculty adviser and dean.

**Changes in the Study List** Graduate students may file petitions to add, substitute, or drop courses entered on their study lists at any time through the twentieth day of instruction. Discontinuance of a course after this time will normally result in a grade of F. In unusual circumstances, and when approved upon petition to the Dean of the Graduate Division, the penalty of an F grade may not be assessed.
The Nature of Graduate Instruction  A graduate course is a highly advanced course in a field of study already intensively presented in the upper division. Graduate courses demand, on the part of both instructor and student, either a capacity for critical analysis or a specialization of research interests not normally appropriate to an undergraduate major. These courses may be conducted in a number of ways: (1) as advanced lecture courses, (2) as seminars in which faculty and students present critical studies of selected problems within the subject field, (3) as independent study or reading courses, or (4) as research projects conducted under faculty supervision. The main purpose of graduate study is to inspire independence and originality of thought in the pursuit of knowledge. The graduate student is expected to achieve mastery of his chosen field through advanced course work and—equally important—through independent study and research. He is accorded considerable liberty in his choice of courses as long as he meets the minimum requirements for academic residence.

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 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 as part of the program for an academic degree.

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

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 he is not a member, provided that he has fulfilled all the requirements of that Division.

No voting member may be recommended for a higher degree by his own division unless, prior to the date of final action on his appointment to a rank carrying the voting privilege, the Dean of his Division has certified to the appropriate authority that he has met all the requirements for the degree. Such appointments may be retroactive.

University Extension  No courses taken in University Extension may be applied toward a higher degree administered by the Graduate Division at Berkeley. Requirements for the Standard Teaching Credential may be met in part, however, by courses offered in University Extension. (See the Announcement of the School of Education.)
The Master’s Degree

Instruction is offered on the Berkeley campus leading to the following master’s degrees:

**Academic**
- Master of Arts (M.A.)
- Master of Science (M.S.)
- Master of Fine Arts (M.F.A.)

**Professional Master’s Degrees in**
- Architecture (M. Arch.)
- Bioradiology (M. Biorad.)
- Business Administration (M.B.A.)
- City Planning (M.C.P.)
- Criminology (M. Crim.)
- Engineering (M. Eng.)
- Forestry (M. F.)
- Journalism (M.J.)
- Landscape Architecture (M.L.A.)
- Law (LL. M.)
- Library Science (M.L.S.)
- Public Health (M.P.H.)
- Public Policy (M.P.P.)
- Social Welfare (M.S.W.)
- Teaching (M.A.T.)

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 master’s degree, though the rules and procedures described will be of interest to candidates in all fields.

**Preparation**

Normally a bachelor’s degree comparable to that offered at the University of California—with an undergraduate major either in the field of graduate study or a closely related field—is considered as acceptable preliminary training for study toward a master’s degree. The applicant’s undergraduate program of study must be approved as a sufficient foundation for advanced work by the graduate adviser in the student’s proposed field of study. The applicant’s scholastic record must also be of acceptable standard.

**Residence Requirement**

A minimum of three quarters of academic residence (as defined earlier under Academic Residence) is required for the master’s degree. Specific subject requirements are set by the schools and departments.

**Transfer of Credit from Other Institutions**

Up to 6 quarter units (or 4 semester units) of courses taken at other institutions may be applied toward the degree, upon approval of the Dean of the Graduate Division. These units are allowed if earned in graduate status at an institution of high standing, but they cannot be used to reduce the minimum residence requirement or minimum requirement of graduate-level units. Requests for degree credit for such courses are not considered until a student has completed at least one half of the program for the master’s degree and is applying for advancement to candidacy. The student’s entire record must indicate superior scholarship.

**Course Credit by Examination**

A student in residence may receive a limited amount of course credit toward his 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. Approval to take such examinations must be given by the Dean of the Graduate Division and by the instructor, or, where no instructor is designated, by the departmental chairman.

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1 Application for admission is made both to the Graduate Division and the School of Law.
2 For further information, see page 45.
3 Credit for graduate work completed on other campuses of the University of California may be granted in excess of 6 units. Requests are handled on an individual basis.
Standard of Scholarship  Every graduate student must maintain a minimum grade-point average of B (3.0) for all work undertaken in graduate status. Only courses graded A, B, C (with or without affixes), or P are accepted in satisfaction of degree requirements. No more than one-third of the master’s program may be fulfilled by courses graded Pass and then only if approved by the department.†

Courses graded below C– do not yield unit credit toward a higher degree irrespective of the overall grade-point average.

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) are 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, individual study and research, or other individual graduate work undertaken by a graduate student, may be evaluated by means of the grades satisfactory and unsatisfactory (S and U). Such courses are numbered in the “600 series” and do not count toward academic residence or the unit requirement for a higher degree. No credit will be allowed for work graded unsatisfactory.

Disqualification on grounds of poor scholarship is at the discretion of the Dean of the Graduate Division.

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 30 quarter units and a thesis. At least 12 of these units must be in graduate courses (200 series) in the major subject. Course units are not granted for the thesis.

Plan II requires 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 bears the approval of the student’s major department or school and a precise statement of the studies on which the application is based. Application must be made not later than the end of the second week of instruction of the quarter in which the degree is to be awarded. If a student is to submit a thesis, however, he should consult his adviser about advancement to candidacy as early as possible so that the appropriate committee can be formed.

The Master’s Thesis  Students under Plan I, described above, must submit a thesis in typewritten or printed form (or other form deemed acceptable by the Graduate Council). If typewritten, it must be double spaced on medium weight,†

† For further information on grades and grade points see page 16.
8½" by 11" paper of good quality, with a minimum left-hand margin of 2". It must be unbound and without perforations, and the type must be adequate for photographic reproduction. One copy (the original, if typewritten), following approval by the student’s thesis committee, is filed with the Dean of the Graduate Division. Further information regarding the organization and format of the thesis is available from that office.

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

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

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

### The Doctor’s Degree

Instruction is offered on the Berkeley campus leading to the following doctor’s degrees:

- **Academic**
  - Doctor of Philosophy (Ph.D.)
  - Professional Doctor’s degrees in
    - Criminology (D. Crim.)
    - Education (Ed. D.)

- **Engineering** (D. Eng.)
- **Law** (J.S.D., J.D.)
- **Library Science** (D.L.S.)
- **Public Health** (Dr. P.H.)
- **Social Welfare** (D.S.W.)

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 completion.

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† The Juris Doctor degree (J.D.) has replaced the previously offered LL.B. as the basic degree in Law. Since it is a graduate degree, application for admission is made both to the Graduate Division and the School of Law.
of specified courses. The degree is awarded in recognition of a candidate’s knowledge of a broad field of learning and his 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.

**Preparation** A prospective candidate for a doctor’s degree must possess a bachelor’s degree from the University of California, or an equivalent degree from an institution of comparable standing, with sufficient undergraduate preparation for advanced work in his proposed field, as determined by the department of his choice. The study of foreign languages should also be a strong part of undergraduate preparation for Ph.D. degree study.

**Residence Requirement** As defined earlier, minimum residence of two years, or six quarters, is required for the Ph.D., although most candidates actually spend closer to four years.

**Program of Study** The candidate’s program of study must be approved by the Graduate Council. It must embrace a field of study previously approved by the department(s) or group concerned, and it must extend over a period of at least two years. Many of the doctoral programs require more than two years of study; in any case, it is the candidate’s performance rather than his length of study that leads to recommendation for the degree. Normally the last year must be spent in continuous residence.

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 he has chosen his field of study the student should confer with his graduate adviser to select the sequence of courses that will best prepare him for his qualifying examinations and his 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 department programs. 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 list of Graduate Groups on the Berkeley campus:

**Group in Agricultural Chemistry**
Professor John Whitaker, Davis, Chairman
Professor David L. Brink, Graduate Adviser
478 Richmond Field Station, Campus

**Group in Ancient History and Archaeology**
Professor Darrell A. Amyx, Chairman
238 Kroebier Hall

**Group in Asian Studies**
Professor Bruce R. Pray, Chairman
2538 Channing Way

* This is the fall 1970 listing. Chairmen for 1971–72 will be chosen in June.
Group in Atmospheric and Space Sciences
Professor John H. Reynolds, Chairman
117 Birge Hall

Group in Biostatistics
Professor Jacob Yerushalmy, Chairman
306 Earl Warren Hall

Group in Biophysics, Biophysics, Biophysics, and Medical Physics
Professor Cornelius A. Tobias, Chairman
363 Donner Laboratory

Group in Comparative Biochemistry
Professor M. A. Joslyn, Chairman
313 Hilgard Hall

Group in Comparative Pathology
Professor Stewart H. Madin, Chairman
3510 Life Sciences Building

Group in Endocrinology
Professor Howard A. Bern, Chairman
4079 Life Sciences Building

Group in Environmental Health Sciences
Professor Bernard D. Tebbens, Chairman
% School of Public Health
19 Earl Warren Hall

Group in Epidemiology
Professor Warren Winkelstein, Jr., Chairman
% School of Public Health
19 Earl Warren Hall

Group in Folklore
Professor Alan Dundes, Chairman
232 Kroeber Hall

Group in Food Science
Professor Barbara M. Kennedy, Chairman
119 Morgan Hall

Group in Genetics
Professor Everett R. Dempster, Chairman
345 Mulford Hall

Group in Immunology
Professor Sanford S. Elberg, Chairman
3510 Life Sciences Building

Sponsoring Committee for Latin American Studies
Professor Woodrow W. Borah, Director
% Department of History
3229 Dwinelle Hall

Group in Logic and the Methodology of Science
Professor J. Frits Staal, Chairman
247 Campbell Hall

Committee on Medieval Studies
Professor Richard L. Crocker, Chairman
% Department of Classics
5310 Dwinelle Hall

Group in Microbiology
Professor H. J. Phaff, Davis, Chairman
Professor Michael Doudoroff, Graduate Adviser
% Department of Bacteriology and Immunology
5559 Life Sciences Building

Group in Nutrition
Professor Richard L. Lyman, Chairman
% Department of Nutritional Sciences
119 Morgan Hall

Group in Parasitology
Professor Deane P. Furman, Chairman
411 Wellman Hall

Group in Physiological Optics
Professor Warren Winkelstein, Jr., Chairman
101 Minor Hall

Group in Plant Physiology
Professor Theodore C. Broyer, Chairman
108 Hilgard Hall

Group in Range Management
Professor John A. Zivnuska, Chairman
% School of Forestry and Conservation
145 Mulford Hall

Group in Romance Languages and Literatures
Professor Luis Monguió, Chairman
% Department of Spanish and Portuguese
4309 Dwinelle Hall

Group in Romance Philology
Professor Ruggero Stefanini, Chairman
% Department of Italian
5125 Dwinelle Hall

Committee for Certificate in Russian and East European Studies
Professor Martin Wolins, Graduate Adviser
227 Haviland Hall

Group in Science/Mathematics Education
Professor Frederick Reif, Chairman
347 Birge Hall

Group in Soil Science
Professor Paul L. Gersper, Chairman
% Department of Soils and Plant Nutrition
108 Hilgard Hall

Group in Wood Science and Technology
Professor Fred E. Dickinson, Chairman
478 Richmond Field Station, Campus
To allow the student an approach to his field that, in its breadth, falls between those 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. In such programs, the student may prepare a proposal for a course of study under the sponsorship of three faculty members. Final approval of every individual graduate program and admission of each student into such a program must be granted by the Graduate Council. Degree requirements must be completed in accordance with Graduate Council policies and the degree is awarded in a field stipulated by the Council for the individual student when it admitted him. 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. Advice on procedures for such *ad hoc* programs is presently available from the Dean and Associate Deans of the Graduate Division.

