Few things are more important to a top-rated teaching and research institution than the quality of its library.

This edition of the General Catalog celebrates Berkeley's remarkable library system and highlights some of its treasures. As you explore each section of the catalog and all that Berkeley has to offer, explore too some of the wonders of the library, pictured at the start of each chapter. These treasures, and many more, await your discovery.

The Berkeley library is one of my passions. When I arrived here in 1997, the library was struggling to overcome inflation and budget cuts. One of my first actions was to allocate nearly $5 million to help our librarians build and preserve collections. The effort paid off splendidly. In 2002, the Association of Research Libraries rated Berkeley's library system first among public universities in North America.

The Berkeley library has undergone a profound transformation from its origins in 1869, starting with 1,036 volumes, to its current collection of more than nine million volumes, as well as rare illuminated manuscripts, videos and sound recordings, journals, e-books, other digital media, and more. Explore any one of the University's libraries, and you will find one treasure after another.

By using the latest in information technology, you can bridge the centuries to access ancient texts or the latest research results, all at your fingertips.

I hope that you will come to share my affection for the library in all its manifestations. The library is, after all, the central repository of human knowledge, from every age, culture, language, discipline, and point of view. Make the most of its immense resources while you are here.

Robert M. Berdahl
Chancellor
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While every effort has been made to ensure accuracy, all fees, services, courses, course descriptions, semesters in which courses are offered, teaching assignments, and degree requirements in this catalog are subject to change without notice. Please consult with department offices or go to www.berkeley.edu/catalog for up-to-date information.

General information: (510) 642-6000; www.berkeley.edu

General Catalog, University of California, Berkeley, 2003-05.

All qualified students—regardless of race, sex, color, creed, age, handicap, sexual orientation, or national origin—are welcome.

To obtain the General Catalog by mail, write to the Cal Student Store, University of California, Berkeley, Attn: Mail Order Department #4504, Berkeley, CA 94720-4504; or telephone (510) 981-9618.

UC Berkeley home page: http://www.berkeley.edu; UC Berkeley NewsCenter: newscenter.berkeley.edu
## Academic Calendar 2003-04

### Summer Sessions 2003

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</tr>
<tr>
<td>Winter Holiday</td>
<td>December 24-25</td>
<td>Wednesday-Thursday</td>
</tr>
<tr>
<td>New Year's Holiday</td>
<td>December 31-January 1</td>
<td>Wednesday-Thursday</td>
</tr>
</tbody>
</table>

### Spring Semester 2004

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fee Payment Due</td>
<td>January 15</td>
<td>Thursday</td>
</tr>
<tr>
<td>Tele-BEARS</td>
<td>October 20</td>
<td>Monday-Friday</td>
</tr>
<tr>
<td>Spring Semester Begins</td>
<td>January 13</td>
<td>Tuesday</td>
</tr>
<tr>
<td>Martin Luther King, Jr., Holiday</td>
<td>January 19</td>
<td>Monday</td>
</tr>
<tr>
<td>Instruction Begins</td>
<td>January 20</td>
<td>Tuesday</td>
</tr>
<tr>
<td>Presidents’ Day Holiday</td>
<td>February 16</td>
<td>Monday-Friday</td>
</tr>
<tr>
<td>Spring Recess</td>
<td>March 22</td>
<td>Monday-Friday</td>
</tr>
<tr>
<td>César Chavez Holiday</td>
<td>March 26</td>
<td>Friday</td>
</tr>
<tr>
<td>Instruction Ends</td>
<td>May 11</td>
<td>Tuesday</td>
</tr>
<tr>
<td>Final Examinations</td>
<td>May 14-22</td>
<td>Friday-Saturday</td>
</tr>
<tr>
<td>Spring Semester Ends</td>
<td>May 22</td>
<td>Saturday</td>
</tr>
</tbody>
</table>

### Summer Sessions 2004

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memorial Day Holiday</td>
<td>May 31</td>
</tr>
<tr>
<td>First Six-Week Session</td>
<td>May 24-25</td>
</tr>
<tr>
<td>Ten-Week Session</td>
<td>June 7-13</td>
</tr>
<tr>
<td>Eight-Week Session</td>
<td>June 21-13</td>
</tr>
<tr>
<td>Independence Day Holiday</td>
<td>July 6-8</td>
</tr>
<tr>
<td>Second Six-Week Session</td>
<td>July 26-13</td>
</tr>
<tr>
<td>Three-Week Session</td>
<td>July 28-13</td>
</tr>
</tbody>
</table>

### Note on 2004-05 academic calendar

The calendar for academic year 2004-05 had not yet been approved when this catalog went to press. Approval is expected by the end of 2003, at which time it will be available electronically at http://opa.vcbf.berkeley.edu/academiccalendar/calendar.cfm.
Counseling and Psychological Services
2222 Bancroft Way, (510) 642-9494
Fax: (510) 642-2368
www.uhs.berkeley.edu/students/counseling/

Disabled Students’ Program
260 César Chavez Student Center, (510) 642-0518
TTY/TDD: (510) 642-6376
Fax: (510) 643-9686
http://dsp.berkeley.edu/

Education Abroad Program
160 Stephens Hall, (510) 642-1356, (510) 642-1790
Fax: (510) 643-8370
www.ias.berkeley.edu/bpsa/

Educational Opportunity Program (EOP)
119 César Chavez Student Center, (510) 642-7224
Fax: (510) 642-9078
http://slas.berkeley.edu/

Financial Aid, Graduate
201 Sproul Hall, (510) 642-0485
Fax: (510) 642-5371
http://uga.berkeley.edu/fao/graduate

Financial Aid, Undergraduate
211 Sproul Hall, (510) 642-6442
Fax: (510) 643-5526
http://uga.berkeley.edu/fao/

Gender Equity Resource Center
202 César Chavez Student Center, (510) 642-4786
Fax: (510) 642-4788
www.aad.berkeley.edu/uga/osl/wrc/

Health Services
Tang Center, 2222 Bancroft Way
Medical services, (510) 642-2000
Counseling and Psychological Services, (510) 642-9494
24-hour advice line, (510) 643-7197
Student Health Insurance Plan, (510) 642-5700
www.uhs.berkeley.edu/

Vision Care
School of Optometry Clinics:
230 Minor Hall, (510) 642-2020
Fax: (510) 642-4025
Tang Center, (510) 643-2020
http://spectacle.berkeley.edu

Housing, Campus
2610 Channing Way, (510) 642-4108
Fax: (510) 643-7126
www.housing.berkeley.edu/calstyle/
e-mail: reshall@uclink4.berkeley.edu

Housing, Off-Campus—Cal Rentals
2610 Channing Way, (510) 642-3642
Fax: (510) 642-4026
http://calrentals.housing.berkeley.edu/

Info-BEARS
(510) 642-9400
http://telebears.berkeley.edu:3400/infobears

Information, Campus
(510) 642-INFO (4636)

Interfraternity Council (Fraternities)
102 Sproul Hall, (510) 643-6919
www.ocf.berkeley.edu/~greeks

International Student Admissions, Graduate
309 Sproul Hall, (510) 642-7405
Fax: (510) 643-1524
www.grad.berkeley.edu

International Student Admissions, Undergraduate
110 Sproul Hall, (510) 642-3246
Fax: (510) 642-7333
http://admissions.berkeley.edu

e-mail: ouars@uclink4.berkeley.edu

International Student and Scholar Advising
Services for International Students and Scholars
International House
2299 Piedmont Avenue, (510) 642-2818
Fax: (510) 643-7289
http://ias.berkeley.edu/ihouse

e-mail: siss@uclink.berkeley.edu
Library Information
Main Library Information Desk, (510) 643-9999
TTY/TDD: (510) 642-0704
www.lib.berkeley.edu/main/

Orientations, Undergraduate
New Student Services
CalSO (Cal Student Orientation)
Summer Bridge, (510) 642-5983
2610 Channing Way, (510) 642-4970 (NSS)
Fax: (510) 643-9181
http://uga.berkeley.edu/nss/

Pacific Film Archive
2575 Bancroft Way at Bowditch, (510) 642-1412
Recorded information: (510) 642-1124
TTY/TDD: (510) 642-8734

Panhelleanic Association, College (Sororities)
102 Sproul Hall, (510) 643-6916
Fax: (510) 642-1672

Personnel Office
207 University Hall, (510) 642-9046
Personnel: 2199 Addison Street entrance;
Staff Employment: 2200 University Avenue entrance
TTY/TDD: (510) 642-9421
Fax: (510) 642-2888
http://hrweb.berkeley.edu

Police
1 Sproul Hall, (510) 642-6760
Emergency, 911
Fax: (510) 642-6434
http://public-safety.berkeley.edu/police/

Sexual Assault Services
2222 Bancroft Way
Social Services: Sexual Assault Counseling and Advocacy, (510) 642-6074
Fax: (510) 643-0211
Health Promotion: Sexual Assault Prevention, (510) 642-7202
Medical Care Information: (510) 642-3188
Fax: (510) 643-7030

Shuttle Escort Service
(510) 642-WALK (9255)

Sports, Intramural and Recreational
Recreational Sports Facility, 2301 Bancroft Way, (510) 642-8342
Fax: (510) 642-0990
http://calbears.berkeley.edu/calfacinfo/rsf.htm

Strawberry Canyon Recreation Area
5 Haas Clubhouse, Centennial Drive, (510) 643-6720
Fax: (510) 642-8343

Student Learning Center
Atrium, César Chavez Student Center, (510) 642-7332
http://slc.berkeley.edu/
Fax: (510) 643-7879

Student Life, Office of
102 Sproul Hall, (510) 642-5171
Fax: (510) 642-1672
e-mail: studentlife@uclink4.berkeley.edu

Summer Sessions
22 Wheeler Hall, (510) 642-5611
Fax: (510) 642-2877
http://summer.berkeley.edu/
e-mail: info@mail.summer.berkeley.edu

Tours, Campus
Visitor Services, 101 University Hall, (510) 642-5215
Fax: (510) 642-3423
www.berkeley.edu/visitors
e-mail: visitor_info@pa.urel.berkeley.edu

Transcripts
Office of the Registrar
120 Sproul Hall, (510) 642-4721
Fax: (510) 643-8050
http://registrar.berkeley.edu

UC Berkeley Extension
1995 University Avenue, (510) 642-4111
Fax: (510) 642-0374
www.unex.berkeley.edu

Visitor Services
101 University Hall, (510) 642-5215
Fax: (510) 642-3423
www.berkeley.edu/visitors
e-mail: visitor_info@pa.urel.berkeley.edu

CAL Quiz
No. 1
What is the origin of the UC motto, “Let There Be Light”? (Answer on page 496.)
More than 410,000 maps in the Earth Sciences and Map Library give students a window on the world, as seen by cartographers today and in eras past. This student explores a map of the world in Arabic, circa 1164, one of the oldest in the collection. Students, scholars, and agencies around the world use the maps, on-site and online. The maps — plus a first-rate collection of books and serials — emphasize California geography, geology, and seismology.
History of the University

The roots of the University of California go back to the gold rush days of 1849, when the drafters of the State Constitution, a group of vigorous and farsighted people, required the legislature to “encourage by all suitable means the promotion of intellectual, scientific, moral and agricultural improvement” of the people of California. California had few families in 1849 and few children to educate, but these early planners dreamed of a university which eventually, “if properly organized and conducted, would contribute even more than California’s gold to the glory and happiness of advancing generations.”

The university that was born nearly 20 years later was the product of a merger between the College of California (a private institution) and the Agricultural, Mining, and Mechanical Arts College (a land grant institution). The College of California, founded by former Congregational minister Henry Durant from New England, was incorporated in 1855 in Oakland. Its curriculum was modeled after that of Yale and Harvard, with the addition of modern languages to the core courses in Latin, Greek, history, English, mathematics, and natural history. With an eye to future expansion, the board of trustees augmented the college’s Oakland holdings with the purchase of 160 acres of land four miles north, on a site they named Berkeley in 1866. This original tract was to be considerably expanded over the years.

While the College of California was in its infancy, efforts continued in the state legislature to create a public educational institution, and in 1866 the legislature took advantage of the federal Morrill Land Grant Act of 1862 to establish the Agricultural, Mining, and Mechanical Arts College. The college was to teach agricultural, mechanical arts, and military tactics “to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.” Scientific and classical studies were not to be excluded but were of secondary importance.

The boards of trustees of the College of California and the Agricultural, Mining, and Mechanical Arts College decided to merge the two schools to their mutual advantage—one had land but insufficient funds and the other had ample public funds but no land—on the condition that the curricula of both schools be blended to form “a complete university.” On March 23, 1868, the governor signed into law the Organic Act that created the University of California. The new university used the former College of California’s buildings in Oakland until South Hall and North Hall were completed on the Berkeley site (South Hall is still standing), and in September 1873 the University, with an enrollment of 191 students, moved to Berkeley.

Fiscal problems plagued the new University, and it was not until the 20-year presidency of Benjamin Ide Wheeler beginning in 1899 that finances stabilized, allowing the University to grow in size and distinction. Early in this period Phoebe Apperson Hearst, one of the University’s most generous benefactors, conceived of and financed an international competition for campus architectural plans that, she stipulated, “should be worthy of the great University whose material home they are to provide for.”

The competition, won by Emile Bénard of Paris, brought Berkeley not only a building plan but worldwide notoriety. The London Spectator wrote, “On the face of it this is a grand scheme, reminding one of those famous competitions in Italy in which Brunelleschi and Michael Angelo took part. The conception does honor to the nascent citizenship of the Pacific states. . . .” At Oxford University, which at the time was strapped for funds, a Latin orator said, “There is brought a report that in California there is already established a university furnished with so great resources that even to the architects (a lavish kind of men) full permission has been given to spare no expense. Amidst the most pleasant hills on an elevated site, commanding a wide sea view, is to be placed a home of Universal Science and a seat of the muses.”

John Galen Howard, the supervising architect charged with implementing the Bénard plan, took advantage of his “permission to spare no expense” and developed a style of architecture that reinterpret the grace, dignity, and austerity of classical lines to suit the California environment. Some of the campus’s most elegant and stately structures were built during Howard’s tenure, among them the Hearst Memorial Mining Building (1902-7), the Hearst Greek Theatre (1903), California Hall (1905), Doe Library (1911-17), the Campanile, Wheeler Hall (1917), Gilman Hall (1917), and Hilgard Hall (1918).

President Wheeler, a classical scholar and able administrator, attracted library and scholarship funds, research grants, and a distinguished faculty to the University, and its reputation grew, particularly in the fields of agriculture, the humanities, and engineering. Many new departments were added in the early years of his presidency, and existing departments expanded. Summer sessions were begun in 1899 to train physics and chemistry teachers and before long broadened their scope.

The University grew with the rapidly expanding population of California and responded to the educational needs of the developing state. In the early 1900s the University’s new College of Commerce (now the School of Business Administration) trained students for export trade with the Orient and funneled graduates into industries and businesses throughout the state. During the same period a foreign service training program was developed in response to State Department concern about the poor quality of consular personnel.

In 1930 Robert Gordon Sproul began a presidency that lasted three decades. His principal concern was academic excellence, and he was committed to attract-
ting brilliant faculty in all fields. His success was particularly evident in the physical and biological sciences. In the 1930s research on campus burgeoned in nuclear physics, chemistry, and biology, leading to the development of the first cyclotron by Ernest O. Lawrence, the isolation of the human polio virus, and the discovery of all the artificial elements heavier than uranium. Eighteen members of the Berkeley faculty have been awarded Nobel Prizes for these and subsequent discoveries, as well as in literature and economics, for liberal arts kept pace with physical sciences. In 1966 Berkeley was recognized by the American Council on Education as “the best balanced distinguished university in the country.”

For historical resources about Berkeley, see the Appendix and the marginal notes on pages 50-52.

The Berkeley Campus

South Hall, the oaks along Strawberry Creek, and the eucalyptus grove link Berkeley to its beginnings over a century ago. While the campus has grown considerably since then, it has retained much of the tranquil beauty of its rural past and is now a park-like oasis in an urban setting. Students study, work, and relax among Neoclassical buildings, wooded glens, and parklands spread across 1,232 scenic acres overlooking the San Francisco Bay.

With 31,000 students, a distinguished faculty, nearly 300 degree programs, and alumni in positions of national and international leadership, Berkeley today is a large and complex institution, offering students a vast range of scholarly endeavor and a wide arena for personal growth.

The campus is surrounded by wooded, rolling hills and by the city of Berkeley (population 106,500), “the Athens of the 20th century.” Berkeley has a long history as one of America’s most lively, culturally diverse, and politically adventurous cities. The surrounding San Francisco Bay Area offers culture, entertainment, and natural beauty without rival, much of which is accessible by BART (Bay Area Rapid Transit).

All of Northern California, with its great variety of cultural and recreational opportunities, is within easy reach. San Francisco is just over the bridge; the wine country and the Point Reyes National Seashore are a short drive north; the Monterey Peninsula and Big Sur, a short drive south; and Lake Tahoe, the Sierra Nevada mountains, and Yosemite National Park are close enough for weekend skiing and backpacking trips.

Tradition of Excellence

Berkeley is internationally noted for its academic excellence. Its faculty includes 8 Nobel laureates, 128 members of the National Academy of Sciences, 85 members of the National Academy of Engineering, and more NSF Young Investigators than there are at any other university in the country. In national surveys, Berkeley’s academic departments consistently rank among the top five in the country.

By any standard, Berkeley ranks as one of the world’s leading intellectual centers, renowned for the size and quality of its libraries and laboratories, the scope of its research and publications, and the distinction of its faculty and students. More students who earn bachelor’s degrees at Berkeley complete Ph.D.’s than graduates of any other university in the country.

Superior Research

The range of research projects at Berkeley is broad, reflecting the diversity of disciplines represented. The campus provides a distinctive environment in which faculty and students seek to expand fundamental knowledge of human nature, society, and the natural world.

A Campus Chronology

1855: A private institution called the College of California is incorporated in Oakland.

1860: The College of California opens its doors in Oakland to 10 freshmen.

1866: The trustees of the College of California vote to name the new town that will surround the college at its permanent site after Irish dergymman and philosopher George Berkeley.

1868: The governor signs a bill by which the College of California will disincorporate and become the core of a state-supported University of California. March 23 is thereafter celebrated as Charter Day of the University.

1869: The University begins instruction of 38 male students in Oakland.

Henry Durant named first president of the University.

1870: Regents vote to admit women to the University on equal terms with men.

Seventeen women register.

1871: The first Greek letter society established at the University is the loto chapter of Zeta Psi.

1872: Founding of the University Alumni Association, later renamed the California Alumni Association.

1873: Twelve young men, thereafter known as “the 12 apostles,” receive the first diplomas of the University. First classes open at Berkeley.

(continued on next page)

At the turn of the century, there were four University buildings at Berkeley (from left): North Hall, Mechanic Arts Building, Bacon Hall, and South Hall. Only South Hall remains.
1887: The Associated Students of the University of California is formed to resolve conflicting interests of numerous student societies.

1905: The University purchases a collection of western Americana and Spanish-American historical materials from Hubert Bancroft, and founds the Bancroft Library, now one of the world’s outstanding collections.

1912: Doe Library is dedicated.

1913: Sather Gate, one of the campus’s principal landmarks, is completed.

1914: The Jane K. Sather Tower, more popularly known as the Campanile for its resemblance to the campanile at St. Mark’s Plaza in Venice, takes its place as Berkeley’s chief landmark.

1929: The first residence hall for students, Bowles Hall, opens. It was funded by private gifts.

1930: International House, one of four worldwide funded by John D. Rockefeller, opens at Berkeley.

1931: Ernest Lawrence and Stanley Livingston conduct on campus the first successful operation of a cyclotron.

1941: Professors Glenn Seaborg and Edwin McMillan and two colleagues discover plutonium in experiments conducted in Gilman Hall.

Research programs at Berkeley are conducted within teaching departments and organized research units (ORUs). The latter are established and administered separately from the teaching units. ORUs are interdisciplinary in nature and are organized around the work of a group of faculty and graduate students whose research interests transcend traditional disciplinary boundaries. They do not offer courses of instruction or degrees, although several work in conjunction with interdepartmental instruction programs which lead to bachelor’s or advanced degrees. ORUs provide invaluable experience for graduate students in basic and applied research and greatly enhance Berkeley’s educational program and the overall academic quality of the University.

Please see the Appendix for a listing of the campus ORUs.

### Commitment to Teaching

Every year, the Berkeley campus honors several of its outstanding faculty members by presenting them with the Distinguished Teaching Award (http://teaching.berkeley.edu/dta.html). More than 207 faculty members in 48 departments have been recognized in this way for their outstanding teaching. (Recipients of Distinguished Teaching Awards have daggers by their names in the “Courses and Curricula” section of this catalog.)

At a large institution often known more for its research, such recognition serves to remind us all of the importance of teaching and the value we place on it. Students who attend Berkeley have the benefit of learning from world-renowned theorists and researchers who are also often distinguished teachers. Recipients of past awards have pointed out that their research is often enhanced by the questions and responses of their students in the classroom, while at the same time, the excitement of generating new ideas and discoveries in research stimulates them to become better teachers.

Good teachers do more than convey knowledge in a field. They clarify for students the relationships between their subject and other fields of knowledge; they ignite in their students a desire to learn; and as a consequence they often have a life-long impact on their students’ lives and careers.

Good teaching is, of course, not limited to the people who have received Distinguished Teaching Awards. You will encounter excellent teachers in all departments, all disciplines, in large classes and in seminars. There is no one way to teach well; the styles you will encounter will be as varied as the courses you take, from eye-opening lectures to discussion sections in which you will clarify and define your own ideas. In teaching, as in every aspect of Berkeley, diversity is the key to a rich and challenging educational experience.

### Student Diversity

The quality of Berkeley’s student body complements the stature of its faculty. Most students are Californians, but nearly every state and 100 foreign countries are represented. The student body can best be characterized by its diversity; more than half of the students are minorities, helping to produce the wide range of opinion and perspective essential to a great university. Many programs, such as African American, Asian American, Chicano, and Native American Studies, reflect the diversity, as does the opportunity students have to design their own major if their interests do not match any of the 100 majors offered.

### Organization and Administration

The University of California

The University of California comprises 10 campuses, each with a distinctive character. The San Francisco campus was added to the University in 1873, the Los Angeles campus in 1919, Riverside in 1954, Santa Barbara in 1958, San Diego and Davis in 1959, and Santa Cruz and Irvine in 1965. UC Merced is under development in the San Joaquin Valley and could open as early as 2004. The campuses have three law schools, five medical schools, and schools of architecture, business administration, education, engineering, and many others. UC campuses have a full-time faculty of about 7,200 and the total enrollment is about 191,000 students, most of them California residents. Nearly 20 percent are graduate students. Some 480 laboratories, extension centers, and research and field stations strengthen teaching and research while providing public service to California and the country.

### Administration

Under the State Constitution, the government of the University is entrusted to the Board of Regents. The regents appoint the president of the University, and with the president’s advice, appoint the chancellors, directors of major laboratories, provosts, and deans who administer the affairs of the individual campuses and other divisions of the University. Authority in academic matters is delegated by the regents to the Academic Senate, which determines academic policy for the University as a whole.

The Board of Regents includes seven ex officio board members and 18 members who are appointed by the governor for 12-year terms after consultation with an advisory committee. In addition, the regents appoint a student regent for a one-year term as a voting board member with full rights of participation. The chair and vice chair of the Academic Council serve as faculty representatives to the board and participate fully in all discussions. A constitutional amendment provides that “Regents shall be able persons broadly reflective of
the economic, cultural, and social diversity of the State, including ethnic minorities and women." They shall have “full powers of organization and government, subject only to such legislative controls as may be necessary to ensure compliance with the terms of the endowments of the University and the security of its funds.”

The president is executive head of the 10-campus University system. The Office of the President, located in Oakland, is the University’s central administrative headquarters. There are 10 vice presidential divisions—Academic Affairs, Business and Finance, Agricultural and Natural Resources, University Affairs, Financial Management, Health Affairs, Clinical Services Development, Laboratory Management, Educational Outreach, and Budget. The Office of the President performs administrative functions for the University as a whole and supports all campus operations.

Each of the campuses 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. For the names of University regents, officers, and chancellors, see the Appendix.

The Academic Senate, consisting of faculty and certain administrative officers, determines the conditions for admission and degrees, subject to the approval of the regents; authorizes and supervises courses and curricula; and advises the University administration on the important matters of faculty appointments and promotions and budgets.

Students participate in policy-making at both the campus and Universitywide levels.

Colleges and Schools

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

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

1952: Clark Kerr, professor of industrial relations, is named Berkeley’s first chancellor, with responsibility for all but Universitywide policies. Kerr later becomes president of UC.

1961: The UC Regents name a fountain on Sproul Plaza after a German short-haired pointer named Ludwig von Schwanenberg, who had played in it daily.

A new student union opens, now called the Martin Luther King, Jr., Student Union.

1964: Students demonstrate against rules that prohibited certain political activities on campus, actions that later become known as the Free Speech Movement.

1969: A student strike in support of establishment of an independent Third World College and protests over use of a three-acre plot later called People’s Park convey an image of Berkeley that is still strong in the public mind.

1989: Berkeley faculty approves the American Cultures requirement that requires students to take a course that examines the experiences in and contributions to American culture of a mixture of ethnic groups. Faculty call it the “great educational experiment of the 1990s.”

1992-93: Celebration of the 125th anniversary of the founding of the University of California.

1995: Chancellor Chang-Lin Tien launches the Berkeley Pledge, an ambitious outreach effort to help a greater number of disadvantaged Bay Area youngsters become eligible for a UC education.

(continued on next page)
Academic Resources

The University Library

Berkeley's library system (www.lib.berkeley.edu) contains one of the best research collections in the country. The system consists of Doe Library, Moffitt Library, the Gardner Stacks (underground), the Bancroft Library which houses rare books and western Americana, and 20 subject specialty libraries serving particular academic disciplines. All libraries, including the Teaching Library, promote information literacy and academic success by teaching students and faculty how to use a wide range of information resources—print, online, and networked—now available in the library. The library's collections and services are complemented by a variety of special purpose or "affiliated" libraries on campus. The holdings of the University library system include more than nine million book volumes, 90,000 current serial publications, five million microform items, 400,000 maps, 60,000 sound recordings, 6,000 videos, and hundreds of thousands of government documents.

Most of the Berkeley humanities and social sciences materials are located in Moffitt Library and the Gardner Stacks. Moffitt Library, with its 95,000 volumes, is designed as a core collection and an entry point for new and undergraduate students. Special collections in Moffitt include reserve texts assigned in undergraduate courses and a file of course exams. Access is limited to card holders, including UC faculty, students, and staff.

The Media Resources Center on Moffitt's first floor provides spoken word and visual image material on a wide variety of subjects for student research and class reserves. The center also houses audio and video cassettes, slides, computer software programs, and the equipment to use these materials.

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As a student you are entitled to use the libraries upon presentation of your current Berkeley student photo ID card. Borrowing privileges and access to the collections vary from unit to unit. Orientation tours are scheduled throughout the year, and library staff are available to help you at various information and reference desks. The library's services are described in the leaflets available at many central points and subject specialty libraries.

For information about the campus libraries or help in using the online catalogs, ask at the Reference Desk in Doe Library ((510) 642-6657). For tours, small group sessions on catalog use, and classes on a wide range of information resources, contact the Teaching Library in Moffitt ((510) 643-9959) or one of the subject specialty branch libraries.

A cooperative program between the university libraries of Berkeley and Stanford provides convenient interlibrary services to faculty and graduate students. Together the two libraries have more than 13 million volumes, a combined research collection that is one of the richest in the world.

Affiliated Libraries

The library system also includes 15 affiliated libraries that contain specialized research collections of unique and often difficult-to-locate materials associated with organized research units, academic departments, and professional schools at Berkeley. These libraries primarily serve the teaching and research needs of faculty and staff, although many of them also serve the campus community at large and the general public.

Studying Abroad

Both undergraduate and graduate students may earn University credit while studying abroad at some 130 study centers around the world. See the study abroad sections in the chapters on undergraduate education (page 45) and graduate education (page 66).

Lawrence Hall of Science

The Lawrence Hall of Science is both a public science center and a research unit in pre-college science and mathematics education. LHS programs are designed to involve participants actively in science and math explorations. Visitors participate in interactive planetarium shows, conduct do-it-yourself experiments and observations at stations throughout the hall, and explore topics from dinosaurs to lasers in permanent and traveling exhibits. A new permanent, outdoor installation, “Forces That Shape the Bay,” is an interactive exhibit on the formation of San Francisco Bay.

LHS also offers workshops and after-school classes in biology, chemistry, physics, astronomy, computers, robotics, and math. During the summer, day and residential camps are offered. Outside groups can also rent facilities at the hall for meetings, reunions, and birthday parties.
Science curricula developed at LHS are used throughout the world. Teacher-training workshops actively involve participants in curriculum development. LHS is open daily from 10 a.m. to 5 p.m. There is an admission fee, but UC Berkeley students are admitted free. Transportation to and from LHS is available on a shuttle bus on weekdays, excluding UC holidays. For more information, call (510) 642-5132 or send e-mail to lhsinfo@uclink.berkeley.edu. You can also visit LHS at www.lawrencehallofscience.org.

**Berkeley Natural History Museums**

The Berkeley Natural History Museums (BNHM) is a consortium of six independent museums at Berkeley: the Essig Museum of Entomology, the Museum of Vertebrate Zoology, the Phoebe Hearst Museum of Anthropology (see below), the UC Botanical Garden (see below), the UC Museum of Paleontology, and the University and Jepson Herbaria. Individually, each is a world-class natural history museum with collections and resources typically ranked in the top 10 in the nation in their respective disciplines. Unlike most other museums, the BNHM are part of a premier research university, which provides a setting for full integration of research, teaching, educational outreach, and technology. Thus, the BNHM provide a uniquely unified approach to the study and public dissemination of all aspects of biodiversity from molecular evolution to human prehistory.

The BNHM house more than 30 million natural history objects and specimens that are quite literally priceless. They support the research and teaching of more than 60 Berkeley faculty and researchers and countless scientists around the world. In addition to the faculty who serve as curators, there are 22 professional staff members whose duties include conservation and curation, system administration, and leadership of museum and campus outreach programs. The BNHM collections also support undergraduate, graduate, and postdoctoral education and training; collections are used in classes in more than 10 departments and at least three colleges. Collection materials have an impact on thousands of students annually during their course of study at Berkeley.

**Phoebe Hearst Museum of Anthropology**

Facilitating scholarly research and educating undergraduate and graduate students are among the primary functions of the Phoebe Hearst Museum. The museum also sponsors changing exhibits and programs in its exhibit hall to meet the varied educational and aesthetic interests of the University community and general public. There are more than four million objects in the museum's holdings. Among these are major collections of ethnographic and archaeological objects from California and archaeological collections from ancient Peru and Egypt. The exhibit hall is open Wednesday through Saturday from 10 a.m. to 4:30 p.m., Sundays noon to 4:30 p.m. Admission is free for museum members, UC students, staff, and faculty, and free to the public on Thursdays. The museum is closed on holidays and is wheelchair accessible. For further information, please call (510) 642-3682 or (510) 643-7648.