**Foreign Language Requirement** The requirement serves (1) to make certain that a Ph.D. candidate has the ability to acquire wide knowledge in his field of study, and (2) to enable him to keep up with foreign developments in the field. There is sufficient flexibility to this requirement to enable each department or group to adapt it to the needs of the individual candidate. Before advancement to candidacy, and preferably before admission to the Qualifying Examinations (see below), the student must satisfy one of the following options, as determined by his department or group:

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

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

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

Departments will periodically review their procedures for fulfillment of the language requirement and make appropriate recommendations to the Dean of the Graduate Division. Changes in departmental procedure should be brought to his attention; specification of requirements lower than or markedly different from those established here can be accomplished at the discretion of the Graduate Council on petition by departments.

The Dean will periodically review the administration of the language requirement to determine whether the standards set by the Graduate Council are being maintained and report his recommendations to the Council.
The above constitutes the general foreign language requirement for the Ph.D. degree; the student’s department(s) may require knowledge of more than two languages (some departments currently require as many as five). The prospective graduate student is strongly urged to begin his language preparation in his undergraduate years. Noncredit courses for graduate students are offered by the various language departments to prepare candidates for reading examinations.

**Notice of Intended Candidacy** Notice of his intention to proceed to candidacy for the Ph.D. degree should be given by the student to his department or group as early as possible in his graduate career, preferably by the end of the second quarter of residence.

**Qualifying Examinations** Before admission to candidacy a student must pass a series of qualifying examinations administered by a committee appointed by the Graduate Council. He must have removed any deficiencies in his training, fulfilled the foreign language requirement, and maintained better than a B average in all course work undertaken in graduate status.

**Advancement to Candidacy** Application is made on a form furnished by the Graduate Division. The completed form, bearing the endorsement of the student’s department, is filed with the Dean of the Graduate Division, who determines whether all formal requirements have been met. A fee of $25 must be paid when the application is filed.

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

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<th>Applied Mathematics</th>
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<th>Palaeontology</th>
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<td>Architecture</td>
<td>Genetics</td>
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<td>Astronomy</td>
<td>Geography</td>
<td>Plant Physiology</td>
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<td>Bacteriology</td>
<td>German</td>
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<td>Botany</td>
<td>History</td>
<td>Romance Philology</td>
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<td>Comparative Literature</td>
<td>Immunology</td>
<td>Slavic Languages and Literatures</td>
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<td>Computer Science</td>
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<td>Economics</td>
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<td>Electrical Engineering</td>
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<td>English</td>
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**Doctoral Dissertation** The format of the Ph.D. 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, must be submitted to the committee in charge (see below), and must receive both its approval and the approval of the Graduate Council. The dissertation is one of the most important requirements for the Ph.D. 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 his department or group:

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

Under 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 his research and judge the merits of his dissertation. This committee may require any necessary conferences for elucidation of the subject treated in the dissertation. After presentation of the dissertation, but before final action is taken upon it, the committee may, if deemed necessary, require the candidate to defend the dissertation in a formal oral examination.

After the dissertation has been approved by the candidate's committee, two copies (one an original) are filed with the Dean of the Graduate Division on a date specified by that office. Along with the dissertation, an abstract of it in quadruplicate not to exceed 600 words, with one copy signed by the dissertation chairman, 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. Departmental choice of doctoral Plans A and B is fixed as listed below.

**Facilities and Services**

**Foreign Language Training** When space is available, University graduate students and faculty may facilitate their research and overseas field work by enrolling in courses for oral proficiency training in any of the twenty-eight languages taught at the Defense Language Institute at the Presidio of Monterey.

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<th>PLAN A</th>
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<td>Sciences</td>
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<td>Anthropology</td>
<td>Bacteriology</td>
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<td>Applied Mathematics</td>
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<td>Biophysics</td>
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Application forms may be obtained from the Secretary, University of California Language Training Advisory Committee, University of California, Santa Cruz, California 95060.

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

Graduate Theological Union  The Graduate Theological Union in Berkeley offers graduate programs in religion that consist of Union courses as well as courses offered in the Graduate Division at Berkeley. Examinations, the dissertation, and the general scope of the program are under the direction of faculty members representing both the University and the Graduate Theological Union. All applicants to this program must follow the normal Graduate Division admissions procedure, observing the Graduate Division and departmental deadline dates, supplying required documentation, and having their applications go through the customary reviews. Initial information about the program, a catalogue, and application forms should be obtained through the office of the Graduate Theological Union, 2465 LeConte Avenue, Berkeley, California 94709.

Joint Doctoral Programs  Special Education—A joint doctoral program in special education leading to either the Ph.D. degree or the Ed.D. degree is offered by the University at Berkeley and San Francisco State College. 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: Dean, School of Edu-
cation, University of California, Berkeley, California 94720, or to the Department of Education, San Francisco State College, 1600 Holloway Avenue, San Francisco, California 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 College. For application material and additional information, write to: Professor James W. Fristrom, Department of Genetics, 345 Mulford Hall, University of California, Berkeley, California 94720. Materials Science and Materials Engineering—A joint doctoral program in engineering leading to the Ph.D. or D.Eng. degree is offered by the University at Berkeley and San Jose State College. For application material and additional information, write to: Department of Materials Science and Engineering, 210 Hearst Memorial Mining Building, University of California, Berkeley, California 94720, or to the Department of Materials Science, San Jose State College, 125 South Seventh Street, San Jose, California 95114.

University support for these programs is reflected in the continuing concern shown by the Coordinating Committee on Graduate Affairs for their quality and in the constant review by various agencies of the University of the guidelines established for the approval of future programs. The importance of these programs for State College students, many of whom live in the state's larger urban areas, and their place in the state government's overall plan for the support of doctoral education have received special—and positive—attention in these considerations.

Study Abroad for Graduate Students

**Education Abroad Program** Graduate students who have been admitted for study toward a higher degree may, under certain conditions, be granted permission to study abroad. This may be independent thesis study or participation in University-sponsored programs abroad. The most extensive of these programs is the Education Abroad Program. In order to qualify, an applicant must have completed at least one year in residence before departure for study abroad, must demonstrate the language proficiency required of participants in the Education Abroad Program, and must secure the approval of his Graduate Adviser, his Departmental Chairman, the Graduate Dean, and the Campus Director for International Education. If the student desires that the unit credit earned at a Center be counted toward his graduate program, he must, after his return to Berkeley and with departmental support, petition the Dean of the Graduate Division to present his request to the Administrative Committee of the Graduate Council. For additional information and application materials, write to: Office of International Education, Room 104A, 2538 Channing Way, Berkeley, California 94720.

The University also belongs to Consortia, which provides limited study opportunities in Eastern Europe as well as language programs in Cairo, Tokyo, and Taipei. This information, too, may be obtained from the Office of International Education.

**Work/Study Opportunities in Professional Schools Program Abroad** The Professional Schools at Berkeley conduct a program in New Delhi, India. Students
from each of the professional schools spend at least two quarters working and studying in the program. A seminar is given each quarter by the program’s director (a U.C. faculty member). The students also work twenty hours per week as interns in local government or private agencies appropriate to their professional interest.

Students who have completed the equivalent of one year of graduate study at Berkeley are eligible to apply. Fellowships covering round trip air fare and living expenses in the foreign country are provided for the Professional School Fellows. Regular campus aid funds may also be used abroad.

Interested students should inquire at the office of the Dean of their professional school, or at the Office of International Education, 2538 Channing Way, Room 104-A.

For other programs abroad for graduate students, see “Study Abroad” under the “Services and Facilities” section of this catalogue.

Financial Aid to Graduate Students

Over 500 fellowships and graduate scholarships are offered on the Berkeley campus. Awards range from about $300 to $3,600 for the academic year, the majority carrying stipends in the range of $2,000 to $2,400. Some are restricted to beginning graduate students, others to advanced graduate students; some are restricted to specific fields of study, others are open to all students by competition. Provision is made also for a number of traveling fellowships.

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

Information Information on awards available each year is issued early in the fall. Requests for information should be addressed to the Graduate Admission/Fellowship Office, Room 1, California Hall, University of California, Berkeley, California 94720.

Application Procedure The fellowship application deadline for the 1972-73 competition is December 1, 1971. Since the date is subject to change, a student should write for information in the late summer or early fall of the year preceding his proposed enrollment at Berkeley.

Students who will be enrolling as new graduate students in a fall quarter may apply for admission and for consideration for a fellowship or graduate scholarship by completing a combined application for Admission and Fellowship* and filing it by the deadline set for receipt of fellowship applications.

Newly entering foreign students, however, fill out a separate application for admission, not the combined form. Since the number of fellowship and graduate scholarship awards available to them is extremely limited, the following procedure has been adopted: as the applications for admission of new foreign graduate students are reviewed, departments may recommend to the Fellowship Committee that individuals of high academic distinction be considered for

* Applications are not sent by airmail unless the applicant forwards in advance sufficient postage for 4 ounces of airmail postage.
awards. This will be done entirely by departmental recommendation, not by the applicant's special request. Those who do receive fellowship awards will be notified by the Graduate Admission/Fellowship Office on or about April 1. Foreign students not receiving these awards will simply be notified of their admission or denial of admission when action has been taken on their applications, without reference to the April 1 date.

Continuing or returning graduate students at Berkeley in a fall quarter may obtain necessary fellowship application material from departmental offices or from the Graduate Admission/Fellowship Office, Room 1, California Hall. These applications and supporting materials must be filed with the department by the date established for new student applications for the year in question.

Applications for all the fellowship and graduate scholarship award programs mentioned here and on the following page are considered only once a year, and, except for certain federal awards which may be taken up in the summer, are for the academic year beginning with the fall quarter and extending through the winter and spring quarters. None of the awards is made in mid-year.

**Announcement of Awards** Awards are announced on or about April 1, and must be accepted or refused, in writing, by April 15. The acceptance of a fellowship or graduate scholarship carries with it the presumption that the incumbent will devote full time to graduate study and research at the University of California. Institutions which are members of the Association of Graduate Schools in the Association of American Universities require that anyone who resigns an accepted appointment after April 15 must, in order to become eligible to fill a vacancy in a member institution, receive consent to do so from the university that first appointed him.

**Criteria of Appointment** The purpose of graduate appointments is to provide able and productive scholars for the future. Awards are thus made as a mark of honor, primarily on the bases of outstanding scholastic achievement and promise. The applicant's academic record, evidence of his ability in research or of some other creative accomplishment, his intellectual capacity, and his general promise, are all strongly considered. Normally the award is for one academic year.

Because a fellowship is designed to enable a student to devote full time to studies, appointees have, until recently, been prohibited from accepting employment concurrent with their period of tenure. However, in view of current living costs, the Dean of the Graduate Division may, upon recommendation of the student's graduate adviser, approve a limited amount of paid employment, provided the fellow who is able to carry a full program of graduate study with distinction.

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

**National Defense Education Act Fellowships** A number of National Defense
Graduate Fellowships are available under Title IV of the National Defense Education Act in specified fields of study. National Defense Foreign Language Graduate Fellowships are also available under Title VI of the same act, which provides for awards in certain designated modern foreign languages.

Students who apply through the regular University fellowship competition will be considered for awards under both Title IV and Title VI without making further application.

**Teaching Assistantships**

Many departments make teaching assistantships available to outstanding graduate students, providing them a salary of $3,447 per academic year. The teaching assistant, chosen for his scholarly achievement and his promise as a teacher, must be a full-time student in residence. He serves his apprenticeship under the active tutelage and supervision of regular faculty members. *Application is made directly to the chairman of the department in which the student wishes to teach.* Students working for the Ph.D. degree in some departments are required to complete a specified minimum period of teaching as part of their degree programs.

**Teaching Fellowships**

An appointee to a teaching fellowship must be a full-time student in residence who has been advanced to candidacy for the doctorate, or otherwise achieved appropriate professional maturity. He is chosen for his 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 $4,158 for a half-time annual appointment. *Application is made to the individual departmental chairman.*

**Associateships**

The title “Associate” is assigned to teachers employed temporarily and not under consideration for appointment as “Instructor” or “Professor.” Normally, their services, either full- or part-time, are contracted to give independent instruction in lower division courses. Associates may or may not be registered graduate students or candidates for degrees at this University. Appointees who are registered graduate students must possess a master’s degree or equivalent training and have had at least one year of teaching experience (including that of a teaching fellowship or assistantship) in or outside of the University. Stipends for full-time service range from $7,152 to $8,952. *Application is made to the individual departmental chairman.*

**Research Assistantships**

Qualified full-time graduate students in residence may seek positions as research assistants in the various departments, institutes, and bureaus at the University. The stipend is $3,660 per year (11 months). *Application is made directly to the department, institute, or bureau.*

**Waiver of the Nonresident Tuition Fee**

A very limited number of waivers of the nonresident tuition fee are available each academic year. They are awarded to graduate students with distinguished academic records or to teaching assistants, by departmental recommendation, until departmental waiver quotas are filled. Applicants must be enrolled full-time in a program of study leading to a

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*The salary for teaching and research assistantships is subject to United States income tax deductions. Salary figures given are gross, not net. Information about salary payment schedules should be obtained at the time an appointment is offered, since payment dates for work performed may be considerably later than dates when registration fees are due.*
higher degree and cannot be the recipients of a fellowship, scholarship, grant-in-aid, or other award from a city, state, or national government, or from any other source that would make them ineligible for the waiver privilege. Applications can be obtained from the Graduate Admission/Fellowship Office and must be returned to that office on or before May 15. Awards are usually made in late June. Waivers are not available during the summer sessions.

**GRADUATE DEGREES OFFERED ON THE BERKELEY CAMPUS**

Applicants should specify both general field and emphasis, if any.

† Agricultural Chemistry, Ph.D.
Agricultural 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.
† Atmospheric and Space
Sciences, M.A., Ph.D.
Bacteriology, M.A., Ph.D.
Biochemistry, M.A., Ph.D.
† Biophysics, Ph.D.
† Biodiagnosis, M. Biodiag.
† Biostatistics, M.A., Ph.D.
Botany, M.A., 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.
Ph.D. program emphases:
Greek, Latin
† Comparative Biochemistry,
M.A., Ph.D.
Comparative Literature, M.A.,
Ph.D.
† Comparative Pathology, M.S.,
Ph.D.
Computer Science, M.A., Ph.D.
Criminology, M.Crim., D.Crim.
Demography, M.A., Ph.D.
Design, M.A.
Dramatic Art, M.A., Ph.D.
Economics, M.A., Ph.D.
Education, M.A., Ph.D., Ed.D.
† Endocrinology, M.A., Ph.D.
Engineering, M.S., M.Eng.,
Ph.D., D.Eng.
Engineering Science,
M.S., Ph.D.
Emphases for Engineering
and Engineering
Science
Civil Engineering
Electrical Engineering and
Computer Sciences
Industrial Engineering and
Operations Research
Materials Science and
Engineering
Mechanical Engineering
Naval Architecture
Nuclear Engineering
English, M.A., Ph.D.
Entomology, M.S., Ph.D.
† Environmental Health Sciences,
M.S., 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.
Geography, M.A., Ph.D.
Geology, M.A., Ph.D.
Geophysics, M.A., Ph.D.
German, M.A., Ph.D.
Greek, M.A.
History, M.A., Ph.D.
History of Art, M.A., Ph.D.
† Immunology, M.A., Ph.D.
Italian, M.A., Ph.D.
Italian, M.A., Ph.D.
Journalsim, M.J.
Landscape Architecture, M.L.A.
Latin, M.A.
† Latin-American Studies, Ph.D.
Law, J.D., LL.M., J.S.D.
† Law and Society, M.A.
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 Physics, Ph.D.
† Microbiology, M.A., Ph.D.
Molecular Biology, M.A., Ph.D.
Music, M.A., Ph.D.
Near Eastern Languages, 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 Policy, M.P.P., Ph.D.
Public Health, M.P.H., Dr.P.H.
† Range Management, M.S.
Rhetoric, M.A., Ph.D.
† Romance Languages and
Literatures, Ph.D.
Emphases:
French, Italian, Spanish
† Romance Philology, Ph.D.
Sanskrit, M.A., Ph.D.
Scandinavian Languages and
Literatures, M.A., Ph.D.
† Science/Mathematics
Education, Ph.D.
Slavic Languages and
Litteratures, M.A., Ph.D.
Social Welfare, M.S.W., D.S.W.
Sociology, M.A., Ph.D.
† Soil Science, M.S., Ph.D.
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.

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

Interdisciplinary Groups  See information on page 34.

Master of Arts in Teaching  The degree of Master of Arts in Teaching is offered by the Departments of Comparative Literature, English, and German jointly with the School of Education. At the present time, it is limited to the three 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 three subject fields. Inquiries should be directed to the appropriate academic department and to the School of Education.

Medieval Studies  Students interested in specializing in medieval studies may be assisted by a Committee for Medieval Studies Advisory to the Dean of the Graduate Division. In drawing up a program of study, the committee will provide necessary information both to students and their faculty advisers.

Teaching Credentials  Work leading to the Standard Teaching Credential is given on the Berkeley campus. For details, please consult the Announcement of the School of Education.
Services and Facilities

The Berkeley campus has a vast range of facilities and services for your use. This section of the catalogue offers a general outline of campus services, student organizations and activities, fees and expenses, financial aids, and housing. You may obtain more extensive information by writing directly to the appropriate office for the information desired. Instructions for obtaining information are also included with admissions materials you receive prior to your arrival on the Berkeley campus.

Services to Students

Student Health Service  Located in Cowell Memorial Hospital in the eastern area of the campus, the Student Health Service is financed by a portion of your registration fee. This service is offered to conserve your time for classwork and studies by preventing and treating acute illnesses.

When you pay your registration fee, you are eligible for health service from the first day of the quarter in which you register to the last day of the quarter, or to the date of official withdrawal if you withdraw prior to the end of a quarter or semester. You may receive hospital care up to ten days during a quarter, fifteen days during a semester. Following verification of academic status by departments concerned, the non-registered graduate student working toward an advanced degree may pay a Student Health Service fee and be eligible for care at the Health Service during the summer months, provided he/she has been a fully registered student the previous quarter.

With certain exceptions, the Health Service does not provide continuing treatment or surgery for chronic physical defects or illnesses present at the time of entrance to the University; for injury or illness under treatment elsewhere; or for conditions where medical or surgical treatment is not immediately necessary and may be postponed to avoid interruption of classwork. A charge is made for all dental services.

Optometry Clinic  Complete emergency and routine vision services are provided in the Optometry Clinic of the School of Optometry for students, faculty, University employees, and the general public to the extent possible. These services are a part of the teaching program in the School of Optometry and are not included as a part of the Health Service.

Counseling Center  As a regularly enrolled student, you may make use of the services of a professionally qualified staff member to answer questions or to talk at length about your scholastic performance, choice of vocation, or personal adjustment. You may request help in improving study skills, assessing interests and aptitudes, deciding on a major, or exploring long-range career opportunities. You may, if you wish, discuss personal problems. Marital counseling is also available. Psychological and aptitude testing are provided as part of the counseling process, as well as the use of an extensive library of reference materials on oc-
SERVICES TO STUDENTS

Cupations, professions, and career opportunities. All communications between students and counselors are treated confidentially.

If you wish to improve your basic educational skills, you may use the Reading and Study Skills Service, which offers diagnosis and correction of study problems, including reading, writing, spelling, and vocabulary difficulties. The Service maintains a modern, electronically equipped reading laboratory supervised by a professionally trained staff.

The Center also offers legal counseling and special testing when required for admission to graduate or undergraduate programs. It also maintains directories and catalogues of colleges, professional and technical schools, as well as lists of scholarships, fellowships, and loans. You may use these reference materials even if not seeking counseling service.

Further inquiry or appointments may be made at the Counseling Center, Temporary Building 5, just north of the Campanile Esplanade.

Student and Alumni Placement Center If you seek part-time, temporary, vacation, or odd-job employment, apply to the Student Division, first floor of Temporary Building 6. You should arrange your class schedule before applying to the Center. To be served, you must identify yourself by a current registration card or a letter of admission to the University. The Center's staff provides job assistance in meeting financial obligations and helps students determine those areas of work for which they are qualified. The University advises that you avoid part-time employment in your first quarter at Berkeley.

School-year jobs for students cover a wide range, skilled and unskilled. These include services, technical, clerical, sales, domestic, manual, and many other kinds of employment. Some employers offer room and board in lieu of salaries. Work Study Program job opportunities, designed for needy students, include a variety of opportunities, both off and on campus. Before applying to the Placement Center for these Work-Study Program opportunities, certification of financial need must be obtained from the Office of Special Services, 2539 Channing Way.