**Botanical Garden**

The UC Botanical Garden was established in 1890 and moved to its current 34-acre location on Centennial Drive in Strawberry Canyon in the 1920s. The garden, a member of the Berkeley Natural History Museums (see above), ranks among the world's leaders in the quality and variety of its plants and their scientific importance. Its collection comprises more than 12,000 taxa, most of which have been collected from the wild with scientific data.

The garden offers employment and internship opportunities for students in horticulture, scientific research, elementary education, and garden operations. The garden is a national leader in developing curriculum in environmental education and is building a program in plant conservation. Information regarding volunteer opportunities, special programs for adults and children, and special events may be obtained from the garden's web site at www.mip.berkeley.edu/garden. General information and directions are also available at (510) 643-2755.

**CAL Quiz No. 2**

**What do the carved plaques on the upper walls of South Hall represent?**

(Answer on page 496.)
The garden offers free guided tours to the public every Thursday, Saturday, and Sunday at 1:30 p.m. Self-guided tours and educational brochures are available at the garden entrance. Group tours, including school tours, may be arranged for a nominal charge by calling (510) 642-3352. To use the garden for University research or teaching purposes, contact the curator at (510) 643-8040. The Conference Center and Mather Redwood Grove are available for weddings and other special events by calling (510) 642-3352.

The garden has three plant sales annually, as well as plants for sale daily at the Garden Shop. The garden is open to the public daily except Christmas and the first Tuesday of each month. Hours are 9 a.m. to 5 p.m., extended to 7 p.m. from Memorial Day to Labor Day. The Garden Shop (books, gifts, tools, and plants) is open from 10:30 a.m. to 4:30 p.m. on days the garden is open. Admission fees: free to members, UC Berkeley faculty, staff, and students with current ID; adults $3, current California Alumni Association members $2, seniors (65+) $2, children (3-18) $1, children under 3 free. Thursdays are free to everyone.

The Hill Shuttle bus departs from Hearst Mining Circle on campus and provides transportation to and from the garden Monday through Friday. For shuttle information, call (510) 642-5149 or go to http://public-safety.berkeley.edu/p&t/shuttle-h.html. Parking adjacent to the garden is available for a fee.

Berkeley Language Center (BLC)

The BLC offers a wide array of pedagogical and technological services to students and language instructors. Services include a Second Language Acquisition/applied linguistics library, a lecture series on the methodology of SLA, a circulating collection of foreign language media, listening and viewing facilities, computer labs and high-tech classrooms, a multimedia development lab, an audio recording and digitizing studio, media duplication services, and equipment. The BLC houses an extensive collection of language resource materials, language instruction in more than 100 languages, and archival collections of linguistic field work and noteworthy University speeches and events. For further information call (510) 642-0767, or go to http://blc.berkeley.edu/.

Berkeley Summer Sessions

More than 500 courses in 80 academic disciplines are offered in the summer. Students in good standing at any UC campus or at other colleges or universities are eligible for enrollment. Summer study is also open to adults willing to commit to a serious course of study, and to high school juniors and seniors. Students can earn credit while studying abroad by enrolling in Summer Sessions’ international programs.
Exchange and Cross-Registration Programs
Students may participate in cross-registration programs with Mills College; Sonoma State University; San Francisco State University; California State University, Hayward; College of Holy Names; Dominican College; and John F. Kennedy University. In addition, UC Berkeley students may attend a class each semester at any one of the campuses of the California state university or community college systems. Graduate students may participate in exchange programs with other University of California campuses, Stanford University, the Graduate Theological Union, and a number of colleges and universities that participate in the Exchange Scholar Program. See the exchange and cross-registration program sections in the chapters on undergraduate and graduate education.

University Extension
UC Berkeley Extension is the continuing education branch of the University, linking the campus to the community. It ranks among the top half-dozen university-level programs in the nation in size, scope, and the quality of instruction. A self-supporting unit of the University, Berkeley Extension offers more than 3,000 courses each year in most of the University’s fields of study. The evening, daytime, and weekend courses offer opportunities to earn college credit, pursue intellectual and cultural interests, keep abreast of current research, prepare for career advancement, and examine critical issues in society. For students seeking a planned sequence of study, Extension offers more than 35 multi-course certificate programs in fields such as telecommunications, engineering, marketing, graphic design, and alcohol and drug abuse studies.

While courses are open to the public, most Extension students already have bachelor’s degrees, and many have advanced degrees. Instructors are drawn from the campus, the business world, the arts and sciences, and the professions. The average 10-week, 30-hour course costs around $450. Berkeley Extension courses are held at locations around the Bay. Extension also offers a nationwide seminar series; a travel/study program, including a summer program at Oxford; residential programs and short courses for international students; custom-designed contract training programs; and more than 100 online courses.

The Fall Program for Freshmen, offered through Extension and designed in cooperation with the College of Letters and Science and the College of Engineering, provides a liberal arts curriculum each fall for 500 freshmen admitted for the following spring semester. The program enables these new students to complete the full academic year of study.

Many Berkeley campus courses in regular session are also open to nondegree students through an Extension enrollment option called concurrent enrollment. The consent of the instructor and the department chair (and in some cases the dean of the school or college) are required, and enrollment for credit is optional. You may obtain full details and an application form from Extension’s registrar. For more information, call (510) 642-4111, visit the online catalog at www.unex.berkeley.edu, or write to UC Berkeley Extension, 1995 University Avenue #7000, Berkeley, CA 94720-7000.

Cultural and Recreational Resources
The University of California, Berkeley Art Museum and Pacific Film Archive (BAM/PFA)
The University of California, Berkeley Art Museum and Pacific Film Archive, located at 2626 Bancroft Way (near College Avenue), is the major visual arts museum serving the University community. Facilities include galleries, a fine arts bookstore, a sculpture garden, a cafe, and a film theater and film library. Gallery hours are 11 a.m. to 7 p.m. Wednesday through Sunday. Admission to gallery exhibitions is free for Berkeley students, staff, and faculty. For a taped message about exhibits, call (510) 642-0808; for a taped message about the Pacific Film Archive program, call (510) 642-1124. To reach Pacific Film Archive offices, call (510) 642-1412, Monday through Friday, 9 a.m. to 5 p.m.

The museum annually offers about 15 exhibitions; some are nationally circulating and others originate at the museum. A permanent collection of Western and Asian art is on display on a rotating basis. The MATRIX program is a changing exhibition of contemporary art. Special study collections are available to students and faculty, works in storage can often be made available for study upon request, and various exhibitions are prepared for and by University classes and seminars. In addition, the museum has internship opportunities available for advanced students who receive practical experience by assisting in museum work. Lectures on art by artists and art historians are regularly held.

The museum’s film department, the Pacific Film Archive (PFA), is one of the major film exhibition centers in the country, offering programs of international cinema to the public each evening. PFA maintains a study collection of 10,000 prints and 6,000 books and provides a media information service and facilities for both film study and research screenings.
Music, Dance, Drama

The University offers a broad variety of activities in the arts and humanities. These include:

Music—Students may enroll in a variety of student performing groups for credit through the Department of Music, 104 Morrison Hall (510) 642-2678; auditors are also welcome in most groups. The African Music Ensemble, Chamber Chorus, wind ensemble, gospel chorus, Chamber Music Ensemble, Collegium Musicum, Javanese Gamelan, University Chorus, and University Symphony Orchestra are included; many of these groups give concerts every semester. The Department of Music also presents free noon concerts on Wednesdays in Hertz Hall. Extracurricular musical groups are the UC Jazz Ensemble ((510) 642-5062), the Cal Marching Band ((510) 642-6704), and Student Musical Activities—Vocal ((510) 642-3880).

Theater and Dance—The Department of Theater, Dance, and Performance Studies offers many opportunities for students interested in these arts. Credit is offered for a full range of courses in the history and theory of performance and for all aspects of participation in theater and dance productions staged on campus: acting, dancing, directing, designing, stagecraft, and choreography. For information, please call (510) 642-1677, e-mail ugprograms@theater.berkeley.edu, or go to http://theater.berkeley.edu.

The Student Union Program, Entertainment, and Recreation Board (SUPERB) is a student-run entertainment production company that produces a wide range of events, including the Berkeley Film Series in Wheeler Auditorium, concerts in The Bear’s Lair and on Lower Sproul Plaza, comedy nights in The Bear’s Lair, annual chess tournaments in Pauley Ballroom, free sneak previews, special events, and more. All students are welcome to get behind the scenes of SUPERB events. SUPERB is a part of the ASUC (Associated Students of the University of California). For more information, contact SUPERB at 4 Eshleman Hall, (510) 642-7477, or go to www.calsuperb.org.

Cal Performances—a year-round program of world-class, professional music, dance, and drama presentations. Registered Berkeley students receive a half-price discount and $5 student rush tickets, as available. Berkeley faculty and staff receive a $2 discount. For information or reservations, call (510) 642-9988.

Physical Education, Sports, and Recreation

Each year more than half the Berkeley student body regularly uses the campus physical education, sports, and recreation facilities. The campus has four gymnasiums; five swimming facilities; four weight rooms; squash, handball, racquetball, and tennis courts; a martial arts room; and two 440-yard tracks. The atrium of the Recreational Sports Facility (RSF) houses many cardio machines, including Precor cross-trainers, treadmills, stairmasters, bicycles, rowing machines, and more. Registered students can purchase a semester membership to use these facilities.

The Physical Education Program offers physical activity classes to students in aquatics, sports, dance, combatives, and exercise. Instruction is directed toward improving performance skills, learning about personal wellness and fitness, and developing and maintaining physical fitness. Elementary and intermediate classes are provided in many activities, and advanced classes are offered in certain areas. All classes offered by the Physical Education Program are for credit and are open to all students. (See the Schedule of Classes for specific classes each semester.) For further information, consult the program office at 200 Hearst Gymnasium, e-mail peuclb@uclink.berkeley.edu, or go to http://pe.berkeley.edu.

The Department of Intercollegiate Athletics and Recreational Sports offers a wide range of leisure and competitive activities. The CalFIT (Fitness, Instruction, and Training) program is open to students, faculty, staff, and the community. Participants can take a wide variety of noncredit classes, among them Capoeira, dancing, massage, yoga, water exercise, tennis, strength training, and more. Massage Therapy offers 30-, 60-, and 90-minute massage appointments along with nutritional counseling. CalSTAR (Sports, Training, and Recreation) assists disabled users who are interested in recreational programs. We offer volunteer assistants as well as equipment.

Cal Intramurals offers Berkeley students, staff,
and faculty a diverse range of organized team and individual sports on a competitive or recreational level, as well as job opportunities through officiating. Cal Sport Clubs offer Cal students, staff, faculty, and alumni national and international competitions, recreation, and instruction in 23 sports.

Cal Rec Club is a membership program available to Berkeley students, faculty, staff, and the community. Full membership includes use of the RSF, which features an Olympic-size swimming pool, weight rooms and cardiovascular machines; courts for squash, handball, racquetball, volleyball, basketball, and badminton; and table tennis. Full members may also use the swimming pools at the Hearst Gymnasium, the Golden Bear Rec Center, and Strawberry Canyon. Cal Aerobics offers drop-in aerobics and fitness classes including step, low-impact, fitness boxing, and more. One-on-One Personal Fitness Training provides individual consultation with a highly qualified fitness trainer who best suits your needs, limitations, and aspirations. For more information, go to http://calbears.berkeley.edu.

Cal Adventures, Berkeley’s outdoor recreation program, offers a wide variety of classes, trips, youth camps, and custom events. Activities include sailing, sea kayaking, windsurfing, backpacking, rock climbing, whitewater rafting, wilderness first aid, teambuilding, and instructor training courses. A complete line of rental equipment, including sleeping bags, tents, and stoves, is available at affordable prices. The program is open to the community, as well as to students, faculty, and staff at discounted rates. Cal Adventures visits Mt. Tamalpais, Tomales Bay, Mono Lake, Yosemite, the High Sierra, and other beautiful locations. Facilities include an aquatic center at the Berkeley Marina, a ropes course at Strawberry Canyon, a climbing wall at the Recreational Sports Facility, and a mobile climbing wall that can be rented for private events. Office hours are Monday through Friday, 9 a.m.-6 p.m. For more information, call (510) 642-4000 or go to www.oski.org. For a free brochure, write to Cal Adventures, 100 Strawberry Canyon Center #4430, University of California, Berkeley; Berkeley, CA 94720-4430.

Other Resources

Computing on Campus

The Berkeley campus provides access to a full range of computing capabilities, from individual workstations to large shared computers, as well as high-speed Internet access. Network connections are available in computer facilities, classrooms, and residence halls. Wireless connections are also available for laptops equipped with wireless cards. A free e-mail service (UCLink) is available to registered students, and dial-up access is offered at a modest cost. The UC Berkeley Computing web site (http://comp-resources.berkeley.edu/) describes campus information technology resources.

Computer facilities—Computer facilities are available throughout the campus for general use. For locations and current schedule, visit the Workstation & Microcomputer Facilities web site at http://facility.berkeley.edu, or call (510) 643-6253 for a recorded message.

Electrical Engineering and Computer Sciences, the Haas School of Business, Chemistry, Physics, Engineering, and many other units have their own computing facilities. Check with your department for details.

Computing resources and services—Most student services are on the web. Below are some of the many computing resources and services available at Berkeley:

Berkeley Internet Link (http://bilink.berkeley.edu/) is a one-stop sign-up page for campus Internet services including UCLink, the free electronic mail service for students, faculty, and staff, and Home IP, the campus dialup network for remote access to systems on the campus network. CalNet IDs must be set up at the CalNet Gateway (http://calnet.berkeley.edu/).

CalNet Gateway (http://calnet.berkeley.edu/) is the place to set up a CalNet ID for accessing campus online services.

CalNet Directory Services (http://directory.berkeley.edu/) is a searchable directory containing records for all current faculty, students, and staff at Berkeley. All students are required to maintain a current e-mail address in this directory.

BearLink (http://bearlink.berkeley.edu/) is a gateway to the most important student information resources online. A few of the links on this site include those to Bear Facts, Tele-BEARS on the web, and the Online Schedule of Classes.

Berkeley Internet Link (http://bilink.berkeley.edu/) is a one-stop sign-up page for campus Internet services including UCLink, the free electronic mail service for students, faculty, and staff, and Home IP, the campus dialup network for remote access to systems on the campus network. CalNet IDs must be set up at the CalNet Gateway (http://calnet.berkeley.edu/).

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CalNet Directory Services (http://directory.berkeley.edu/) is a searchable directory containing records for all current faculty, students, and staff at Berkeley. All students are required to maintain a current e-mail address in this directory.

BearMail (http://bearmail.berkeley.edu/) is the Berkeley web mail service for students, faculty, and staff.

AirBears (http://airbears.berkeley.edu/) is the wireless service that enables access to the campus network with a laptop equipped with a wireless card.

Connecting@Berkeley CD (http://cab.berkeley.edu/), a CD available for purchase, is the easiest way for students, faculty, and staff to configure a connection to the Internet through UC Berkeley, as well as the most convenient way to get the programs needed to use that connection.

The Scholar’s Workstation (TSW) (www.tsw.berkeley.edu/), the campus computer store, offers a large variety of computers, peripherals, and software for sale at academic prices to the campus community.

Workstation Hardware Support (www.whsg.berkeley.edu) provides repair service for equipment sold by The Scholar’s Workstation.

Student Computer Consulting Service (http://facility.berkeley.edu/labs/sccs.html) is available to students for help with network access, C@B, Home IP, and AirBears.