The Career Division of the Placement Center maintains services on the second floor of T-6, in career planning and placement for University of California degree candidates and alumni. Seniors and graduate students should register with the Career Division no later than their final year of study. Annually, the Center arranges on-campus interviews with employer representatives who visit the campus each fall and spring. Other types of career employment information and assistance are available to prospective graduates and alumni the year around.

The Center supports and subscribes to all equal opportunity employment practices.

Office of Educational Career Services Located at North Gate Hall, Berkeley, California 94720, this is the placement center for teaching, administrative, supervisory, and research positions—in universities, colleges, community colleges, high schools, and elementary schools, in this country and abroad. The Office serves all qualified graduates and eligible prospective graduates of the University of California. The Office registers candidates and assembles information into personal files concerning background, training, and professional experi-
ience, in order to match candidates with available positions. Placement ad-
visers counsel candidates, communicate with employers, arrange interviews, and
recommend qualified candidates to employers. The University reserves the right

to recommend only those persons who are considered to be fully qualified.

Living Accommodations There is a wide selection of housing at the Berkeley
campus. Admission to this campus does not guarantee housing reservations.
You should acquaint yourself, well in advance of your enrollment, with the vari-
ous living arrangements. Return the request card in your Admissions Packet to
receive descriptive material. Housing Office also maintains rental listings, but
you must visit the office after you arrive on campus to make use of the files,
which change daily.

More than 3,000 men and women live in University residence halls. An equal
number live in fraternities, sororities, cooperatives, and boarding houses. There
are apartments for 920 married students in University Village. The remaining
students live in rooms and apartments in the community. Students consider
their individual wishes and needs and select their own accommodations.

Office of Financial Aid The Office of Financial Aid is located at 2539 Channing
Way. By visiting or writing the office, you may obtain information on Under-
graduate Scholarships, Educational Opportunity Grants, University Grants-in-
Aid, National Defense Education Act Loans, University Loans, College Work-
Study Program, Educational Fee Deferment, and other aid programs.

Application for all types of financial aid should be submitted at the earliest
possible date with application periods opening in October and ending January
15th.

Among the possibilities for financial aid are Undergraduate Scholarships which
are made on the basis of scholarship and financial need. For details, consult the
Committee on Undergraduate Scholarships and Honors, 2539 Channing Way.

California State Scholarships, awarded by the State, range from $300–$600
and apply toward the registration fee. You may obtain application forms and
further information from the California State Scholarship and Loan Commission,
1714 P Street, Sacramento, California 95814, beginning about October 1st for
the following year.

Prizes are awarded on the basis of competition or outstanding ability in some
area of creative or scholarly achievement. For information consult the Committee
on Prizes, Room 9, 2543 Channing Way.

Information detailing fellowships and graduate scholarships may be obtained
from the Graduate Division, 1 California Hall.

Educational Opportunity Grants, University Grants-in-Aid, and National De-
fense Education Act Loans are administered by the Office of Financial Aid, 2539
Channing Way. Complete information concerning scholarship and loan pro-
grams is contained in publications which may be obtained by writing the Office
of Financial Aid. Additional information detailing fellowships and graduate
scholarships may be obtained from the Graduate Division. If you apply for a
scholarship, you may apply for other forms of financial aid on an accompanying
application form.

Social Security Benefits If you have questions regarding Social Security bene-
fits, inquire at the Office of Financial Aid, 2539 Channing Way.
Aid to Veterans  If you have questions concerning educational benefits under federal (including new legislation) or California state programs, inquire at the Office of Financial Aid, 2539 Channing Way.

Aid to Veterans and Dependents of Veterans  If you are a veteran, you may secure application forms (VA Form 21E-1990) from the Veterans office at colleges and universities, from local representatives of veterans organizations, from the Red Cross, or from Veterans Administration offices. The application should be accompanied by a copy of your DD-214 (Report of Separation from the Armed Services) and, if applicable, all the documents necessary to support evidence of dependency. Unless you have your application on file with the Veterans Administration within 15 days after the beginning date of classes, you will not be eligible for benefits from the first day of classes. If you have questions, inquire at the Office of Financial Aid.

Reserve Officers Training Corps  The University of California, as a land-grant institution established by the Morrill Act of 1862, offers courses and programs in military training. This training is voluntary, and affords a young man the opportunity to qualify for a commission as an officer in the Army, Marine Corps, Navy, or Air Force while completing his college education. Reserve Officer Training Corps (ROTC) courses are offered by three departments: Aerospace Studies (Air Force), Military Science (Army), and Naval Science (Navy and Marine Corps). The departments furnish all necessary textbooks, uniforms, and supplies, and arrange draft deferment. The programs carry a monthly stipend in the junior and senior years, and additional financial aids are available to qualified students. Individual programs are summarized briefly as follows:

**Air Force  Four-Year Program**—Open to a limited number of qualified male freshmen. During the freshman and sophomore years students attend AFROTC classes as described on page 80. After the sophomore year students may compete for the Commissioning Program and if selected attend four weeks of field training at an Air Force base, and participate in AFROTC during their junior and senior years. Upon graduation and successful completion of AFROTC the student qualifies for a commission as a Second Lieutenant in either the Air Force Reserve or Regular Air Force (Distinguished Graduate) and active duty in an officer specialty related to his academic preparation. For nonflying personnel the active duty commitment is four years, and for flying personnel it is five years after completing Air Force flying training. Scholarships are available to well-qualified cadets in the four-year program. These cover full tuition, laboratory expenses, registration fees, and an allowance for books, and $50 per month in nontaxable pay.

**Two-Year Program**—A two-year program is offered to undergraduate or graduate students. Selected applicants complete six weeks of field training during the summer preceding the Commissioning Program. Two academic years are required to complete the program as described on page 80. The commissioning and active duty procedures are as described above. Cadets are paid $50 per month during the two academic years.

**Flying Training**—Applicants who are interested in flying training are particularly encouraged to apply. Those qualified receive free flight training during their last year in AFROTC and may qualify for a private pilot’s license. For additional information on any phase of the AFROTC program, please consult the Department of Aerospace Studies, 47 Harmon Gymnasium.
Army Three programs:

1. **Four-Year Program** Open to male freshmen and to other male undergraduates who will be in academic residence for a time sufficient to complete the program. During the last two years of the program, students receive a $50 month stipend; admission to this phase of the program is competitive. The student completes a six-week summer camp between the third and fourth year; summer camp pay is approximately $193.20 per month plus travel expenses. Upon graduation he accepts, if offered, a commission in the Army Reserve; outstanding students are eligible for a commission in the Regular Army. Active duty obligation for Reserve officers is two years. Entry on active duty may be delayed for graduate study and participating students may receive draft deferments.

2. **Two-Year Program** Substitutes an additional six-week summer camp, between the sophomore and junior years, for the first two years of military science classes. Open only to students with upper division or graduate standing and intended principally, but not exclusively, for highly qualified transfer students. Admission is competitive. Other aspects of this program are identical to those of the four-year program. Interested students should apply at the Department of Military Science early in the winter quarter of their sophomore year.

3. **Scholarship Program**
   a. **Four-Year** Awarded annually, by nationwide competition among high school seniors, to outstanding prospective college students. Those selected receive $50 monthly stipend, payment of tuition (if any) and incidental and laboratory fees, and reimbursement for textbook purchases. Upon graduation, the student accepts, if offered, a commission in the Army Reserve; outstanding students are commissioned in the Regular Army. Active duty obligation is four years. Interested prospective University students should consult their high school guidance counselor for details.
   b. **Three-Year** Awarded annually to outstanding cadets who are completing their first year of the four-year program described above. Benefits and service obligations are identical to those described above for the four-year scholarships.
   c. **Two-Year** Awarded annually to outstanding cadets who are completing their second year of the four-year program described above. Benefits and service obligations are identical to those described above for four-year scholarships.
   d. **One-Year** Awarded annually to outstanding cadets who are completing their third year of the two- or four-year program. Benefits and service obligations are identical to those described for four-year scholarships.

For additional information on any of the programs and their benefits please consult the Department of Military Science, 151 Harmon Gymnasium.

Navy and Marine Corps Two programs:

1. **Naval ROTC Nonscholarship Program** Open by application to physically qualified male students between the ages of 17–21, who are U. S. citizens. The student receives at least $50 monthly during the junior and senior years, plus books and expenses for Naval Science courses. He completes one summer training session prior to the senior year. Upon graduation he is eligible for a commission in the Navy or Marine Corps Reserve, and serves three years of active duty. Commissions are also available in the U. S. Naval Supply Corps and Civil Engineer Corps Reserve.

2. **Naval ROTC Scholarship Program** Open by nationwide competition to physically qualified male students between the ages of 17–21, who are U. S. citizens. Candidates receive at least $50 monthly plus four years’ tuition, other fees of an instructional nature and textbooks for all University courses. The scholarship student completes three summer training sessions about six to eight weeks each. Upon graduation, he is eligible for a commission in the Regular Navy or Marine Corps, and serves four years of active duty. Commissions are also available in the U. S. Navy Supply Corps and Civil Engineer Corps. For additional information please consult the Department of Naval Science, 25 Callaghan Hall.

Facilities

**Campus Libraries** The University maintains a network of reading and research
libraries located throughout the campus. Together, they contain more than 3,900,000 volumes and 90,000 current periodicals and serials.

The Main Library houses an extensive loan stack collection in the humanities and social sciences; a current periodical room; a Reference Service which offers valuable assistance in library use and bibliographical research; a Documents Department containing official publications of the Federal, State, foreign, and international governments; a Map Room; a Newspaper and Microcopy Room; the Bancroft Library, which contains the Bancroft and Rare Books collections; the Morrison Library, a recreational reading collection; the South/Southeast Asia Library Service; and a graduate reading room and reserve service for the humanities.

The new Moffitt Undergraduate Library provides a substantial open stack collection of basic books and periodicals of interest to the undergraduate, significant books of contemporary concern, and reserve materials for undergraduate courses.

Branch and special libraries with collections in the biological, physical, and agricultural sciences, education, psychology, music, environmental design, anthropology, law, East Asian studies, librarianship, and social welfare are located on campus, usually in the same buildings as the academic departments or schools whose needs they serve.

All students are entitled to use these libraries, upon presentation of their registration card. However, borrowing privileges and access to the collection vary from unit to unit. For more information about the campus library system, please inquire at the General Reference Desk or Service Desk in the Main Library or the Reference Desk in the Moffitt Undergraduate Library.

Sports and Recreation Harmon Gymnasium for men is equipped with two swimming pools, as well as squash, handball, volleyball, and tennis courts, athletic fields, and a variety of indoor facilities. It is open throughout the year, free of charge, to every male student of the University, who may obtain, upon showing a student registration card, a locker and free use of gym clothing and equipment. Apply at 2-B Harmon Gymnasium. Hearst Gymnasium offers similar advantages to women students. Apply at Office, 110 Hearst Gymnasium.

A wide variety of instructional, intramural, extramural, intercollegiate, and recreational athletic programs and sports clubs are offered by the Department of Physical Education, Department of Intercollegiate Athletics, and the ASUC. Strawberry Canyon Recreational Area serves the entire University community with swimming pools, lounging, play, and picnic-barbeque areas. Further information may be obtained by calling Haas Clubhouse.

Dining The Dining Commons is just north of the Student Union and serves over 75,000 meals each week to the University community and visitors. On Sproul Plaza level: The Terrace serves hot meals, sandwiches and snacks; the Golden Bear restaurant offers table service; the Fence provides carry-out snack service. On the lower plaza level: a Cafeteria serves hot lunches and dinners; the Bear’s Lair, in the Student Union building, has grill and fountain service. The Commons also operates a catering service for special functions and student activities on campus; a mobile unit—the Oskimobile—makes scheduled stops at various locations with snack and sandwich service; and an Office Coffee plan.
**Student Union and Student Center** The Student Union, a six-level building located at the south entrance of the campus, is a focal point of student activities and recreation. It contains lounges, a television room, meeting rooms, Pauley Ballroom, an art exhibit area, a game room, a meditation room, a check-cashing service, a ticket office, the ASUC Store (a comprehensive book, stationery, and supply store), an information center, a bowling alley, a barber shop, a garage, a creative arts studio, the Bear’s Lair, and facilities for the ASUC musical organizations. Operating costs of the Student Union are largely financed by revenues from ASUC enterprises located within the facilities.

Eshleman Hall, the student office building, houses the student officers and senators as well as other student activities, ASUC publications, and the Department of Intercollegiate Athletics. An auditorium and theater completes the Student Center.

**Student Organizations and Activities**

**The ASUC** The Associated Students of the University of California is the official organization for student government. You automatically become a member upon payment of the ASUC fee along with other registration fees. This nonprofit organization, through its student-elected Senate, is responsible for directing a large variety of student activities and serves as official student spokesman in University affairs. You are urged to make use of your ASUC votes to secure the representatives you feel will serve you capably and articulately.

**The Community Projects Office (CPO)** This office, located on the street level of Eshleman Hall, serves as the ASUC clearinghouse for existing volunteer opportunities in the Bay Area and as the resource agency for the development of new projects. If you are interested in doing volunteer work of any type, the CPO provides an orientation program; files and information on the various projects; a library of commentary books, texts, and tutoring aids; and also sponsors numerous workshops in areas such as co-operative buying and reading instruction. The CPO is also working directly with a large number of Bay Area organizations, developing resources and doing research on campus, and has the necessary information and contacts for those interested in starting new projects in any area. The CPO employs a number of part-time student employees and a larger number of student volunteers. For these students, the CPO provides a meaningful and relevant link to the community while at the same time allowing the students to work on the campus.

**SUPERB** The Student Union Program, Entertainment, and Recreation Board, located in 303 Eshleman Hall, is responsible for developing and supervising an activities program for the ASUC to satisfy the cultural, educational, recreational, and social needs of the campus. Programs and activities planned include speakers, dances, exhibits, coffee hours, recreational exhibitions, cabarets, drama, movies, music and art festivals, and special presentations.

**Student Publications** Five student publications provide opportunities for activities in all phases of publishing: writing, editing, reporting, art and design, advertising, sales, and general management. They are:

*The Daily Californian*—the campus newspaper; published continuously since 1897, it has ranked among the best college papers in the country.
The Pelican—the quarterly humor magazine; specializes in jokes and satire, with articles and features of current interest.

The Blue and Gold—the official yearbook, covering virtually all phases of campus and academic life; it is a permanent record of the year's events.

California Engineer—a magazine of engineering and scientific topics, for both technical and general interests.

Occident—one of the oldest campus publications, it is the literary magazine, featuring poetry, fiction, criticism, and commentary, by students, faculty, and distinguished guest writers.

The center for all student publications except the Pelican is Eshleman Hall.

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

Committee for Arts and Lectures (CAL)—a program of drama, music, dance, and lectures. Some events are open to students and to the University community without admission charge. For those events requiring tickets, a reduced fee is usually available for registered students. Brochures announcing committee events may be obtained at the Committee's office in room 101 Zellerbach Hall or at the Information Desk of the Student Union.

Music—a large selection of groups, including the Men's Glee Club, the University Chorus, Repertory Chorus, California Band, and others which students may join for academic credit. Each week, also, there is a noon concert, open free of charge to the general public. The Symphony Forum is a program sponsoring record concerts on campus and providing for students inexpensive San Francisco Symphony tickets.

Theater, Television, and Radio—The Department of Dramatic Arts offers course credit to any student participating, either in a performing or backstage capacity, in one of its excellent stage productions. There is also a Radio-Television Theater, and Orchesis, a workshop in the study and performance of modern dance.

Debate—Varsity Debate and University Roundtable (the latter open to all regardless of experience), are the two debate organizations of the Berkeley campus, nationally respected for their excellence.

For further information about these and many 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 organizations on campus serving special interests and abilities. In the spring and fall of each year, an Activities Fair is held in the Student Center 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: Tower and Flame (lower division); Honor Students' Society (upper division); Phi Beta Kappa (a national
society of historical renown, open by invitation to the top seniors in nonprofessional fields); and others, including California Club, Gavel and Quill, and various groups for men and women separately. Most of these groups offer tutoring services.

Hobby and recreational groups abound. And 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.

International House  International House is a coeducational residence and program center for American and foreign students, primarily at the graduate level. Its activities include cultural and social events, home hospitality and educational tours. The program is designed to promote better understanding between all nationalities. For application and further information, write or call International House, University of California, Berkeley, California 94720; telephone number (area code 415) 848-6600.

Fraternities and Sororities  Membership in a fraternity or sorority is by invitation after a period of “rushing.” If you are interested, apply through the Interfraternity Council for men, or the College Panhellenic Association for women, both located in the Office of Student Relations and Programs, 201 Sproul Hall. This office will supply general information regarding program and costs.

General

The University Press  The University of California Press is one of the largest university presses in the country. It publishes scholarly books, about forty monograph series, and eight journals. The separate books (including a line of quality 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.

The Alumni Association  More than 55,000 graduates of the University find the California Alumni Association a means of working for the continued welfare of the University and its student body. The California Alumni Foundation provides financial assistance to more than 325 students each year, as well as funds for research, library acquisitions, and campus improvements. Members also receive advance application for football tickets, exclusive low rates at the Lair of the Bear summer camps at Pinecrest and discount and preferential treatment at Tahoe’s Four Seasons Lodge, and use of the facilities of the headquarters of the Association, Alumni House, where students and alumni alike are always welcome. The California Monthly magazine and a program of alumni meetings enable members to remain in close touch with the University and with one another. Information on young alumni programs; the traditional alumni events on Charter Day and Commencement; club activities throughout the state, the nation, and abroad, on foreign tours, and special events, is available at Alumni House.
Study Abroad for Undergraduate Students

As an undergraduate student at Berkeley, you enjoy a number of opportunities to study abroad at the following study centers around the world.

- Chinese University of Hong Kong
- Georg-August University, Goettingen, Germany
- Hebrew University, Jerusalem
- University of Bordeaux, France
- University of Lund, Sweden
- University of Madrid, Spain
- University of Padua, Italy
- International Christian University, Tokyo
- American University of Beirut
- Trinity College of Dublin University, Ireland
- Mexico City Center
- Paris (Graduate Teaching Credentials Program)
- Universities of Birmingham, St. Andrews, Stirling, Sussex, and Edinburgh, United Kingdom
- University of Bergen, Norway
- Intercollegiate Center for the Study of Classics in Rome
- India Professional Schools Program

To be eligible you must have a minimum of 2.75 overall grade-point average. For most programs, you are expected to complete with a grade of B the equivalent of six quarters of the language of the country in which you plan to study. Exceptions to this requirement are the programs in Japan, Hong Kong, Israel, Lebanon, Sweden, and Rome.

You receive full credit for the work taken overseas toward your degree. However, the number of courses you may take abroad in your major and the extent to which the work overseas satisfies breadth requirements, is subject to the approval of your department and/or college.

The undergraduate programs are intended primarily for juniors. If you wish to participate in the program as a senior, you should be aware of the senior residency requirement of your College which usually requires additional study at Berkeley for two quarters upon completion of the year abroad. There is also a maximum unit level college requirement of 195 units of which you should be aware.

The estimated cost of study abroad varies according to the centers. University scholarships, loans, and grants may be used to finance the year abroad.

Provision for graduate study has been included for most of the programs. Graduate students who wish to apply to study abroad on independent research projects, and who have satisfactorily completed a year of full-time graduate study at Berkeley, may do so if they obtain necessary approvals.

If you are interested, consult your academic advisers and the study abroad counselors in the International Education Office, Room 104-A, Building D, 2538 Channing Way.

University Police

The University of California Police Department was established by the State Legislature in 1947 to perform primary and general police functions on the campuses and properties of the University of California. Legislative sessions of 1962 and 1968 extended the delegation of peace officer powers status for University Police. Sections 23501 of the Education Code and 830 of the Penal Code assign full police powers to the University Police and afford
them primary law enforcement responsibility including the investigation of criminal offenses committed within the jurisdiction of the department. Police service is available twenty-four hours a day at the University Police Office, Room 2, Sproul Hall, or by telephoning (64)2-6760. The University Police also operate a lost-and-found service which is open from 10:00 a.m. to 4:00 p.m., Monday through Friday.

For emergency police, fire, or ambulance service, call 2-3333.

**Fees* and Expenses**

It is extremely important that a student carefully consider the total financing of his education, from his entering quarter to the completion of his degree objective. If financial help will be needed, beyond those funds which the student or his family are able to provide, the student should make the necessary applications for financial assistance well in advance of his enrollment. He should pay particular attention to early deadline dates of application for grants, scholarships, and National Defense Education Act Loans. While the needs and resources of each student differ, the University can provide a general list of fees and expenses normally encountered.

Part of the fees may be refunded to students who cancel their registration prior to the first day of classes or who withdraw before the beginning of the sixth week of classes of any quarter. A separate circular, STUDENT FEES AND DEPOSITS, gives information on refunds. This circular is available from the Registrar.

**TABLE OF FEES AND EXPENSES (Fees are subject to change without notice)**

Certain fees are paid at the time of registration by each student. These fees are listed and described below.