Telphone Numbers and Electronic Mail Addresses

UC Berkeley Computing & Communications: http://comp-resources.berkeley.edu


CyberCentral (faculty help with educational technology): http://cybercentral.berkeley.edu/

Central Systems Consulting: (510) 642-4072 consult@socrates.berkeley.edu consult@uclink.berkeley.edu

Network and Central Systems Trouble Desk: (510) 642-4920

User & Account Services: (510) 642-7355 accounts@uclink.berkeley.edu http://uas.berkeley.edu/

The Scholar’s Workstation (TSW): (510) 642-8424 info@tsw.berkeley.edu http://www.tsw.berkeley.edu/

Workstation Hardware Support: (510) 643-6937 caltec@socrates.berkeley.edu http://www-whsg.berkeley.edu/

Workstation and Microcomputer Facilities: (510) 643-6253 http://facility.berkeley.edu/
The Social Science Computing Laboratory (SSCL) (http://socrates.berkeley.edu:7500/facilities.html) is open to graduate students and faculty in the social sciences and affiliates.

Educational Technology Services (http://media.berkeley.edu/) assists faculty with course web sites, multimedia, and classroom technologies.

User and Account Services (http://uas.berkeley.edu/) answers general inquiries regarding computing, networking, and computer accounts offered by Information Systems and Technology.

Berkeley Computing and Communications (BC & C) (http://istpub.berkeley.edu/bcc/) is a free newsletter covering developments in information technology at Berkeley.

Visit the UC Berkeley Computing web site (http://comp-resources.berkeley.edu/) and the Information Systems and Technology web site (http://ist.berkeley.edu/) for complete and current lists of resources and services. The search facility on the Berkeley home page (www.berkeley.edu/) is also a useful resource for finding current computing information.

The California Alumni Association

Founded in 1872, the California Alumni Association (CAA) is the largest single-campus membership alumni association in the nation. Its aim is to serve both students and alumni while supporting the University. The Student Alumni Mentor Program offers current Berkeley students an opportunity to connect with alumni volunteers for guidance and support on academic and social issues. A similar program, Bear Connections, makes alumni available for career advice, informational interviews, and networking.

CAA’s Alumni Leadership Scholarship Program annually awards approximately $1 million to more than 1,000 undergraduates who demonstrate strong extra-curricular leadership skills. The CAA Achievement Award is a financial award for a few dozen entering students who have participated in UC-affiliated outreach programs.

Beyond the campus, the California Alumni Association is the primary vehicle to keep alumni connected to Berkeley. Currently, over 92,000 alumni are CAA members. Members receive numerous benefits, discounts, and services. The California Alumni Association publishes the California Monthly alumni magazine, operates the Lair of the Golden Bear family summer camp in the Sierra Nevada (for information, call (510) 642-0221 or e-mail lair@alumni.berkeley.edu), sponsors Bear Treks educational alumni group travel, co-hosts Homecoming and class reunions, and maintains nearly 120 local alumni clubs throughout the world. Cal alumni look to CAA for career networking and continuing education, social gatherings, and opportunities for volunteer work for their alma mater. Alumni participate in student outreach programs to attract future Berkeley students, interview prospective scholars, raise much-needed funds for CAA programs, and host special events for alumni gatherings around the world.

The California Alumni Association is located on campus in Alumni House. The main information line is (510) 642-7026. CAA’s Student Center, which houses the student programs, is located at 2600 Bancroft Way, second floor; (510) 642-6112. CAA also has a Southern California office in downtown Los Angeles; (213) 624-5060. For more information, go to www.alumni.berkeley.edu.

Visitor Services

The Visitor Center, located at 101 University Hall at the corner of Oxford Street and University Avenue, provides tours of the campus for individuals and groups. Information about the campus, student services, and the University community is available at (510) 642-5215. You may also visit the office or the Berkeley campus web site at www.berkeley.edu.

Campus tours start at the Visitor Center Monday through Friday at 10 a.m. Weekend tours at 10 a.m. Saturday and 1 p.m. Sunday begin at Sather Tower, popularly known as the Campanile, the bell and clock tower in the center of campus. There is no charge for these 90-minute walking tours conducted by trained student tour guides.

Special group tours may be arranged by calling (510) 642-5216 at least two weeks in advance. There is a small charge for groups not related to schools.
Student Life

Originals from an Original

Twain’s prolific papers illuminate his wit, life, and work.

Scrapbooks, letters, photos, and manuscripts — the world’s largest collection of original materials by and about Mark Twain — are fully accessible to students at the Mark Twain Papers and Project in Berkeley’s Bancroft Library. Scholars from around the world come to the Bancroft to study America’s most cantankerous but beloved writer.
The University of California, which celebrated the 125th anniversary of its founding in 1993, has a singular place in American higher education—in terms of its history, its beneficial roles within the state and beyond, and its influence as a model for achieving both quality and quantity in its programs. Some would point out other singularities as well, such as the pronounced tendency for the University of California to become a testing ground at the leading edge of new intellectual and social trends.

—Glenn T. Seaborg, 1912-1999

The ASUC

The Associated Students of the University of California (ASUC) is the official organization of Berkeley students. Membership in the ASUC is voluntary, although all students must pay the ASUC fees. This nonprofit organization, through its student-elected senate, is responsible for directing a large variety of student activities and serves as the official student spokesperson in University affairs. Graduate students also elect departmental representatives to the Graduate Assembly, which meets regularly in Anthony Hall. The ASUC also provides a wide range of programs and activities. Each year, roughly $600,000 is distributed to student activity groups, including associations, ethnic and cultural groups, and sports. The ASUC, moreover, sponsors vital programs such as student advocacy ((510) 642-6912), the Student Legal Clinic ((510) 642-9986), Renters’ Legal Assistance ((510) 642-1755), and the Student Union Program, Entertainment, and Recreation Board (SUPERB) ((510) 642-7477).

The basic goals of the ASUC are to enhance the quality of life for both students and the community, as well as to increase the avenues for student participation in education and campus operations. Other important goals of the ASUC are to protect full freedom of assembly and expression in the University community and to facilitate academic and social responsibility.

Athletic Study Center

The Athletic Study Center, located in 179 César Chavez Student Center, offers academic support and advising for Berkeley’s student athletes. Services are geared to ensuring academic achievement through tutoring, study tables, computer labs, and staff advisers. For more information, call (510) 642-8402 or go to www.asc.berkeley.edu.

Career Center

The Career Center educates undergraduate and graduate students about the career planning process, job searches, and professional/graduate schools. It also promotes linkages among students, employers, alumni, and professional/graduate schools. The center serves as a comprehensive information resource for all career and employment opportunities. The major components of the Career Center are career counseling, employment services, information services, letter of recommendation services, professional and graduate school programs, the Cal Internship Program, employer relations and recruiting, and alumni career services.

The Career Center provides a variety of ways to enable Berkeley students to connect with employers and graduate program representatives. Some highlights are:

- Career Week (over 40 programs including a variety of employer panels providing insights about various career fields)
- Externships (short, shadowing opportunities with employers)
- Career, internship, summer job and graduate school fairs at which representatives meet with students
- Recruiting (employers visit the Berkeley campus to interview graduating students for positions)
- Electronic job and internship listings for part-time, summer, and full-time employment opportunities

For more information, including access to our calendar of activities, go to http://career.berkeley.edu.

The Career Center is located at 2111 Bancroft Way, between Fulton Street and Shattuck Avenue. Hours are 9 a.m. to 5 p.m., Monday through Friday. Call (510) 642-1716 for more information.

See page 46 for information on internships.

Child Care

The Early Childhood Education Program is available to full-time registered Berkeley students and provides care for children aged three months to seven years as of the first day of fall classes in a given academic year. To be eligible, at least one parent must be a registered Berkeley student; the other parent, if not a Berkeley student, must be employed or attending a degree-granting institution. Priority is given to currently enrolled children; next, to families based on gross income (lower income admitted before higher income). Each family is expected to contribute two hours of parent participation per week. Fees at the five
centers are based on a sliding scale depending on gross monthly income and family size. For information and an application (the deadline for fall is May 30), contact the Early Childhood Education Program office, 2537 Haste Street #4640, Berkeley, CA 94720-4840, (510) 642-1827, or go to http://housing.berkeley.edu/child.

**Clubs**

**Special Interest Clubs**

Besides regular ASUC-sponsored activities, there are more than 600 registered student organizations on campus serving special interests and needs. Student groups include academic and professional, ethnic and cultural, political and social action, recreational, religious, and service-oriented organizations, as well as student publications. At the beginning of the fall semester, a student group fair is held in Sproul Plaza to acquaint you with many of the organizations and to give you an opportunity to join. A list of registered student groups is available from the Office of Student Life in 102 Sproul Hall ((510) 642-5171) or at http://osl.berkeley.edu.

**Fraternities and Sororities**

Fraternities and sororities offer students an opportunity to make life-long friendships, participate in community service, develop leadership skills and much more. Contact the Interfraternity Council for men ((510) 642-8067), the College Panhellenic Association for women ((510) 642-5709), or the predominantly African American National Pan Hellenic Council ((510) 643-5111). All three groups are located in 102 Sproul Hall. Additional information is available from the Office of Student Life ((510) 642-5171) in 102 Sproul Hall.

**Honor Groups**

Honorary academic societies are open to students of outstanding accomplishment. These multidisciplinary honor societies include Honor Students' Society, Phi Beta Kappa, Mortar Board, Golden Key, Order of Omega (a Greek honor society), Tau Beta Pi (a national society of upper division students in the College of Engineering and in chemical engineering), National Society of Collegiate Scholars, and various other groups in other disciplines. Most of these groups offer tutoring services. Information on the general groups is available in 102 Sproul Hall. Contact specific departments for the single-discipline honor societies.

**Student Publications**

Student publications provide opportunities for involvement in all phases of publishing: writing, editing, reporting, art and design, advertising, sales, and general management. If interested, inquire at the ASUC Student Publications Center, located in the basement of Eshleman Hall ((510) 642-2892). Grants are available through the Chancellor's Committee on Student Publications and other sources in 102 Sproul Hall, or go to http://students.berkeley.edu/osl/pubs.shtml.

The Berkeley Undergraduate Journal publishes outstanding essays from the humanities and social sciences. If you have written a paper 15-60 pages long that would appeal to an educated audience, watch The Daily Cal for submission deadlines (usually the third week of each semester). Undergraduate students may also apply for positions on the 10-member Editorial Board. For further information, contact the publication adviser at buj@learning.berkeley.edu, or go to http://research.berkeley.edu/.

Berkeley Scientific is a faculty-reviewed, student-published science journal that is issued twice a year. Undergraduate papers from all scientific disciplines are welcome. For more information, contact the editors at bjs@ocf.berkeley.edu, or go to www.ocf.berkeley.edu/~bjsj.

Office of Student Affairs

The Office of Student Affairs within the ASUC Auxiliary offers fiscal advice and program assistance to more than 150 ASUC-funded student groups. For information call (510) 642-4536.

**Community Service Programs**

Berkeley is committed to promoting the ethic of public service and encouraging students to participate in community service activities. Through these experiences, students expand their understanding of social issues and develop valuable leadership skills while working on solutions to real-life problems.

The Cal Corps Public Service Center—the campus office for student public service, leadership development, community development, and civic engagement—offers individual and student group resources, training, and programs. For information on service leadership opportunities or any of Cal Corps’ programs,
visit the office at 505 Eshleman Hall, call (510) 642-3916, or go to http://calcorps.berkeley.edu/.

The following are a few of Cal Corps’ student program areas:

Service and Leadership Resources: Cal Corps has many resources to help support the service experiences of all students, whether already serving in the community or looking for ways to become involved. As the campus volunteer placement center, Cal Corps has an online database of more than 200 Bay Area nonprofit organizations seeking volunteers. Cal Corps staff and peer advisers provide training and roundtables on leadership skill development, social issues, and public service. Student leaders work through the Service Advocates program and the Peer2Peer Leadership Training Team to provide service and leadership outreach to campus communities. Cal Corps also serves as the information resource on postgraduate service opportunities with agencies such as the Peace Corps, AmeriCorps, and Teach for America.

AmeriCorps National Service: Cal Corps serves as the campus home for the two campus AmeriCorps programs, Destination: College and the Bonner Leaders Program. Destination: College is a campus collaborative organization that places Berkeley students in tutoring, mentoring, and pre-college advising positions throughout the Bay Area. The Bonner Leaders Program is a multi-tiered program connecting student leaders to a variety of service and leadership opportunities within Cal Corps and in the community. AmeriCorps members in both programs are eligible for scholarships, and some positions offer pay or academic credit.

Student-Initiated Community Projects: Cal Corps provides support for groups of students to coordinate and manage their own public service projects. These groups work on a number of social service areas including the following:

- Increasing educational opportunities for underrepresented students in higher education through recruitment and support.
- Providing academic, social, and cultural support for students in local elementary, middle, and high schools.
- Bringing awareness to issues facing people of color, women, the disabled, and the elderly.

Service-Learning Programs: Several programs allow students to connect their service experiences with learning and reflection.

- Alternative Breaks takes students on student-led service trips during their winter and spring breaks, as well as on weekends.
- The Cal in Berkeley Student Internship Program places students as interns in the city of Berkeley and related community-based organizations.
experiencing ongoing bias-related threats, discrimination, advising, support, and appropriate referrals to those practice through education and internship opportunities, programs that promote and support equity and social jus-

The center provides a full range of services and programs that promote and support equity and social justice through education and internship opportunities, advising, support, and appropriate referrals to those experiencing ongoing bias-related threats, discrimination, harassment, or domestic or sexual violence. The center’s welcoming, friendly environment allows students, faculty, and staff to feel comfortable exploring issues of difference. GenEq is located at 202 César Chavez Center, (510) 642-4786; fax, (510) 642-4788; e-mail, geneq@uclink.berkeley.edu; or online at http://students.berkeley.edu/osl/geneq.

Graduate Assembly
The Graduate Assembly (GA) is the student government for Berkeley’s graduate and professional students. Located in Anthony Hall (The Pelican Building), the GA represents the interests of graduate and professional students to the Berkeley administration, the UC systemwide administration, and the state. The assembly meets the first Thursday of every month (except in January and summer) at 5:30 p.m. in the Senate Chambers of Eshleman Hall. Each department is represented by at least one delegate, whom it appoints.

All graduate and professional students are welcome to participate in these meetings and other GA-sponsored events and programs, such as fundraising for graduate/professional student groups and activities, an annual New Graduate Student Orientation, receptions, academic workshops, and various programs sponsored by the Graduate Minority Students’ Project and the Graduate Women’s Project. The GA also publishes a biannual newsletter for graduate and professional students, The Berkeley Graduate, and maintains a web site (http://ga.berkeley.edu). A patio and meeting room are available on a reservation-only basis for student groups, and staff assistance is available for various information and referral services at (510) 642-2175.

Health and Counseling Services
University Health Services (UHS) provides comprehensive medical, counseling, and prevention services to Berkeley students and selected services for faculty and staff. UHS is located in the Tang Center at 2222 University Avenue.
Bancroft Way. Services are generally available from 8 a.m. to 5 p.m. Monday through Friday. Selected services, including urgent care, are available after 5 p.m. and on Saturdays. Services and hours are reduced during the summer.

You can call the 24-hour Advice Line at (510) 643-7197. A nurse will discuss symptoms and provide advice on emergencies, self-care, and when to see a clinician.

Most student visits to the Tang Center are supported by registration fees. There are, however, additional fees for selected services. Call the UHS Cashier's Office, (510) 642-8448, with any questions.

**Medical and Insurance Services**

All students can use on-campus services. These include visits with the physician/nurse practitioner of your choice, visits to specialists in any of nine medical disciplines, walk-in urgent care, appointments with a health educator, laboratory tests and X-ray procedures, pharmacy, allergy tests and shots, and international travel care. Call (510) 642-2000.

All Berkeley students must carry major medical health insurance, which covers hospitalization and services outside UHS, including out-of-area care. You are automatically enrolled in the University's Student Health Insurance Plan (SHIP) and are charged a health insurance fee as part of registration. This insurance, which includes dental coverage, supplements the campus services available at UHS.