<table>
<thead>
<tr>
<th>Student Category</th>
<th>Fall, Winter, or Spring Term 1971–72</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident Undergraduate</td>
<td>$212.75</td>
</tr>
<tr>
<td>Nonresident Undergraduate</td>
<td>712.75</td>
</tr>
<tr>
<td>Foreign Undergraduate</td>
<td>721.75</td>
</tr>
<tr>
<td>Resident Graduate</td>
<td>232.75</td>
</tr>
<tr>
<td>Nonresident Graduate</td>
<td>732.75</td>
</tr>
<tr>
<td>Foreign Graduate</td>
<td>741.75</td>
</tr>
<tr>
<td>Resident Graduate, School of Law</td>
<td>$354.13</td>
</tr>
<tr>
<td>Nonresident Graduate, School of Law</td>
<td>1,104.13</td>
</tr>
<tr>
<td>Foreign Graduate, School of Law</td>
<td>1,117.63</td>
</tr>
</tbody>
</table>

**EXPLANATION OF FEES AND EXPENSES**

**Required Fees**

University Registration Fee—$100 per quarter; $150 per term for students in the School of Law. Paid by all students. Covers normal expected usage of such facilities as laboratories, gymnasium, counseling and placement services, health service, etc.

* Fees are subject to change without notice.
Educational Fee—Paid by all undergraduates at $100 per quarter, by students in the School of Law at $180 per term, and by all other graduate students at $120 per quarter. Used to support a portion of the cost for the educational program.

Berkeley Campus Fee—Paid by all students in the amount of $12.75 per quarter and by students in the School of Law in the amount of $19.13 per term. Provides support for a wide range of activities sponsored by the ASUC, covers use of the Student Union, helps pay costs of construction of the Union building, assists with the provision of ethnic studies on the Berkeley campus, and provides support for the Disabled Students Program.

Nonresident Tuition—$500 per quarter; $750 per term, School of Law. See rules on page 14 to determine whether this fee is applicable.

Foreign Student Health Insurance—$9 per quarter; $13.50 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

Subject A Fee—$45
Applies to those who are required to enroll in the Subject A course.

Athletic Privilege Card—$12
Optional. Permits free admission or reduced rates to most University athletic events.

Student Health and Life Insurance
Optional, available through ASUC. Provides coverage, beyond normal service of the Student Health Service, in any of several standard health and hospitalization plans; has additional advantage of including student’s spouse. Rates lower than normal adult rates.

Books and Supplies
Normally about $150–$180 a year on the average.

Living Expenses
Room and board in living groups will range from $800 to $1,500 for the academic year, with an average of around $1,200. Apartment housing (rent, utilities, and food) if shared with others for nine months, would have the same range. If leased for twelve months the cost, of course, would 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 $450 to $500 per academic year.

Total Estimated Expenses Per School Year
The following approximates the total budget for three quarters. This estimate is based on fees and expenses for single undergraduate students:
Resident Students ........................................ $2,850.00
Nonresident Students .................................... 4,350.00

Research at Berkeley
The Berkeley campus is renowned for its programs of faculty and graduate student research, which are conducted within teaching departments and or-
ganized 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, Bureau, Laboratory, Museum, Station, or Project, depending on the nature of the activity supported and the organization visualized when a particular unit was established. These units are grouped administratively according to the breadth of interest they represent. The grouping may be within the Graduate Division, a School, or a College. Specific administrative groupings are as follows:

**College of Agricultural Sciences**
- Agricultural Experiment Station
- Giannini Foundation
- International Center for Biological Control

**School of Business Administration**
- Center for Research in Management Science

**College of Engineering**
- Earthquake Engineering Research Center
- Electronics Research Laboratory
- Operations Research Center
- Sanitary Engineering Research Laboratory
- Sea Water Conversion Laboratory
- Institute of Transportation and Traffic Engineering

**School of Forestry and Conservation**
- Agricultural Experiment Station
- Forest Products Laboratory
- Wildland Research Center

**Graduate Division**
- Bodega Marine Laboratory
- Institute of Business and Economic Research
- Center for Research and Development in Higher Education
- Institute of Human Development
- Institute of Industrial Relations
- Institute of International Studies
- Center for Chinese Studies
- Center for Japanese and Korean Studies
- Center for Latin American Studies
- Center for Slavic and East European Studies
- Center for South and Southeast Asia Studies
- Lawrence Hall of Science
- Institute of Race and Community Relations
- Space Science Laboratory
- Survey Research Center
- Institute of Urban and Regional Development
- Center for Planning and Development Research
- Center for Real Estate and Urban Economics
- White Mountain Research Station
- 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 Genetics Laboratory
- Institute of Governmental Studies
- Jepson Herbarium
- Institute of Human Learning
- Lowie Museum of Anthropology
In addition to the officially established organized research units, there are numerous special facilities for the support of faculty and student programs.
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 eighteen major academic subdivisions—the Graduate Division, five colleges, and twelve schools:

**Colleges**

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<tr>
<th>College</th>
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<tbody>
<tr>
<td>Agricultural Sciences</td>
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<tr>
<td>Chemistry</td>
</tr>
<tr>
<td>Engineering</td>
</tr>
<tr>
<td>Environmental Design</td>
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<tr>
<td>Letters and Science</td>
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</tbody>
</table>

**Schools**

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<tr>
<th>School</th>
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<tbody>
<tr>
<td>Business Administration</td>
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<tr>
<td>Business Administration, Graduate</td>
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<tr>
<td>Criminology</td>
</tr>
<tr>
<td>Education</td>
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<tr>
<td>Forestry and Conservation</td>
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<tr>
<td>Journalism, Graduate</td>
</tr>
<tr>
<td>Law</td>
</tr>
<tr>
<td>Librarianship</td>
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<tr>
<td>Optometry</td>
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<tr>
<td>Public Affairs, Graduate</td>
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<tr>
<td>Public Health</td>
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<tr>
<td>Social Welfare</td>
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</tbody>
</table>

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

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

Each of the colleges and schools has its own administrative officials and its own regulations for earning degrees, and since each undergraduate student at the University belongs either to a college or a school he is expected to satisfy requirements for the degree on three levels: University, college or school, and field of concentration. This section provides a broad survey of the colleges and schools and their degree programs. For further information, see the individual school or college announcements.

**COLLEGE OF AGRICULTURAL SCIENCES**

The College of Agricultural Sciences offers undergraduate instruction leading to the Bachelor of Science degree and, when completed, opportunities for immediate employment exist in most fields.
Two curricula are offered—Agricultural Sciences (with seven majors) and Conservation of Natural Resources. Related curricula in the College are also available in preforestry and preveterinary.

 Majors in Agricultural Sciences are: agricultural economics; agricultural science; dietetics; entomology; food and nutritional sciences; genetics; and soils and plant nutrition. Preparation for graduate work in plant pathology is offered under the agricultural science major. The curriculum in Conservation of Natural Resources is an experimental field major offered in cooperation with the School of Forestry and Conservation. The preforestry program, although administered by the College of Agricultural Sciences, is described under the Forestry and Conservation section.

The College also administers a preveterinary curriculum for those students preparing for subsequent work in the School of Veterinary Medicine at Davis. The Dean's Office, 101 Giannini Hall, will provide the name of an adviser and general information about the program. For details concerning the complete program, consult the Dean of the School of Veterinary Medicine, University of California, Davis.

Graduate Programs
Graduate instruction leading to a higher degree is available in the following fields: agricultural economics; biophysics (see Cell Physiology and Soils and Plant Nutrition); comparative biochemistry (see Cell Physiology, Nutritional Sciences, and Soils and Plant Nutrition); entomology; food science; genetics; microbiology (see Nutritional Sciences and Soils and Plant Nutrition); nutrition; parasitology (see Entomology and Parasitology); plant pathology; plant physiology (see Cell Physiology and Soils and Plant Nutrition); and soil science.

For further information, consult the ANNOUNCEMENT OF THE COLLEGE OF AGRICULTURAL SCIENCES, available free of charge from the Dean’s Office, 101 Giannini Hall.

□ COLLEGE OF CHEMISTRY

The College of Chemistry comprises two departments, the Department of Chemistry and the Department of Chemical Engineering. The College offers programs leading to the B.S., M.S., and Ph.D. degrees in chemistry or chemical engineering. The College of Letters and Science offers a chemistry major leading to an A.B. degree through a curriculum with a greater proportion of courses in the humanities and social sciences than is included in the B.S. chemistry program.

For information on recommended high school preparation for admission, as well as specific requirements for degrees, see the ANNOUNCEMENT OF THE COLLEGE OF CHEMISTRY.

□ COLLEGE OF ENGINEERING

The College of Engineering offers programs in a wide variety of engineering fields, based on the concept that the engineer must be well grounded in the
sciences and in social and humanistic studies, with a full command of the principles and practices of his profession.

Four-year undergraduate curricula are offered in the following professional fields: civil engineering, electrical engineering and computer sciences, industrial engineering and operations research, mechanical engineering, and materials science and engineering (ceramic engineering and metallurgy). Each of these curricula is administered by a separate department within the College and each emphasizes a core program of science and engineering subjects related to the particular field. In addition, there is a curriculum in Engineering Science with programs in bioengineering, engineering geoscience, engineering mathematics or mathematical statistics, and engineering physics.

High school preparation for study in engineering includes the following: algebra (2 units); plane geometry (1 unit); trigonometry (½ unit); physics or chemistry, preferably both (1 or 2 units). Advanced mathematics courses are acceptable if they include the mathematics topics listed above. It is suggested that an engineering student also include a minimum of 1 unit of high school mechanical drawing as part of his preparation since graphic communication is an essential part of engineering.

Entering freshman students with clearly defined educational and career goals should refer to the detailed presentation of curriculum of personal interest in the departmental section of the Announcement of the College of Engineering or the course section of this catalogue. The College, as a general rule, prefers to admit students only as beginning freshmen or in advanced standing at the junior or senior level. However, any student who is admissible to the University and to the Berkeley campus at any level may be accepted by the College.

If you are interested in pursuing one of the professional engineering fields such as civil, electrical, industrial, mechanical engineering, or materials science but are not certain of your ultimate choice, you should consider the common lower division program described in the Announcement of the College of Engineering which combines preparation for any one of the above professional engineering majors with an introduction to each. Consequently, election of a specific field and curriculum may be deferred until the junior year without loss of time or normal progress. Upper division curricula and programs are also described in the announcement under the various engineering departments as well as in the course section of this catalogue.

Graduate programs are offered leading to the Master of Science and Doctor of Philosophy degrees for study emphasizing engineering applied sciences, and Master of Engineering and Doctor of Engineering degrees for advanced professional studies of design and development. Fields of study include civil engineering, electrical engineering and computer sciences, industrial engineering and operations research, mechanical engineering, nuclear engineering, materials science, engineering geoscience, aeronautical sciences, applied mechanics, and naval architecture. Specific graduate programs may also be found in the Announcement of the College of Engineering.
The College of Environmental Design is composed of the departments of Architecture, City and Regional Planning, Design, and Landscape Architecture.

Undergraduates entering the College for the first time will enroll in a four-year curriculum leading to the preprofessional degree of Bachelor of Arts with a major in either architecture or landscape architecture. Only students presently enrolled in the College will be permitted to complete the old curricula leading to the professional undergraduate degrees of Bachelor of Architecture and Bachelor of Landscape Architecture if they choose to do so. On the graduate level the College presently offers curricula leading to the Master of Architecture, Master of Landscape Architecture, Master of City Planning, and the Doctor of Philosophy in Architecture and in City and Regional Planning. The Master of Architecture degree will be the first professional degree applicable to requirements for state registration in architecture. The Master of Landscape Architecture degree is similarly applicable to the registration of landscape architects.

New undergraduate and graduate curricula in the Department of Design will be established in the College of Environmental Design in the near future. An undergraduate major in design leading to a similar Bachelor of Arts degree, emphasizing industrial product and communications design, will then be available in this College. The major will not be open to new students until a transition stage has been completed and a new curriculum adopted.

High school preparation for architecture should include four years of mathematics, one year of physics or chemistry, and one year of freehand drawing. Preparation for landscape architecture should include three years of mathematics, including plane geometry and trigonometry; two years of biology or natural science; one year of freehand drawing; and one-half year of mechanical or instrumental drawing.

Procedures for undergraduate admission, registration, and enrollment are identical to those of the University in general. However, a student who has credit for more than 195 quarter units of university-level work will not be permitted to continue in the College of Environmental Design without the approval of the Dean. Students who are interested in graduate study should obtain from the Dean of the Graduate Division the circular Admission to Graduate Study, which outlines general University requirements for admission. Application is made directly to the Graduate Division of the University.

For specific undergraduate and graduate programs and degree requirements in the environmental design fields, refer to the course section of this catalogue and the Announcement of the College of Environmental Design.

The College of Letters and Science offers the undergraduate student a variety of programs leading to the Bachelor of Arts degree in four academic years of full-time study. The basic concern of the College is with the wholeness of
knowledge, a theme which is present in all of our various programs. Although no single program can by itself introduce the undergraduate student to the entire range of human knowledge, each of the many programs is designed to aid the student in establishing a structured awareness of the present condition of knowledge and how it has developed. Each program endeavors to cultivate an appreciation for past and present ideas and a capacity for generating new ones. Each strives to foster keen observation, critical analysis, and an awareness of the relation between perceived reality and theoretical abstractions derived from it.

For the student, the first two years are a time of exploration, experimentation, and decision. The last two years are a period of confirmation and of the acquisition and refinement of special knowledge, usually in connection with a department. The College's departments are devoted to instruction and research in the several academic subjects. Each department represents a style of study and communication and a refined development of a set of structured ideas. The subjects of the departments overlap and complement each other.

**Requirements for the Bachelor of Arts Degree**

The student must complete a minimum of 180 units, distributed according to regulations which appear in the ANNOUNCEMENT OF THE COLLEGE OF LETTERS AND SCIENCE. There are also scholarship, residence, breadth, and major requirements; these are described in the Announcement as well. Brief descriptions of the breadth and major requirements appear below, and major programs appear in this publication under the department or group heading. In addition, the student must satisfy the University requirements in Subject A, in American History and in American Institutions; these are described on page 22.

**Breadth Requirements** Each student in the College is required to include in his program a study of the use and appreciation of the English language. This requirement is to be completed early in the college years in order that the student may develop skill in the communication of ideas and a sensibility for language which will facilitate and enrich his further studies. The other breadth requirement involves exploration in several broad areas of knowledge, the humanities, the natural sciences, and the social sciences. This exploration by the student is intended to deepen his appreciation for language, literature, and the arts, to enable him to comprehend the structure of living and nonliving matter and the environment of man, and to facilitate his understanding of the individual and social behavior of human beings. Completion of this requirement may be spread over the four years of college attendance.

**Major Programs** Each student must pursue and complete a major program, the object of which is to provide him with a limited experience in specialization. There are forty-seven departmental major programs, ranging from Altaic languages to zoology. In addition, there are group majors in communication and public policy, environmental studies, genetics, religious studies, social welfare, and South and Southeast Asian languages and literatures. There are also field majors in humanities, biological sciences, physical sciences and social sciences.
Moreover, a student in good academic standing may, with permission of the Dean and support and supervision of a College faculty member, pursue an individual group major designed to satisfy his special academic goals.

Special Programs

The Division of Interdisciplinary and General Studies (DIGS) and the Residential Program in History and Literature are offered by the College and are described in the Announcement of the College of Letters and Science. Both of these programs permit the student to spend a considerable portion of his time in the exploration of a unified area of study. Both of the programs also allow for free electives and are designed to qualify the student, on completion, for entrance into any one of a range of major programs. The student in the College of Letters and Science normally constructs his own program for the freshman and sophomore years by making a choice of individual courses. His selection is guided by his adviser, within limits set by College requirements and by the demands of his anticipated major subject. These special integrated programs are offered as optional alternatives to this procedure.

Letters and Science List of Courses

The regulations governing the List are to be found in the Announcement of the College of Letters and Science.

SCHOOL OF BUSINESS ADMINISTRATION

The School of Business Administration admits students at the junior level and offers curricula leading to the undergraduate degree of Bachelor of Science in Business Administration. The primary function of the School is to prepare students for eventual responsible administrative and executive positions in business and government. You may specialize in such fields as accounting, applied economics, finance, marketing, operations research, organizational behavior, and production management.

As an undergraduate, you may complete basic lower division courses in the College of Letters and Science or its equivalent at other institutions, or you may elect to complete lower division work in one of the colleges of applied sciences. Counselors in the School of Business Administration will assist you in selecting courses prerequisite to upper division courses.

For detailed information, consult the Announcement of the School of Business Administration.

Graduate School of Business Administration

The Graduate School offers curricula leading to the Master of Business Administration degree and to the more specialized Master of Science degree. These curricula afford opportunity for advanced and specialized training based either upon the fundamental undergraduate curriculum in Business Administration or upon undergraduate study in other fields.

The core courses for the master's degree include basic work in economic analysis, quantitative decision models and techniques, accounting, political, social, and
legal environment of business, finance, marketing, production, and organizational behavior. All graduate students must maintain a B average in all courses and must pass a comprehensive examination. You may pursue a program leading to the Ph.D. in Business Administration if you wish to prepare for university and college teaching and research or for high-level research positions in business or government.

For detailed information, consult the Announcement of the Graduate School of Business Administration.

SCHOOL OF CRIMINOLOGY

The School of Criminology offers a broad range of studies in the nature, causes, and consequences of crime and criminal justice. The School's program falls into two main areas of emphasis: general criminology and criminalistics.

General criminology draws upon the concepts and methods of the social and behavioral sciences for an understanding of the economic, political, psychological, and sociological factors behind crime. You may take courses in the areas of social policy and crime, social institutions and deviant behavior, social causes and characteristics of crime and delinquency, the psychology of deviance, the system of criminal justice, criminalistics, and law enforcement. Criminalistics is concerned with the application of the natural sciences to law enforcement and crime investigation. You may take courses in criminal law, criminal investigation, scientific methodology, forensic medicine, biochemistry, microanalytical techniques, and other topics. The first program leads to the Bachelor of Arts degree and the second to the Bachelor of Science degree on the undergraduate level. Both lead to the Master of Criminology and Doctor of Criminology on the graduate level.

You may be admitted to the School in your junior year, after completion of a 90-unit lower division precriminology curriculum. You must have a 2.0 or better grade-point average to be admitted.

Students are admitted in the fall quarter for study leading to the M.Crim. and the D.Crim. If you have completed a bachelor's degree in the School, you should be able to complete the requirements for the M.Crim. degree within a year and those for the D.Crim. within three years. Other students may require a somewhat longer period of study.

Prerequisite courses for undergraduate admission are listed on page 152. Specific requirements for all degrees may be found in the Announcement of the School of Criminology.

SCHOOL OF EDUCATION

The School of Education offers three principal areas of study: a teaching credential program for those preparing for teaching positions in public schools; programs leading toward credentials for administrative, supervisory, and pupil personnel services in the public schools; and degree programs, both academic (M.A. and Ph.D.) and professional (M.A.T. and Ed.D.). The M.A.T. (Master of Arts in Teaching) program is available in Comparative Literature, English, and German. This program combines a major emphasis in an academic field with professional training in education.

As an applicant to any program in the School of Education, you must be ad-
mitted to the Graduate Division. If you plan to enter teacher education programs, you should confer with an adviser in the Credentials Office, 1615 Tolman Hall, early in your university career, because the credentials programs involve specific courses you must complete during your undergraduate years.

As a holder of a State teaching credential, you are qualified for service in the public schools of California. To be a candidate for this credential, you must hold a bachelor's degree, with a major and a minor in a teaching field (not education). The teacher education program at Berkeley normally comprises one postgraduate year following receipt of the bachelor's degree, during which time you take basic courses in education, obtain actual teaching experience in a public school, and take further courses in your major or minor field.

For further details concerning the requirements and areas of specialization for all credential and degree programs in education, consult the Announcement of the School of Education.

SCHOOL OF FORESTRY AND CONSERVATION

Undergraduate programs are offered in forestry, in wood science and technology, and in the conservation of natural resources. The major in forestry is designed to educate professional resource managers and scientists oriented to forests and wildlands. In contrast, the conservation major provides a broad education oriented to environmental issues. The program in wood science prepares students for managerial and scientific careers in the wood-using industries.

Students are admitted to these programs in the junior year. The preparatory lower division program may be taken at any accredited college or through the College of Agricultural Sciences at Berkeley. A program of summer field courses is prerequisite to the balance of the upper division program in the major in forestry. This ten-week program includes 15 units of course work offered at the U.C. Forestry Camp, Meadow Valley, Plumas County.

High school preparation should include: algebra (2 units), plane geometry (1 unit), trigonometry (½ unit), and laboratory science (1 unit). An additional year of laboratory science (preferably chemistry or physics) and a half-year of mechanical drawing are strongly recommended.

Graduate programs are offered in wildland resource science, in forestry, in range management, and in wood science and technology. The Master of Forestry is the advanced professional degree in this field and is based on an additional year of study designed to widen the student's grasp of forestry principles and to increase his ability to apply the principles to resource management problems. The Master of Science in wildland resource science provides a program for students interested in specialization in some field of forestry such as forest influences, silviculture, forest economics, wildlife habitat management, or remote sensing. The M.S. in range management, which is administered by an interdepartmental group, provides for specialization in the scientific basis of managing range lands and related wildland areas. The M.S. in wood science and technology, also administered by an interdepartmental group, provides for graduate specialization in wood mechanics, wood physics, wood chemistry, wood anatomy, or wood processing.

Programs leading to the Ph.D. are offered in wildland resource science; in wood science and technology; and in sciences related to wildland resources,
forestry, and range management such as agricultural economics, botany, entomology, genetics, plant pathology, plant physiology, soils, and zoology.

For further information concerning course requirements and areas of specialization, consult the Announcement of the School of Forestry and Conservation or a faculty adviser at 145 Mulford Hall.

SCHOOL OF JOURNALISM

The Graduate School of Journalism offers a program leading to the degree of Master of Journalism (M.J.). The program seeks to provide training in the skills and techniques of journalism and a knowledge of the traditions and principles of the profession, combined with the study of other academic disciplines that constitute the subject matter of journalism.