If you are covered by other health insurance, you may waive the SHIP requirement if you can show that your coverage is comparable to that available under the University plan. Please note that even if you waive SHIP, you are still eligible like all other students for on-campus health care at UHS.

Please call the insurance office at (510) 642-5700 for more information, or for information on health insurance for dependents. Insurance information also is available at www.uhs.berkeley.edu.

**Counseling and Psychological Services**

Counseling is available for career, academic, and personal concerns; call (510) 642-9494. The counselors are a multicultural group of social workers, psychologists, and psychiatrists. Any Berkeley student can come in to talk about choosing a major, learning about interests and abilities, clarifying career goals and exploring options, coping with personal crises, dealing with concerns about relations with family or others, overcoming learning and concentration problems, life at Berkeley, or any other concerns.

A career counseling program, including aptitude and skills testing, is available to students, as are group and couples counseling. Social services (510) 642-6074 are also offered to assist students with concerns such as pregnancy, alcohol and other drug use, chronic or life-threatening diseases, traumatic accidents, and sexual assault.

The Tang Center also houses the Career Counseling Library ((510) 642-2367), which has materials on occupations, professions, and educational and career opportunities; and the Self-Care Resource Center, which has interactive programs, books, audio and video tapes, magazines, and self-assessment tools. For more information, go to www.ush.berkeley.edu.

**Health Promotion**

Workshops and speakers are available on a variety of topics including HIV/AIDS, stress, cultural health issues, alcohol and other drugs, sexually transmitted diseases, sexual assault, and community health.

Trained student health educators (peer educators) offer workshops and individual consultations and organize groups of students to work on critical campus health issues. Peer educators earn 4 units per year through the School of Public Health. For more information, call (510) 642-7202.

**University Optometric Eye Center**

The School of Optometry, located in Minor Hall, is one of the leading research facilities in the world for studying the eye, vision, and related disorders. As part of its academic programs, the school has an excellent Optometry Clinic that offers comprehensive eye care to faculty, staff, students, and the general public.

The clinic provides complete eye examinations, including eye health assessments and treatment, seven days a week. Prescriptions for glasses or contact lenses can be filled from an extensive selection of eyewear. In addition to providing primary vision care, specialized care is also available: ocular health, eye photography, binocular and infant vision, low-vision rehabilitation, and electro-diagnostic testing; vision training for reading or sports; video display terminal (VDT) examinations; special visual assessments for the disabled; and job-related vision examinations and safety glasses. Laser refractive correction is also available on campus.

The school also operates an eye clinic open to the general public in University Health Services at 2222 Bancroft Way. Insurance (including SHIP and UC employee benefit coverage) is accepted.

For more information about Minor Hall, call (510) 642-2020; for more information about the vision clinic in University Health Services, call (510) 643-2020; or go to www.caleyceare.org.

**Housing**

Approximately one-third of all students are housed in University or University-affiliated housing. Nearly all new, fall freshman live in University residence halls. Other housing includes fraternities, sororities, cooperatives, International House, and University Family Student Housing. Each housing provider has its own application procedure and deadline.

Housing information including an application for the residence halls will be mailed to all new undergraduate students after their admission to Berkeley. Go to
University Residence Halls
University-operated residence halls accommodate some 5,000 students, approximately 70 percent of whom are new, incoming students. All new, incoming fall freshmen and transfer students who apply by the deadline are guaranteed housing in the residence halls, if we are able to accommodate their preferences. Each residence hall is unique, and to become acquainted with the options, new students are encouraged to read their housing information thoroughly. If possible, they should also take the tour offered by the campus Visitor Services. Most halls are co-ed, and most offer a dining facility, recreational and social programs, and study rooms. University housing includes “theme programs” which provide a living environment focused on a language or culture. Most residence halls are within a few blocks of campus.

Cal Rentals
Cal Rentals provides rental listings and housing counseling for students. For more information, write to Cal Rentals, UC Berkeley, 2610 Channing Way, Berkeley, CA 94720-2272; (510) 642-3642; e-mail homeinfo@uclink4.berkeley.edu. Cal Rentals information is also available at the web site above and at www.calrentals.housing.berkeley.edu.

University Residence Halls
The University of California, Berkeley, operates University Residence Halls, co-ed residence halls that provide a living environment in which students may develop independence and a strong sense of community. Each hall is unique, with its own special emphasis or cultural program centered at the core of the community of the hall. There are some 5,000 students living in residence halls at UC Berkeley, and the halls are located on a number of small blocks of campus.

Family Student Housing
For married students and single-parent families, the University Village is a complex of 900 apartments located at the University Village in Albany, approximately four miles northeast of the campus, and at the Smyth-Fernwald complex in Berkeley. You may apply for family student housing before you have been admitted to the University. You should apply early, as assignments are made on a first-come, first-served basis, and the waiting period could be as long as a year. For more information, contact Apartment Assignments, 2610 Channing Way, Berkeley, CA 94720-2272, or call (510) 642-4109, or e-mail apts@uclink4.berkeley.edu.

Law and Graduate Student Apartments
Manville Apartments is a complex of 132 small, unfurnished, single-occupancy studio apartments reserved exclusively for law and graduate students. It is located at 2100 Channing Way and offers many amenities: recreation room, laundry, mail room, storage space, cable TV, and in-room campus network and Internet hookups. For additional information, contact Apartment Assignments, 2610 Channing Way, Berkeley, CA 94720-2272, or call (510) 642-4109, or e-mail apts@uclink4.berkeley.edu.

College Durant Apartments
This complex, which opened in 2002, features shared apartments with single-occupancy bedrooms. Located a block south of campus, these furnished apartments range in size from two to six bedrooms. Each apartment has a kitchen, living room, dining area, and one or two bathrooms. The complex features study rooms, lounge, private courtyard, and coin laundry facilities. In fall 2003, 90 of the 120 apartments will be reserved for graduate students with the remainder assigned to continuing upper division students. In 2004 the entire complex will be reserved for graduate students. For additional information, contact Apartment Assignments, 2610 Channing Way, Berkeley, CA 94720-2272; call (510) 642-4109; or e-mail apts@uclink4.berkeley.edu.

International House
International House is a coeducational residence for about 600 students and scholars from the U.S. and abroad, primarily at the graduate level. It is also an intercultural program center for the campus, serving nonresident and resident members. An active schedule of cultural, social, and recreational events is offered, designed to promote understanding and friendship among all nationalities. For an application and further information, write or call the Residence Office, International House, University of California, Berkeley, 2299 Piedmont Avenue #2320, Berkeley, CA 94720-2320; (510) 642-9470; fax: (510) 642-5220; e-mail: ihres@uclink.berkeley.edu; or go to www.ishouse.berkeley.edu. For nonresident membership, call the Program Office, (510) 642-9460.

Co-ops
The University Students’ Cooperative Association (USCA) is a nonprofit, student-owned and operated organization that is independent of the University. The Co-op houses more than 1,200 students in 19 houses and apartments. Members are required to contribute a regular work shift. Admission priority is given to EOP/AA and disabled students. For more information, contact USCA, 2424 Ridge Road, Berkeley, CA 94709; call (510) 848-1936; send e-mail to housing@usca.org; or go to www.usca.org.

Student Life
The first day I arrived, people were coming up to me and saying, “Oh, hi, my name is so-and-so, I’m from here; where are you from?” They were just really friendly.

2nd-year student
Information Online

Most campus web servers can be found by accessing the Berkeley home page (www.berkeley.edu/). Some online services of particular interest to students include the following:

UC Berkeley Students (www.berkeley.edu/students/) has information about campus services fundamental to student life, such as health services, housing, student jobs, and student organizations.

Bear Link (http://bearlink.berkeley.edu/) is a gateway to the most important student information resources online. A few of the links on this site include those to Bear Facts, Tele-BEARS on the web, and the Online Schedule of Classes.

The Library (http://library.berkeley.edu/) has links to the many collections and electronic resources available at the various campus libraries, as well as links to catalogs at other UC campuses, workstations, campus computer facilities, and libraries.

International Student Advising

Services for International Students and Scholars (SISS) offers a wide range of services to UC Berkeley's international students, international scholars, and their families. Services include orientations, guidance on visa matters, help in solving financial problems, advice and referrals about personal concerns, and information on almost any topic of special interest to international students and scholars. Located in International House, 2299 Piedmont Avenue, (510) 642-2818, the office is open Monday through Friday, 9 a.m. to noon and 1 to 4 p.m. Web site: www.ias.berkeley.edu/siss; e-mail: siss@uclink.berkeley.edu.

International Student Programs

The International House Program Office, (510) 642-9460, organizes cultural, social, and recreational programs that enhance the appreciation of various cultures for both residents and nonresident members. Programs offer opportunities for personal interaction and participation in campus and community events including a host family program for international students and scholars. Trips to neighboring communities for home stays and tours of local institutions and facilities enable international visitors and U.S. citizens to learn from each other. I House cultural events, parties, and slide shows enrich the extracurricular life of the campus.

Nonresident membership in the I House (for a nominal fee) keeps you informed and allows you to participate in these events. For updated information, go to http://ihouse.berkeley.edu.

Legal Services

If you are a registered Berkeley student concerned about a legal problem or want information about your legal rights and obligations, you are encouraged to make an appointment with Beth Karren, the Student Legal Services' attorney, by calling (510) 642-5171. Ms. Karren's office is located in the Office of Student Life, 102 Sproul Hall, and her hours are 9 a.m. to 4 p.m. Monday through Wednesday during the academic year and 9 a.m. to 4 p.m. Tuesday during the summer.

Office of the Ombudsperson for Students

The ombudsperson serves all students, both undergraduate and graduate, who feel they have been treated unfairly or need help in resolving University-related problems, including student-reserved employment issues. Having no official administrative role in imposing solutions, the ombudsperson acts as an independent “agent of justice” to work informally with all parties involved to mediate a satisfactory solution. All matters referred to the ombudsperson are held in the strictest confidence. The only exceptions, to be determined solely at the discretion of the ombudsperson, are when there appears to be imminent threat of physical harm.

If you are confronted with a bureaucratic impasse or feel you have been treated unfairly or need help with a procedural or academic problem, contact the ombudsperson. To make an appointment, call (510) 642-5754.

Office of Student Life

Staff in the Office of Student Life (OSL) help students learn to use the campus to its fullest. OSL encourages participation in co-curricular activities that, for many students, can be one of the most rewarding benefits of a Berkeley education.

OSL recognizes more than 600 student groups including fraternities and sororities, honor societies, student publications, and service organizations. Among OSL's support services are leadership workshops and conferences, multicultural student group advising, and internships and awards. Volunteer opportunities are available through the Cal Corps Public Service Center (see Community Service Programs, above). OSL also assists with facility reservations and events management, disseminates campus information, and administers funding for student programs.

Registered students may seek free legal advice from the attorney for students (see Legal Services, above). The campus Gender Equity Resource Center is also part of OSL (see Gender Equity Resource Center, above), as is Student Judicial Affairs.

The Office of Student Life is located in 102 Sproul Hall, (510) 642-5171 or (510) 642-6778 (TDD).

Orientations for New Students

New Student Services offers programs, services, and publications to introduce new undergraduates to the Berkeley campus. Admitted freshmen and transfer students who have submitted their online SIRs may sign themselves and their parents and guests for a CalSO (Cal Student Orientation) program by going to
http://calso.berkeley.edu. At CalSO, new students (and their parents) receive information, advice, and the student handbook Resource (http://uga.berkeley.edu/resource) to ease their transition to life at Berkeley. New Student Services also organizes Welcome Week in the fall and the Calapalooza activity fair and staffs the chancellor's Smooth Transition Information Tent on Upper Sproul Plaza. New Student Services is located at 2610 Channing Way, third floor, (510) 642-4970. You may also e-mail calso@uclink4.berkeley.edu or go to http://uga.berkeley.edu/nss.

**Smooth Transition**
The fall “Smooth Transition” program builds upon Welcome Week activities and includes nearly a month of welcoming and orientation activities sponsored by academic departments, student service units, and student groups. Spring Smooth Transition includes orientations and an afternoon reception with the chancellor.

**Re-entry Student Center**
The Re-entry Student Center offers services and programs designed to promote adult learning for undergraduate re-entry students. The program co-sponsors two academic courses, Education 98 and 198, with the School of Education. Each is offered for 1-3 units of passed/not passed credit. The following topics are covered: Increasing Academic Performance: Easing the Transition to Cal; Negotiating the Bureaucracy: A Guide to Campus Services; and The Peer Advocacy Seminar: A Peer-Based Advising Course. In addition, the Department of English co-sponsors English 310, a course in tutor training.

The program also provides advising, mediation, and advocacy, sponsors social and academic events, hosts an annual graduation celebration, and publishes a re-entry newsletter. In addition to these services for current Berkeley students, the program also offers monthly orientations (co-sponsored by the Office of Undergraduate Admissions) for prospective students. The program is located in 105 César Chavez Student Center and can be reached at (510) 643-8070. You may also visit the web site at http://students.berkeley.edu/reentry.

**Religious Activities and Resources**
Although by law the University may not sponsor religious activities, there are abundant religious activities both on and off campus that serve the campus community. Among these are numerous religious student organizations representing many faiths; nine campus ministries offering spiritual, social, and service opportunities; and many churches, temples, mosques, and other institutions in the community. The Graduate Theological Union, a multidenominational graduate school of theology just north of the campus on “Holy Hill,” offers courses that are open to Cal students, as well as an outstanding bookstore and the most comprehensive theological library in the country. Students seeking religious connections and resources can find them at the Office of Student Life, 102 Sproul Hall, (510) 642-5171, or online at http://students.berkeley.edu/osl/religious.shtml.

**Safety**
The University maintains a police department on the Berkeley campus for your protection and safety. The department consists of over 70 fully trained, sworn officers, 50 other full-time personnel, and 55 student employees. The Police Department is located in 1 Sproul Hall (basement) and is open 24 hours a day, seven days a week. Police patrol the campus, the surrounding University properties, and Southside and vicinity, and they investigate all crimes committed on University property. For emergencies, including police, fire, or medical, call 911 from any campus phone (no need to dial 9 first); from cellular phones, call (510) 642-3333. For general business, call (510) 642-6760 or go to www.police.berkeley.edu; for information about campus safety services and programs, call (510) 64B-SAFE (642-7233); for information on emergency preparedness, call (510) 642-9036 or go to www.berkeley.edu/oep; for lost and found, call (510) 642-4936.

**Bicycle Licensing**
All bicycles on campus must have California bicycle licenses, which the Parking and Transportation department can provide to the campus community. For more information, call (510) 642-2987.
Night Safety Shuttle/Night Escort Service
The Night Safety Shuttle and Night Escort Service are available in the evening for safe access to your car, campus facilities, nearby home, or public transportation. Presentations on safety and workplace violence are also available. For more information about the shuttle and escort services, call (510) 642-WALK (642-9255). For general information about safety, call (510) 64BSAFE (642-7233).

Sexual Assault Prevention, Medical Care, and Counseling
University Health Services offers resources to maximize your personal safety and to contribute to a campus environment that does not tolerate sexual assault, promotes its prevention, and supports assault survivors. Prevention activities include workshops and other educational campaigns. Workshops are available for living centers, classes, and campus departments; call (510) 642-7202.

Immediate response to survivors of sexual assault includes confidential crisis counseling as well as assistance and advocacy, as needed, for the initial medical evaluation, legal and police procedures, and academic and housing issues; call (510) 642-6074. Services are available for both recent survivors and those working to recover from a past assault. We also provide short-term individual and group counseling and education sessions for friends, family, housemates, and co-workers of survivors.