A candidate for the M.J. degree shall have completed four to six quarters in graduate study in journalism and related disciplines. He shall have completed 42 units of approved upper division or graduate courses, including not less than 20 units in graduate courses in journalism, and shall have presented an acceptable thesis or reporting project. A student generally will take about two-thirds of his courses in journalism and one-third in a related field of specialization.

An applicant for graduate study should hold a bachelor's degree comparable to that given by the University of California. Requirements and procedures are outlined in the circular Admission to Graduate Study, available at the office of the Dean of the Graduate Division, and in the Announcement of the Graduate School of Journalism.

An individual major in journalistic studies is available to students of junior standing as part of the Bachelor of Arts program within the College of Letters and Science. The individual major consists of at least 52 units, half in journalism and half in courses offered by the College of Letters and Science. A senior thesis is required of all individual majors.

Admission to the major is upon petition to the Dean of the College of Letters and Science following consultation with an adviser from the Graduate School of Journalism. The number of students admitted to the program is limited by the School, and preference is given to those with honor standing.

SCHOOL OF LAW

The School of Law, Boalt Hall, has a broad three-year curriculum leading to the J.D. degree and a postgraduate program for students working toward the Master of Laws and Doctor of the Science of Law degrees. The School attempts not only to prepare its students to practice law, but also to develop the scientific study of law and to further legal research. Boalt Hall is a member of the Association of American Law Schools and is approved by the American Bar Association. Its graduates are qualified to become applicants for admission to practice in any state of the United States.

No single “pre-law” major is required or even recommended. However, these suggestions are made: learn to write by taking courses in which your work will be vigorously edited; enroll in courses demanding analytical skills; obtain some breadth in humanities and social sciences which will help you understand the
social context within which legal problems arise; acquire a general understanding of the business world. But you should not be deterred from pursuing the study of law merely because your undergraduate education has not been focused on the areas above. Diversity of undergraduate education enhances and enriches the legal experience of all the students.

The School does not offer a part-time or evening program. The work of the first year is prescribed; the second and third years' courses are elective.

The graduate program is designed for the student who wishes to broaden his professional education by study of legal history, international and comparative jurisprudence, or the relations of law and other social sciences; to supplement his professional education by study of special subjects (e.g., taxation, labor law, international law, marital property, procedure, corporations); or to obtain special training in preparation for law teaching, legal research, government service, or legislative drafting. You may apply to become a candidate for the degree of LL.M. or J.S.D.

For further degree and admission requirements, consult the Announcement of the School of Law.

SCHOOL OF LIBRARIANSHIP

The School of Librarianship offers a one-year basic curriculum at the graduate level leading to the Master of Library Science degree, which qualifies the holder for service in various types of libraries and other information agencies. The School also offers two advanced degree programs—the Doctor of Library Science and the Ph.D.—which prepare a student for advanced research in theories and problems of librarianship and the information sciences, as well as for administrative, planning, and teaching positions.

The forty-two quarter units for the Master of Library Science degree may be completed in three quarters and one summer session. Admission to the school is through the Graduate Division. For further details concerning the curriculum, consult the Announcement of the School of Librarianship.

SCHOOL OF OPTOMETRY

The School of Optometry provides training in the practice of optometry, drawing upon the principles of anatomy, optics, physiology, and psychology, and includes the study of both environmental and personal factors influencing visual performance.

The four-year program qualifies you for the degree of Doctor of Optometry, which qualifies you to take the state board examinations in all states. The first year is devoted to more advanced study of basic sciences which form the background for optometry; the second and third years are devoted to the science of optometry and the acquisition of technical skills; the fourth year is devoted to the practice of optometry and the detailed study of specialized areas.

The graduate program in physiological optics leads to the Master of Science degree and the Doctor of Philosophy degree. Offered in cooperation with other departments of the University, this program is designed to prepare students for a career in teaching and research in the sciences of vision.
For admission and degree requirements, consult the Announcement of the School of Optometry.

**GRADUATE SCHOOL OF PUBLIC POLICY**

Beginning in the fall of 1971, the School will offer new programs designed to train policy analysts and create new knowledge in the field of public policy. The primary objective of this program is to promote the intelligent application of systematic analysis to issues of public policy. The research and teaching programs will emphasize both theoretical and applied work and problems of domestic public policy formation. The focus in this School differs significantly from that of public administration programs. Inquiries on admission, program content, and degrees to be offered may be addressed to the Graduate School of Public Policy, 2607 Hearst Avenue, Berkeley, California 94720.

**SCHOOL OF PUBLIC HEALTH**

The following programs of study in the School of Public Health provide a focus for the particular interests of students and faculty: behavioral sciences, biostatistics, environmental health sciences, epidemiology, health administration and planning, hospital administration, maternal and child health, biomedical laboratory sciences, public health education, public health nursing administration, public health nutrition, and public health social work. Within the above curricula, special fields may be given attention, e.g., comprehensive health planning, family planning and population, health of the school age child, medical care administration, and mental health. Formal application for admission to the Graduate School of Public Health and for federal traineeships should be made no later than March 1.

Graduate curricula in the School of Public Health lead either to professional or to academic degrees. The professional degrees, Master of Public Health and Doctor of Public Health, constitute preparation for positions of administrative leadership in official and voluntary health agencies. The academic degrees prepare the candidate for research and teaching in specific fields in the health sciences.

The program leading to the Master of Public Health degree has both depth and breadth components. To satisfy the depth requirement each candidate pursues one of the specialty programs. Breadth components are satisfied by courses or independent study in the fundamental areas of knowledge which bear on the field, and through elective courses related to each student's particular interest.

In addition to the academic requirements described in the Announcement of the School of Public Health, candidates for the Master of Public Health degree must complete a period of approved field experience unless their previous experience renders this requirement unnecessary. Although this degree may be obtained after one year of study, programs extending beyond a single academic year are not unusual. At least 18 units of the minimum 36 units required must be taken in the School of Public Health.

The Doctor of Public Health is conferred after the candidate has demonstrated his command of a comprehensive body of technical knowledge in the field of
public health and its related disciplines, and his ability to initiate, organize, and pursue the investigation of significant problems in public health. The basis for admission is the prior completion, with an outstanding scholastic record, of courses equivalent to those required for the Master of Public Health degree at the University of California. A comprehensive examination covers the student's area of specialization, two related areas, and research methodology.

Programs of study leading to the following academic degrees are administered by groups of faculty from the School of Public Health and other departments:

- Biostatistics, M.A., Ph.D.
- Comparative Pathology, M.S., Ph.D.
- Environmental Health Sciences, M.S., Ph.D.
- Epidemiology, M.S., Ph.D.
- Immunology, M.A., Ph.D.
- Microbiology, M.A., Ph.D.
- Nutrition, Ph.D.
- Parasitology, M.S., Ph.D.

For further information, consult the Announcement of the School of Public Health or write to the Dean of the School of Public Health, University of California, Berkeley, California 94720.

The School of Social Welfare is a graduate professional school which offers:

1. A program of studies which leads to the degree of Doctor of Social Welfare and which prepares students for careers in teaching, research, policy development and administration in the field of social welfare and in the profession of social work. It is open to applicants who already have completed the master's degree in an accredited school of social work and who give evidence of intellectual and other qualifications essential to successful doctoral study.

Also offered is a combined program of master's-doctoral studies which begins in the first graduate year, leads to both Master of Social Welfare and Doctor of Social Welfare degrees, and prepares for the same careers. Applicants must evidence ability successfully to complete doctoral study and must have undergraduate preparation as outlined below.

2. A two-year program of studies for the Master of Social Welfare degree in preparation for the professional practice of social work. Applicants must have completed the group major in social welfare in the College of Letters and Science, or an equivalent major, or undergraduate study in other social and behavioral sciences judged by the faculty as adequate preparation for graduate study in the School.

3. Three advanced post-master's programs to prepare graduate social workers for practice in specialized fields:

The Community Mental Health program emphasizes community organization, mental health consultation and education, administration and policy development, social planning, evaluative research, and modes of preventive intervention. It admits experienced social workers and tailors its curriculum to meet the educational needs and career objectives of each student, offering study in the mental health aspects of social problems such as alienated youth, drug abuse, family planning, suicide prevention, urban redevelopment and housing, alcoholism, child neglect and abuse, care of the mentally ill, etc.

The School Social Work Internship program allows graduate social workers
to qualify for the California Standard Designated Services Credential and may be completed in two quarters of full-time attendance or in three quarters of part-time attendance by special arrangement.

The Public Health Social Work program jointly offered by the Schools of Social Welfare and Public Health prepares social workers for practice in staff, consultative, and administrative positions in health programs. A year of advanced courses and field work is offered, with the option of choosing a program leading to the Master of Public Health degree.

Applications for admission to any of these programs should be submitted as early as possible beginning in December and no later than March 1, for admission in the following academic year. Admission to the School is contingent on admission to graduate standing; for details see the booklet Admission to Graduate Study.

The Department of Social Welfare administers an undergraduate group major in social welfare in the College of Letters and Science.

For further information, consult the Announcement of the School of Social Welfare.

**SPECIAL SUMMER PROGRAM FOR TEACHERS**
(June 21–July 23, 1971)

The Summer Program, an in-service education program in several fields of specialization, is planned and administered by the School of Education in cooperation with other departments of the University. Each course offered carries nine quarter units, the equivalent of six semester units, and one course constitutes a full academic load. Credit earned may be applied toward California teaching credentials. Admission to the program is a separate and different procedure from admission to a regular quarter at the University. Fees for the five-week session in 1971 include a $10 application fee, a $135 tuition fee, and a $2 student union fee—a total of $147. Auditors or visitors are not allowed in the Summer Program classes. You may obtain information about courses offered and an application form by writing to the Summer Program Office, 1605 Tolman Hall, University of California, Berkeley, California 94720 The telephone number is (415) 642-0841.

**SCHOOLS AND COLLEGES IN SAN FRANCISCO**

If you plan to enter one of the University's professional schools or the affiliated college in San Francisco, you may receive your required preprofessional training on the Berkeley campus.

For information regarding admission requirements, curricula, and costs, you should write to the dean of the school or college in which you are interested. Address the Dean, School of Dentistry, School of Medicine, School of Nursing, or School of Pharmacy, University of California, San Francisco, California 94122; or the Dean, Hastings College of the Law, 198 McAllister Street, San Francisco, California 94102.

Also affiliated with the University is the San Francisco Art Institute with
undergraduate programs leading to the degree of Bachelor of Fine Arts or the Certificate of Completion. A program of study at the graduate level leads to the degree of Master of Fine Arts in painting, sculpture, and printmaking. Prospective entrants or transfers may obtain further information from the Registrar, San Francisco Art Institute, 800 Chestnut Street, San Francisco, California 94133.