Student Learning Center
The Student Learning Center (SLC) is a community of 4,000 undergraduates, more than 250 tutors and instructors, and 20 professional staff dedicated to fostering academic excellence. The SLC is driven by the philosophy that students working with students promote academic and personal success.

As the primary academic support service for students at UC Berkeley, the SLC assists students in making the transition to Cal, navigating the academic terrain, creating networks of resources, and achieving academic, personal, and professional goals. Through various services including tutoring, study groups, workshops, and courses for credit (see page 47), the SLC supports students in the biological and physical sciences, business administration, computer science, economics, mathematics, social sciences, statistics, study strategies, and writing.

For additional information or to register for any SLC programs, visit the reception desk at the César Chavez Student Center on lower Sproul Plaza, call (510) 642-7332, or go to http://slc.berkeley.edu.

Student Life Advising Services
Student Life Advising Services (SLAS), an academic counseling and advising unit, gives priority attention to students in special programs such as the Educational Opportunity Program, the Summer Bridge Program, the Incentive Awards Program, etc. Priority assistance is also extended to students who participated in outreach programs including Upward Bound, Educational Guidance Center, Mathematics Engineering Science Achievement, and Early Academic Outreach Programs. SLAS provides academic advising, personal counseling, financial assistance, and advocacy services.

SLAS staff strive to motivate and encourage students toward achieving academic excellence that leads to graduation from Berkeley. Academic counselors and peer advisers are available on both a drop-in and appointment basis to assist students.

In addition to counseling, advising, and advocacy services, SLAS administers a wide range of programs designed to assist students in achieving their educational and career goals. Services include the Achievement Awards Program, Peer Advising Program, Summer Bridge Program seminars, Reduced Study Load Program, Housing Assistance Program, emergency loans and financial assistance, and study list review.

SLAS is located in 119 César Chavez Student Center #4210, (510) 642-7224. Information is also available at http://slas.berkeley.edu/.
In a corner of the Bancroft Library, in a room filled with lead type, an 1850s printing press, and the pungent smell of ink, lecturer Les Ferriss, top, teaches the history and art of making books. “This is a wonderful place to teach this class,” he says. Students get to work with rare library treasures, such as an original leaf from a Gutenberg Bible. Each class makes a masterpiece of its own, hand-printing one of the library’s unpublished manuscripts as a final project.
Undergraduate Education

As a prospective Berkeley undergraduate, you should give careful thought to preparing yourself adequately in reading, writing, mathematics, and other areas related to your intended major. The more comprehensive and challenging your high school or college program is, the better prepared you will be for work at Berkeley. Honors-level and advanced placement courses are good preparation for Berkeley, regardless of the major you choose. The nature of instruction and the subject matter you cover in advanced courses will give you a definite advantage in your studies. These challenging courses will help you develop the good study habits and skills you will need at Berkeley.

Applying for Admission

How to Apply
If you are interested in applying to Berkeley, you can obtain an undergraduate application packet from your California high school or California community college counselor's office or any of the University of California campuses' admissions offices. The application is also available online at www.ucop.edu/pathways. The packet contains an application form and explains the application process, fees, and all the items you must submit with your application. You may apply to as many UC campuses as you wish, using one application form. (The San Francisco campus, which is devoted to the health sciences, has its own application and filing procedures.)

You should be aware of the importance of the priority filing periods. We are unable to accept applications after the filing period ends.

Priority Filing Period
Fall semester: File November 1-30

Note: Berkeley does not accept applications for the spring semester. However, we do defer students to the spring semester from the fall applicant pool. For information about application fees and fee waivers, see below; see also Fees and Financial Aid, beginning on page 69.

Application Fees and Fee Waivers
The basic application fee of $40 entitles you to apply to one University campus. If you apply to more than one campus, you must pay an additional $40 for each campus you select. These fees are not refundable. You must include your fees with the application or the application will not be processed.

The University will waive application fees for up to more than four campuses must pay $40 for each additional choice. To be accepted for the fee waiver program, your family income and the number of dependents must be within specific guidelines. The fee waiver program is for U.S. citizens and permanent residents only.

There are four ways to obtain a fee waiver:
1. If you are in high school, you may use the College Board fee waiver. Applications for this waiver are available from your high school counselors.
2. If you are enrolled in the EOPS program in a California community college, you may obtain a fee waiver from your EOPS office.
3. You may obtain a fee waiver application from Berkeley’s Office of Undergraduate Admissions.
4. If you are unable to obtain a fee waiver from any of the sources mentioned above, you may attach a letter to your admission application requesting consideration for a fee waiver. In the letter, describe your family’s income, the number of dependents, and the hardship that makes payment of the application fee difficult. You may be granted a fee waiver, if appropriate.

Myths and Facts About Majors and Careers

Myths about the relationship between your major and career goals abound. When you choose a major, you should have no misconceptions about the undergraduate preparation you will need to pursue your goals. Several popular myths about majors and careers are debunked below.

Myth: When you choose a college major you are choosing a career.
Fact: A study conducted by the College Placement Council found that the majority of college graduates are successfully employed in fields not directly related to their academic majors. A few majors such as engineering, computer science, and accounting prepare students for fairly specific career fields, but most majors, especially in the liberal arts, give graduates a wide range of career options.

Myth: You should choose a career that is in high demand.
Fact: The job market moves in cycles. The career that is in high demand now may be glutted by the time you finish college — either because so many people have already entered that field or because economic patterns have changed. New fields are also constantly opening up. So it is better to choose a major and career that genuinely interest you.

(continued on next page)
Competitive Admission at Berkeley
All programs at Berkeley receive more applications than they can accept. For fall 2003, Berkeley was able to admit about 8,900 of 37,000, or about 24 percent, of its freshman applicants and about 2,525 of 10,000, or about 25 percent, of its transfer applicants. Consequently, to gain admission to Berkeley, you need to present an academic profile much stronger than that represented by the minimum University of California admission requirements. See page 478 in the Appendix for more information on selection criteria for the Berkeley campus. You can also obtain information online at http://admissions.berkeley.edu/.

Admission As a Freshman
Berkeley considers you a freshman applicant if you are currently enrolled in the 12th grade or if you have graduated from high school and have not enrolled in a regular session at any college or university. If you attend a summer session immediately after graduating from high school, you are still a freshman applicant.

Minimum Eligibility Requirements
California Residents*
There are three pathways to satisfying the admission requirements for freshman students: eligibility in the statewide context, eligibility in the local context, and eligibility by examination alone.

Eligibility in the Statewide Context
Eligibility in the statewide context is the pathway by which most students attain UC eligibility. To be eligible in the statewide context, you must satisfy the subject, scholarship, and examination requirements described below.

Subject Requirement
To satisfy this requirement, you must complete the high school courses listed below with a grade-point average defined by the scholarship requirement. This sequence of courses is also known as the “a-g” requirements. You must take 15 units of high school courses to fulfill the subject requirement, and at least 7 of the 15 units must be taken in your last two years of high school. (A unit is equal to an academic year, or two semesters, of study.)

Applicants from California high schools: To be acceptable to Berkeley, the courses must appear on the certified list for your high school as meeting Berkeley’s admissions requirements. Your counselor or principal will have a copy of this list, or you may view the certified course list at www.ucop.edu/pathways.

*Residency status: The definition of legal residence for tuition purposes is different than that for admission purposes. If you have questions about your residency status, see the Appendix or contact the Office of the Registrar at (510) 642-1614.

a. History/Social Science—Two years required. Two years of history/social science, including one year of U.S. history or one-half year of U.S. history and one-half year of civics or American government; and one year of world history, cultures, and geography.
b. English—Four years required. Four years of college preparatory English that include frequent and regular writing, and reading of classic and modern literature. Not more than two semesters of 9th-grade English can be used to meet this requirement.
c. Mathematics—Three years required, four recommended. Three years, including elementary and advanced algebra and two- and three-dimensional geometry. Approved integrated math courses may be used to fulfill this requirement, as may math courses taken in the 7th and 8th grades that your high school accepts as equivalent to its own courses.
d. Laboratory Science—Two years required, three recommended. Two years of a laboratory science providing fundamental knowledge in at least two of these three areas: biology, chemistry, and physics. Laboratory courses in earth/space sciences are acceptable if they have as prerequisites or provide basic knowledge in biology, chemistry, or physics. The appropriate two years of an approved integrated science program can be used to fulfill this requirement. Not more than one year of 9th-grade laboratory science can be used to meet this requirement.
e. Language Other than English—Two years required, three recommended. Two years of the same language other than English. Courses should emphasize speaking and understanding, and include instruction in grammar, vocabulary, reading, and composition. Courses in languages other than English taken in the 7th and 8th grades may be used to fulfill part of this requirement if your high school accepts them as equivalent to its own courses.
f. Visual and Performing Arts (VPA)—One year required. One year of visual and performing arts chosen from the following: dance, drama/theater, music, and/or visual art.
g. College Preparatory Electives—One year required. One year (two semesters), in addition to those required in “a-f” above, chosen from the following areas: visual and performing arts (non-introductory-level courses), history, social science, English, advanced mathematics, laboratory science and language other than English (a third year in the language used for the “e” requirement or two years of another language).

Scholarship Requirement
The scholarship requirement defines the grade-point average (GPA) you must attain in the “a-g” subjects and the SAT I (or ACT) and SAT II test scores you must earn to be eligible for admission to the University.

Myth: Liberal arts majors are not employable.
Fact: Liberal arts majors develop skills that are highly valued by employers and that are applicable to a wide variety of professional jobs. If these graduates sometimes take longer to find a niche in the working world, it is because they have not defined their goals or are unaware of their options.

Myth: You must pursue certain specific undergraduate majors to gain admission to postgraduate professional schools in fields such as business, law, or medicine.
Fact: While some postgraduate professional schools require or recommend certain academic prerequisites, in most cases they do not require a specific major. In other instances they may be looking for the development of certain broad skills, such as the ability to read and write critically. In short, you may major in a wide variety of academic fields; there is no “pre-med,” “pre-law,” or “pre-business” major that will help you get into graduate school.

(continued on next page)
Eligibility Index

California Residents

<table>
<thead>
<tr>
<th>“a-g” GPA</th>
<th>Test Score Total</th>
<th>“a-g” GPA</th>
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<tr>
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Nonresidents

<table>
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<th>“a-g” GPA</th>
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<th>“a-g” GPA</th>
<th>Test Score Total</th>
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</tr>
<tr>
<td>3.50</td>
<td>3120</td>
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</table>

Test Score Total equals [SAT I composite score] + [2x(SAT II Writing score + SAT II Mathematics score + third required SAT II score)]. SAT I composite is highest combined mathematics and verbal scores from a single sitting. Highest individual SAT II scores, from any sitting, will be considered. An ACT score may substitute for a SAT I composite. An ACT to SAT I conversion table is provided.

If your GPA is 2.8 or above, you satisfy the minimum scholarship requirement if you achieve the test score total indicated in the Eligibility Index (see above).

The University calculates your GPA in the “a-g” subjects by assigning point values to the grades you earn, totaling the points, and dividing the total by the number of “a-g” course units. Points are assigned as follows: A=4 points, B=3 points, C=2 points, D=1 point, F=0 points.

Only the grades you earn in “a-g” subjects in the 10th, 11th, and 12th grades are used to calculate your GPA. Courses you take in 9th grade can be used to meet the subject requirement if you earn a grade of C or better, but they will not be used to calculate your GPA.

Honors courses: The University assigns extra points for up to 4 units of certified honors-level and advanced placement courses taken in grades 10-12: A=5 points, B=4 points, C=3 points. No more than 2 units of certified honors-level courses taken in the 10th grade may be given extra points. A grade of D in an honors or advanced placement course does not earn extra points.

The courses must be in the following “a-g” subjects: history, English, advanced mathematics, laboratory science, or foreign language, and they must be certified at your high school as offered at the honors level. In these fields, as well as in the fields of computer science, social science, and the visual and performing arts, courses that are designed to prepare students for Advanced Placement Examinations, the International Baccalaureate Higher Level Examination, and college courses that are transferable to the University are acceptable honors-level courses.

D and F grades: D and F grades in the “a-g” courses must be repeated or validated. Consult with your counselor to determine how these grades can be improved and how the University will use them in evaluating your scholarship record.

Grades will not be used for repeated courses in which you initially earned a grade of C or better.

Examination Requirement

You must submit the following test scores:

Either the SAT I or the American College Test (ACT). The verbal and mathematics scores on the SAT I must be from the same sitting. The ACT composite score must be submitted.

Three SAT II: Subject Tests, including Writing, Mathematics Level 1 or 2, and one test in one of the following areas: English literature, foreign language, science, or social studies.

For information about the tests you must take to fulfill the examination requirement, talk to your school counselor or write to the appropriate testing organization. Berkeley requires you to take these tests by December of your senior year.

Eligibility in the Local Context

Under the Eligibility in the Local Context (ELC) pathway, the top four percent of students at each participating California high school are designated UC eligible and guaranteed admission to one of UC’s eight general campuses, beginning with students entering UC in fall 2001.

To be considered for ELC, you must complete 11 specific units of the subject requirement by the end of your junior year. With the assistance of each participating high school, the University will identify the top four percent of students on the basis of GPA in the required course work.

The 11 units include 1 unit of history/social science, 3 units of English, 3 units of mathematics, 1 unit of laboratory science, 1 unit of language other than English, and 2 units chosen from among the other subject requirements.

ACT to SAT I Conversion Table

<table>
<thead>
<tr>
<th>ACT Score</th>
<th>Equivalent SAT I Score</th>
<th>ACT Score</th>
<th>Equivalent SAT I Score</th>
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<tr>
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<tr>
<td>11</td>
<td>500</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The University will notify ELC students of their status at the beginning of their senior year. If you are designated UC eligible through ELC, you must submit the University’s undergraduate application during the November filing period and complete remaining eligibility requirements—including the subject and examination requirements—to enroll.

ELC students are guaranteed a spot at one of UC’s eight undergraduate campuses, though not necessarily at their first-choice campus.

**Eligibility by Examination Alone**

If you do not meet the requirements for Eligibility in the Statewide Context or Eligibility in the Local Context, you may be able to qualify for admission to the University by examination. To satisfy the minimum requirements for eligibility by examination alone, you must achieve a total score of at least 1400 on the SAT I or a composite score of 31 or higher on the ACT. In addition, you must earn a total score of 1760 or higher on the three SAT II: Subject Tests, with a minimum score of 530 on each test. You cannot qualify for admission by examination alone if you have completed 12 or more units of transferable college work at another college or university following high school graduation, or if you have taken transferable college courses in any subject covered by the SAT II: Subject Tests.

**Nonresidents**

There are two paths to UC eligibility for nonresidents at the freshman level. The first is the same as described above under Eligibility in the Statewide Context, and the second is the same as described above under Eligibility by Examination Alone, with the following exceptions:

**Scholarship Requirement:** Your grade-point average in the “a-g” subjects must be 3.4 or higher, if you achieve the test score indicated in the Eligibility Index under nonresidents.

**Admission by Examination Alone:** You must earn a composite score of 31 or higher on the ACT or a total score on the SAT I of at least 1400. Your total score on the three SAT II: Subject Tests must be at least 1850, with a minimum score of 530 on each test.

**Admission As a Transfer Student**

Berkeley has a strong commitment to transfer students and has worked hard to develop programs to help students with the transfer process. Following California’s Master Plan for Higher Education, Berkeley gives high priority to students transferring from California’s community colleges.

Most programs at Berkeley receive applications from far more transfer students than they can accept. For fall 2002 the campus was able to admit approximately 2,600 of 9,100 transfer applicants, or about 28 percent. We were also able to defer the admission of approximately 500 fall applicants to the spring 2003 semester.

Consequently, to be competitive you need to present an academic profile much stronger than that represented by the minimum UC admission requirements and complete preparation for your intended field of study.

In general, Berkeley admits transfer applicants at the junior level only—or students who have completed at least 60 UC-transferable semester units. Applicants to the Colleges of Chemistry, Engineering, Environmental Design, Letters and Science, and the Haas School of Business must complete all required units and prerequisites by the end of the preceding spring semester.

You can find more information concerning general transfer admission and the requirements to enter the University of California system in the brochure “Answers for Transfers,” available in your California community college counseling office or online at www.ucop.edu/pathways/infoctr/at/. For specific information on preparing to transfer to Berkeley, see the Appendix, the flyer “Transfer Admission,” and the announcements of the individual colleges and schools. You can also obtain information online at http://admissions.berkeley.edu.

**Minimum Eligibility Requirements**

**Requirements for California Residents**

There are three ways in which you can meet the University’s minimum admission requirements for transfer students:

1. **Eligible for admission upon high school graduation:** If you were eligible for admission to the University when you graduated from high school—meaning you satisfied the subject, scholarship, and examination requirements—you are eligible to transfer if you have a C (2.0) average in your transferable college course work.

2. **If you did not meet subject requirement:** If you met the scholarship requirement but did not satisfy the subject requirement, you must take transferable college courses in the subjects you are missing, earn a grade of C or better in each of these required courses, and earn an overall C (2.0) average in all transferable college course work to be eligible for transfer. If you met the scholarship requirement but did not meet the examination requirement, you must complete a minimum of 12 semester (18 quarter) units of transferable work and earn an overall C (2.0) average in all transferable college course work completed.

*Residency status: The requirements for California residents also apply to dependents of University of California employees. The manner in which legal residence is defined for tuition purposes is different than that for admission purposes. If you have questions about your residency status, see the Appendix or contact the Office of the Registrar at (510) 642-1614.
3. If you did not meet scholarship requirement: If you were not eligible for admission to the University when you graduated from high school because you did not meet the scholarship requirement, you must complete all of the following:

(a) 90 quarter units or 60 semester units of transferable college credit with a grade-point average of at least 2.4, and

(b) a course pattern requirement to include:
• two transferable college courses (3 semester or 4-5 quarter units each) in English composition, and
• one transferable college course (3 semester or 4-5 quarter units) in mathematical concepts and quantitative reasoning, and
• four transferable college courses (3 semester or 4-5 quarter units each) chosen from at least two of the following subject areas: the arts and humanities, the social and behavioral sciences, the physical and biological sciences. (Students who have completed the Intersegmental General Education Transfer Curriculum (IGETC) before transferring to the University will have already satisfied the course pattern requirement.)

Requirements for Nonresidents
The minimum admission requirements for nonresident transfer applicants are the same as those for residents except that nonresidents must have a grade-point average of 2.8 or higher in all transferable college course work.

Transfers from Other UC Campuses
If you are registered on any campus of the University or were previously registered in a regular session of the University, you may apply for transfer to another campus of the University by filing the undergraduate application. Filing dates and application fees are the same as those listed for new applicants. Note: Inter-campus transfer applicants receive no priority in the selection process.

Admission of International Applicants
International students are those holding or intending to apply for nonimmigrant visas. If you wish to apply for admission as an international student, you will find important information about freshman and transfer student admission for international students, foreign academic records, visas, required examinations, fees and expenses, housing, and travel at http://admissions.berkeley.edu/. You may also contact the Office of Undergraduate Admissions at 110 Sproul Hall #5800, or call (510) 642-3246. If you need to improve your English language skills, you should contact the English Language Program, UC Berkeley Extension, 1995 University Avenue #7022, Berkeley, CA 94720-7022, USA.

Readmission
If you formally withdraw from Berkeley, were absent for one or more semesters, or are returning to Berkeley in the Limited Status or Second Bachelor's programs, you must file an Undergraduate Application for Readmission. Application deadlines are April 15 for fall admission and August 15 for spring admission. Applications must be accompanied by a $40 readmission fee. If you attended other colleges or universities while you were away from Berkeley, you must send an official transcript to Berkeley immediately. Address correspondence to the Office of Undergraduate Admissions, 110 Sproul Hall #5800, or call (510) 642-0734.

Limited Status
Limited-status students are a special category of undergraduates who have earned an undergraduate degree with a record of superior scholarship (an overall grade-point average of at least 3.3), but need additional undergraduate course work for a specific and clearly defined purpose. Only the College of Chemistry will consider admitting students in limited status.

Limited status is granted only in special circumstances; students' needs, abilities, and programs should have enough urgency to justify admitting them in place of students in regular status, and there should be no reasonable alternative available. Use of limited status to enable students to raise their scholarship average is not permitted.

Work Toward a Second Bachelor's Degree
If you are a candidate for a second bachelor's degree, you will be considered for admission only if you need an entirely new major program for a valid educational purpose. Only the Colleges of Chemistry and Engineering will consider admitting students for a second bachelor's degree. To apply for this program, you must have earned an undergraduate degree with a record of superior scholarship (an overall grade-point average of at least 3.3) and must have completed all lower division requirements for your proposed major with excellent grades. Your proposed program must represent a definite change in field from your first undergraduate degree, and you must prove that you require the second degree for the stated purpose. If you need course work but not a degree in a new field, you should apply for limited status (see above) instead.

In practice, Berkeley admits very few students to the limited status or second bachelor's programs each year. Detailed information about these programs is available in the Office of Undergraduate Admissions, 110 Sproul Hall #5800, (510) 642-3175. If you are not eligible for the second bachelor's or the limited status programs, you may consider concurrent enrollment through UC Berkeley Extension as an alternative. For information call (510) 642-4111.
Registration and Enrollment in Classes

Tele-BEARS

Tele-BEARS is an interactive computer system that allows you to enroll in classes via the Internet. With Tele-BEARS, you always receive the most immediate, up-to-the-moment information regarding your registration and class enrollment.

How Tele-BEARS Works

To ensure the fairest possible distribution of courses to the student body, enrollment in classes is spread over two phases and an adjustment period. Phase I, starting toward the end of the previous semester, allows you to enroll in a maximum of 10 units plus one physical education activity course. In Phase II, starting immediately after Phase I, you may complete your enrollment by enrolling in courses up to your college or school maximum. You may then add and drop courses during the adjustment period, which starts one week before instruction and extends through the first three weeks of instruction.

Access to Tele-BEARS is regulated by pre-assigned appointments that are spread throughout each phase period. For security purposes, you are assigned a unique Personal Identification Number (PIN) that must be entered after your Student ID number in order to use Tele-BEARS.

To enroll and register through Tele-BEARS, follow these steps:

Obtain Your Tele-BEARS Appointment

Your Tele-BEARS appointments for Phases I and II are made available on the Internet via Bear Facts and Info-BEARS. (See page 38 for information on how to access these systems.) The Office of the Registrar will send you a notification by e-mail when the appointments are available.* If you require academic advising, you also will be required to obtain an Adviser Code (AC) from your major adviser or college/school Dean’s Office.** The AC must be entered when you first access Tele-BEARS each semester.

Enroll in Classes

With the Schedule of Classes and the General Catalog, you can determine a class schedule. If you will be a new student, you are encouraged to attend the Cal Student Orientation (CalSO) program to obtain your AC and to help you choose classes and formulate a schedule tailored to your particular academic interests. Contact the CalSO office, (510) 642-4970, for information. Once you have selected your classes, you are ready to use Tele-BEARS to enroll.

Pay Registration Fees

A monthly billing statement indicating all University fees due will be mailed to you by the Loans and Receivables Office. You may pay your fees in full or in five installments on the Deferred Payment Plan. Fee payment (either in full or the first installment) is due on August 15 for the fall semester and January 15 for the spring semester.

The Deferred Payment Plan

You may pay your registration fees in five installments if you wish. A nonrefundable processing fee will be charged to your first installment. Your billing statement will indicate the amount due for the first payment; subsequent statements for the remaining payments will be mailed to your local address on file with the Office of the Registrar. For full information about the Deferred Payment Plan, read the billing statement or call the Loans and Receivables Office at (510) 642-3190.

*Appointments for continuing and readmitted students are usually made available in mid-March for the fall semester and mid-October for the spring semester. Appointments for new students are usually made available in mid-May for the fall semester and late October for the spring semester.

**New students in the College of Engineering and the College of Letters and Science must obtain their ACs from the Cal Student Orientation (CalSO) program.
Alternatives to Overcrowded Courses
If you are unable to get your first choice of a particular class, think creatively. Check with an advisor to determine whether an alternative course is a viable option for you. Consider these examples:
- Economics: Environmental Economics and Policy (ENVECON) 1 is accepted as equivalent to Econ 3; ENVECON 101, to Econ 125; ENVECON 151, to Econ 171.
- Psychology: Consider alternatives outside the Psychology Department: cognitive science (UGIS), developmental psychology (Education), biological psychology (MCB), or organizational psychology (Business). See also Social Welfare and Public Health.

Undergraduate Majors and Degrees
Planning for a Major
The decision on the choice of a major is a very important one and should be made on the basis of your interests and abilities as well as your career goals. You should look carefully into the programs available by using this catalog and by visiting departments in which you are interested. Your advisor can help you explore the possibilities of interdisciplinary majors, which you take by declaring a group major or field major. If the major you are interested in is offered in more than one college or division, your advisor can help you choose the one that best suits your academic goals.

You are strongly urged to declare your major as soon as possible and should begin thinking about possible majors in your first year at Berkeley. Some majors require a full four years to complete; most majors require that some or all of the lower division major requirements be completed before you may be accepted into the major. Since you are expected to be accepted into a major by the time you have completed 60 units, these lower division major requirements should be planned into your program for the first two years. It is possible for you to plan a program that would include preparation for more than one major, an easy task if the majors in question have some lower division requirements in common.

Some majors are very crowded and cannot accommodate all applicants. You should consult closely with the departments in which you have an interest to learn of any restrictions that have been placed on entry to the major.

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 semester of residence, file a petition for a change of major. (This policy does not apply to students in the College of Engineering.) You must secure approval for this action from the dean or other authorized person in the college or department to which you are transferring.

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

Undergraduate Degrees
- African American Studies, B.A.
- American Studies, B.A.
- Anthropology, B.A.
- Architecture, B.A.
- Art (History of), B.A.
- Art (Practice of), B.A.
- Asian Studies, B.A.
- Asian American Studies, B.A.
- Astrophysics, B.A.
- Business Administration, B.S.¹
- Celtic Studies, B.A.
- Chemical Engineering, B.S.
- Chemistry, B.A. or B.S.²
- Chicano Studies, B.A.
- Chinese Language, B.A.
- Classical Civilization, B.A.
- Classical Languages, B.A.
- Cognitive Science, B.A.
- Comparative Literature, B.A.
- Computer Science, B.A. or B.S.³
- Conservation and Resource Studies, B.S.
- Dance and Performance Studies, B.A.
- Development Studies, B.A.
- Dutch Studies, B.A.
- Earth and Planetary Science, B.A.
- Environmental Earth Science, Atmospheric Science, Marine Science
- Economics, B.A.
- Engineering, B.S.

- English, B.A.

Info-BEARS
Info-Bears is Berkeley’s information retrieval system and an adjunct to Tele-BEARS. With Info-BEARS, you can obtain your final grades for the previous term, the status of your financial aid application, your current class schedule, enrollment restrictions for a particular course, and much more. Info-BEARS is available 24 hours a day, seven days a week, except from 6 a.m. to 7 a.m. Monday through Saturday, and from 5 a.m. to noon on Sunday. You can access Info-BEARS at http://info bears.berkeley.edu. For more information, see the Schedule of Classes.

Bear Facts
Bear Facts provides information regarding your registration, grades, financial aid, billing, class schedule, and more. You can access Bear Facts at http://bearfacts.berkeley.edu. For more information, see the Schedule of Classes.

Undergraduate Education
Environmental Economics and Policy, B.S.
Environmental Sciences, B.A., B.S.4
Ethnic Studies, B.A.
Film, B.A.
Forestry, B.S.
French, B.A.
Genetics and Plant Biology, B.S.
Geography, B.A.
German, B.A.
Greek, B.A.
History, B.A.
Integrative Biology, B.A.
Interdisciplinary Studies Field Major, B.A.
Italian Studies, B.A.
Japanese Language, B.A.
Landscape Architecture, B.A.
Latin, B.A.
Latin American Studies, B.A.
Legal Studies, B.A.
Linguistics, B.A.
Mass Communications, B.A.
Mathematics, B.A.
Mathematics, Applied, B.A.
Microbial Biology, B.S.
Middle Eastern Studies, B.A.
Molecular and Cell Biology, B.A.
Molecular Environmental Biology, B.S.
Music, B.A.
Native American Studies, B.A.
Near Eastern Studies, B.A.

Resource Management, B.S.
Rhetoric, B.A.
Scandinavian, B.A. (Danish, Norwegian, Swedish)
Slavic Languages and Literatures, B.A.
Social Welfare, B.A.
Sociology, B.A.
South and Southeast Asian Studies, B.A.
Spanish, B.A.
Statistics, B.A.
Theater and Performance Studies, B.A.
Vision Science, B.S.6
Women’s Studies, B.A.

Minors

Minors are offered at Berkeley in many departments and groups in the College of Letters and Science:

African American Studies
Anthropology
Art History
Art Practice
Asian Studies
Astrophysics
Celtic Studies
Classics
Creative Writing (UGIS)
Dance and Performance Studies
Demography
Dutch Studies
Earth and Planetary Science
English
Ethnic Studies
French
Geography
German
Italian Studies
Lesbian, Gay, Bisexual, and Transgender Studies (UGIS)
Linguistics
Mathematics
Medieval Studies
Middle Eastern Studies
Music
Near Eastern Studies
Peace and Conflict Studies
Philosophy
Physics

1The Haas School of Business requires completion of 60 semester units for admission into its program.
2A chemistry major may be taken either in the College of Chemistry (B.S.) or in the College of Letters and Science (B.A.).
3Computer science may be studied either in the College of Engineering (B.S. in computer science and engineering) or in the College of Letters and Science (B.A.).
4An environmental sciences major may be taken either in the College of Natural Resources (B.S.) or in the College of Letters and Science (B.A.).
5Admission into the optometry program requires a bachelor’s degree.
6Applicants interested in vision science should apply for optometry and contact an adviser after admission.
I make it a point to talk to my professors in their office hours. It’s nice to go in and talk to them because they’re really willing to help. They’re not as frightening as they seem in class.

4th-year student

Undergraduate Degree Requirements

As soon as you have been accepted for admission to Berkeley, you should learn the requirements you will have to fulfill to earn your bachelor’s degree. These requirements are prescribed by four sources: the University, the Berkeley campus, your college or school, and your department. All are summarized below.

University Requirements

The University sets two general requirements for the baccalaureate degree: Subject A and American History and Institutions.

Subject A Requirement

The University assumes that you are proficient in English and in writing about academic topics. Fulfillment of the Subject A requirement is a prerequisite to enrollment in all freshman reading and composition courses. If you have not passed the Subject A examination or otherwise fulfilled the requirement when you enter the University, you should enroll in College Writing 1A during your first or second semester. College Writing 1A is a 6-unit course that satisfies the Subject A and the first half of the reading and composition requirements.

In addition to a passing score on the Subject A examination, the Office of Undergraduate Admission and Relations with Schools accepts the following means of fulfilling the Subject A requirement before you enter the University:

• A minimum score of 680 on the SAT II: Subject Test in Writing taken since May 1998.
• A minimum score of 600 on the SAT II: Subject Test in Writing taken May 1995 through April 1998.

• A minimum score of 600 on either form of the College Board Achievement Test in English Composition—‘‘with essay’’ or ‘‘all multiple choice’’ taken before May 1994.

• A minimum score of 3 on the Advanced Placement Test in English Composition and Literature or in English Language and Composition.

• A minimum score of 5 on the International Baccalaureate Higher Level Examination in English (Language A only).

• A score of ‘‘Pass for Credit’’ on the California State University and Colleges English Equivalency Examination (discontinued 1993).

• A minimum grade of C in a transferable college-level English composition course completed at an accredited college or university and accepted by the Office of Undergraduate Admissions at Berkeley.

American History and Institutions Requirements

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

I. Options for Students Entering Berkeley for the First Time Fall Semester 1983 or Later:

Both the American History and the American Institutions requirements may be satisfied in the following ways:

• By fulfilling the portion of the ‘‘a’’ subject requirement for admission that consists of one year of U.S. history or one-half year of U.S. history and one-half year of U.S. government in high school with a grade of C or better. (Note: The ‘‘a’’ subject requirement is not the same as the Subject A requirement.)

• By passing with a grade of C or P or better, one quarter or semester of a transferable course in basic U.S. history or U.S. government at a college or university before entering Berkeley. Inquiries about specific courses should be directed to the Office of Undergraduate Admissions, 110 Sproul Hall.

• By passing the high school Advanced Placement American History exam with a score of 3 or better or the SAT II or Achievement Test in U.S. history with a score of 550 or better (500 or better if taken before April 1995).

• For students transferring from another UC campus: by passing with a grade of C or P or better, any course or courses that satisfy the AH&I requirements of that campus.

Students who have not satisfied the AH&I requirements before entering Berkeley may satisfy them in the following ways:

Political Economy of Industrial Societies
Public Policy
Religious Studies (UGIS)
Rhetoric
Scandinavian
Slavic Languages and Literatures
South and Southeast Asian Studies
South Asian Archaeology
Spanish and Portuguese
Statistics
Theater and Performance Studies
Women’s Studies

The College of Natural Resources offers these minors:

Conservation and Resource Studies
Environmental Economics and Policy
Forestry
Nutritional Sciences and Toxicology

Minors are also offered in the College of Engineering, the College of Environmental Design, and the School of Education. For more detailed information and lists of the minors available, see the individual colleges and schools in the courses section of this catalog.
• By taking the American History and/or American Institutions exams. These exams are graded passed/not passed and are offered on campus throughout the year. Contact the AH&I Office for information and reading lists.

• By passing with a grade of C- or P or better, at Berkeley, History 7A or 7B for the History requirement, and Political Science 1 for the Institutions requirement. (Students who took other courses before fall semester 1988 may check with the AH&I Office for possible AH&I credit.)

• By passing with a grade of C or P or better, a course or courses, approved by the AH&I Office, at another collegiate institution.

• By mixing these three alternatives (for example, an exam for one requirement and a course for the other).

Freshmen and transfer students: Your first opportunity to see the status of your AH&I requirements will be when you use Info-BEARS or Bear Facts to register for classes or check your grades after your first semester.

II. Students Who Entered Berkeley Between Fall 1981 and Spring 1983 may use any of the options listed under Section I above with the following exceptions:

• The American History and Institutions requirements are not linked to the “a” subject requirement for admission. The AH&I requirements may be met in high school by completing two semesters of U.S. history with an average grade of B or better for the History requirement and one semester of U.S. government with a grade of B or better for the Institutions requirement.

• One course taken at another collegiate institution before you enter Berkeley will not fulfill both AH&I requirements. A separate course must be taken for each.

• Passing the high school Advanced Placement American History exam with a score of 3 or better or the College Board Achievement Test in U.S. History with a score of 500 or better will fulfill the American History requirement only.

III. Students Who Entered Berkeley Before Fall 1981 may use any of the options listed under Section I above, with the following exceptions:

• High school courses will not satisfy either the History or the Institutions requirement.

• The College Board Achievement Test will not satisfy the American History requirement.

• One course taken at another collegiate institution before you enter Berkeley will not fulfill both AH&I requirements. A separate course must be taken for each.

IV. International Students: The AH&I requirements will be waived if you have at least 90 1/2 semester units (senior status) and hold both a current, non-immigrant visa (F is the most common) and an I-94 departure record. You should present your visa and I-94 record to the Office of the Registrar, 120 Sproul Hall, before the semester in which you will graduate.

English professor and former Poet Laureate Robert Hass introduces “Lunch Poems,” a monthly presentation of work by student, faculty, and professional poets, frequently held in the Morrison Library in 101 Doe Library.

Cal Sports

1892: The first “Big Game” between Cal and Stanford.

1895: Following a spectacularly successful tour through the East by the UC track team, California teams became known as the “Golden Bears.”

1914: At the Big Game, Cal students in the football stands use cards of varying colors to form patterns, the first recorded use of card stunts at a college football game.

1921: The 1920 California football team, considered one of the greatest college teams of all time, culminates its undefeated season with a 28-0 victory over Ohio State in the Rose Bowl. During the season, the Golden Bears scored 510 points to their opponents’ 14.

1924: Helen Wills, a freshman, wins national and international singles titles in tennis and teams with alumna Hazel Hotchkis to win the same crowns in doubles.

(continued on next page)
1928: The crew team wins the first of three Olympic championships for Berkeley crews.

1933-65: Brutus Hamilton, two-time Olympic participant in the 1920s, coaches Cal's track and field teams for 33 years.

1941: Cal mascot "Oski" takes first bow at a freshman rally.


1947-56: Pappy Waldorf coaches the Bears in football for a .670 winning percentage in 10 years, the first four of which the Bears lost only one regular season game and played in three Rose Bowls.

1948: Jackie Jensen earns first team All-America honors as running back and later twice earns All-American status for Cal's baseball team, helping the Bears to the NCAA title in 1947.

1949: Pete Newell coaches the Golden Bears men's basketball team to the national championship. They're runner-up in 1960.

1970: Eddie Hart sets the world record for 100 meters and helps the U.S. Olympic team to the gold medal and world record in the 400 meter relay.

1974: Steve Bartkowski, All-America quarterback, leads the nation in passing, with 2,580 yards.

V. AI&I Office: The office that administers these requirements is located in 120 Wheeler Hall, (510) 642-5006. You may also go to http://teaching.berkeley.edu/AlII/.

Berkeley Campus American Cultures Breadth Requirement

Students who entered Berkeley in fall 1991 or thereafter in lower division standing with 0-55 semester units and all students who entered in fall 1993 or thereafter must satisfy the American cultures breadth requirement in order to graduate. You satisfy the requirement by passing, with a grade not lower than C- or P, an American cultures course. You may take an American cultures course any time during your undergraduate career at Berkeley. International students must satisfy the requirement.

A Berkeley faculty committee determines which courses satisfy the requirement. Faculty from many departments teach American cultures courses, but all courses have a common framework. The courses focus on themes or issues in United States history, society, or culture; address theoretical or analytical issues relevant to understanding race, culture, and ethnicity in our society; take substantial account of groups drawn from at least three of the following: African Americans, indigenous peoples of the United States, Asian Americans, Chicano/Latino Americans, and European Americans; and are integrative and comparative in that students study each group in the larger context of American society, history, or culture. The courses also provide students with the intellectual tools to understand better their own identity and the cultural identity of others in their own terms.

American cultures courses may also meet other requirements, such as a college or school's breadth requirement or a department's major requirement.

See the Schedule of Classes or the American cultures web site, http://amercult.berkeley.edu, for the specific American cultures courses offered each semester. See your academic adviser if you have questions about your responsibility to satisfy the American cultures breadth requirement.

College and School Requirements

Each 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 the total number of units to be completed, with specifications of how these credits are to be distributed; and (5) a minimum scholarship requirement. For detailed information, you should obtain a copy of the announcement of your college or school.

Reading and Composition Requirement

The Berkeley campus is strongly committed to developing high levels of ability in critical thinking and communication among its undergraduates. Hundreds of courses require long papers and a number of courses provide training in writing or speaking. In addition to the Universitywide Subject A requirement, the College of Letters and Science and most other colleges and schools require two semesters of lower division work in composition. The following departments and programs offer writing courses that satisfy all or part of the reading and composition requirement:

African American Studies
Asian American Studies
Celtic Studies
College Writing Programs
Comparative Literature
English
German
History of Art
Linguistics
Native American Studies
Rhetoric
Scandinavian

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Linguistics
Native American Studies
Rhetoric
Scandinavian
Slavic
South and Southeast Asian Studies
Theater, Dance, and Performance Studies
Undergraduate and Interdisciplinary Studies
Women's Studies

In addition, a number of departments offer workshop sections of larger courses that satisfy only the second half of the reading and composition requirement. Such courses are marked with a W (for example, Linguistics 5W and Slavic Languages and Literatures 37W). Course content and orientation vary according to field or discipline. Contact the individual departments for details and consult your college or school for the particular courses that satisfy its requirements.

Minimum Scholarship Requirement
If you fail to maintain the minimum grade-point average prescribed by your college or school, you will normally be dismissed or put on probation. Since scholarship rules are applied only at the close of regular sessions, grade points that you earn in a University of California summer session or by removing an Incomplete grade are not taken into consideration until the close of your next semester of attendance.

Residence Requirement
After you have completed 90 units toward the bachelor's degree, you must complete at least 24 of the remaining units in residence in no fewer than two semesters in the college or school of the University in which you will take your degree. You must begin these final 24 units in the semester in which you exceed 90 units. You should consult the announcement of your college or school for details concerning the senior residence requirement as it pertains to the summer session.

Departmental Requirements
Every student must select a field of concentration and pursue a major or curriculum, normally by taking a minimum number of units in one department or school. Occasionally—as with business administration, optometry, and others—the school and the department are synonymous. In some cases a major may embrace more than one department, as with the interdisciplinary studies field major in the College of Letters and Science.

Major Requirements
Major requirements that must be fulfilled before you may receive a baccalaureate degree are outlined in each department in the “Courses and Curricula” section of this catalog. See also your department adviser.

Declaration of Candidacy
If you know at the beginning of a semester that you will have fulfilled graduation requirements by the end of the semester, enter the appropriate code during the first call to the Tele-BEARS registration system. You may also declare your candidacy in person in the Office of the Registrar, 120 Sproul Hall. The period for declaring candidacy is the first five weeks of the semester. Up to the end of the third week, you can declare with no fee, and from the third to the end of the fifth week there is a $5 fee. If for any reason you do not meet the requirements for graduation after declaring your candidacy, you much file a new declaration in the filing period for the subsequent semester in which the degree will be awarded.

If you are an unregistered student at the time you are ready to declare your candidacy, you may go in person to 120 Sproul Hall to fill out the form “Candidate for Bachelor’s Degree” or call (510) 642-5990. The filing deadline is the same as that stated above.

Note: The Office of the Registrar does not backdate degrees.

General Rules and Academic Policies

See also the section “Academic Policies,” beginning on page 77.

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

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

If you are dismissed, you may appeal for a hearing by formal petition to the dean of your college or school, but the action of dismissal is normally considered final. If you are dismissed and want to transfer to another college or school at Berkeley, you may petition the dean of that college or school.

1982: Cal beats Stanford with “The Play,” a five-lateral kickoff return for a touchdown as time runs out.
1984: Mary T. Meagher, ’87, wins three gold medals in swimming at the Los Angeles Olympics.
1988: Matt Biondi, ’87, wins five gold medals in swimming at the Seoul Olympics.
1991: Russell White earns first team All-America honors in football and ranks as Cal’s all-time leading rusher, with 3,367 yards between 1990 and ’92.
1992: The Bears finish among the top 10 football teams in the country with a Citrus Bowl win and 10-2 record. It is their most successful season in decades.
1993: Men’s basketball reaches the Sweet 16 of the NCAA Tournament for the first time since 1960. Rugby wins its 10th national title in the last 14 years.
1993-94: Jason Kidd, the most notable Cal basketball player in several decades, leads Cal to the NCAA Sweet 16 in ’93 and again to the NCAA Tournament in ’94.
1996: New head football coach Steve Mariucci leads the Bears to an Aloha Bowl berth before accepting a post-season offer to become head coach with the San Francisco 49ers.
1997: The Bears make it all the way to the Sweet 16 of the NCAA basketball tournament with a 23-9 record under first-year head coach Ben Braun.

(continued on next page)
Cross-Registration Programs with Other Schools

Berkeley has cross-registration programs with California State University, Hayward; Mills College; San Francisco State University; Sonoma State University; College of Holy Names; J.F. Kennedy University; and Dominican College. With the approval of your adviser and the dean of your school or college, you may register and pay applicable fees at Berkeley and be exempt from tuition and fees at the host campus. You may enroll for only one course per semester at the host campus.

In addition to these established programs, any Berkeley student may attend a class each semester at any one of the campuses of the California state university or the community college systems. Under these programs, students from the other institutions can also attend classes at Berkeley. Students participating in this exchange program may be subject to a $10 administrative fee, depending on the institution. Berkeley currently does not require this fee of students from the other state campuses.

For more information, go to the Office of the Registrar, 120 Sproul Hall, or call Special Registration at (510) 642-1988.
Studying Abroad

A shrinking world and expanding communication technology have made it increasingly important for practitioners in many fields to be able to function in an international context. The Education Abroad Program (EAP) at Berkeley offers a broad spectrum of opportunities for students to gain first-hand experience living in other cultures while progressing toward their bachelor's degrees. EAP offers a diverse array of programs across all the major disciplines in 34 countries, and students earn University credit for their participation while enhancing their undergraduate experience. Options include semester-long, year-long, and summer programs. Some programs do not require foreign language proficiency. Financial aid recipients qualify for financial assistance while abroad on EAP, and the costs of many of the programs are less than those incurred by students who remain on the Berkeley campus. Scholarship and grant money is available specifically for EAP students, so do not let financial concerns discourage you from considering education abroad among your educational goals.

For further information, consult your academic advisors and the Education Abroad adviser in the Berkeley Programs for Study Abroad office, 160 Stephens Hall, (510) 642-1356. E-mail: eapucb@uclink4.berkeley.edu. Web sites: www.eap.ucop.edu or www.ias.berkeley.edu/bpsa/.

Programs Not Sponsored by the University of California

Many Berkeley undergraduates choose to attend overseas study programs sponsored by institutions and organizations other than the University of California. To obtain information about these programs, you should contact the programs directly. Among helpful web sites for accessing non-UC study abroad programs are studyabroad.com or goabroad.com or iie.passport.org. The office of Berkeley Programs for Study Abroad, 160 Stephens Hall, (510) 642-1356, has a small library of information on non-UC programs. Credit for course work completed may or may not be granted, depending on a review of your final transcript by the Office of the Registrar. Before enrolling in any program, consult with the international admission specialists, 110 Sproul Hall, (510) 642-3246, concerning the transferability of the course work for a particular program. Finally, consult with a college and major adviser as to the appropriateness of your proposed courses toward degree progress and procedures for readmission.

The UC Berkeley-Washington Program

The UC Berkeley-Washington Center hosts 25 juniors and seniors from all majors during the fall and spring of each year. The academic program allows students to combine course work at the UC Washington Center with field research in an internship that reflects each student's particular area of interest. Participants have worked in a wide variety of organizations and agencies. All participants will be registered as full-time Berkeley students and will remain eligible for financial aid as long as they meet the minimum number of units. Applicants must have a minimum 3.0 GPA and have achieved junior status by the start of their semester in Washington. Applicants must have taken at least two upper division courses on the Berkeley campus that will prepare them for the research project they will pursue in Washington.

For more information, contact the UC Berkeley-Washington Program Office, 301 Campbell Hall #2922, (510) 642-9102. E-mail: ucdc@socrates.berkeley.edu; web site: http://learning.berkeley.edu/ucdc/.

Research and Internships

Berkeley offers many opportunities for you to conduct research projects and engage in internships either as volunteers or paid employees.

The Office of Undergraduate Research (OUR) seeks to involve undergraduates more deeply in the research life of the University. To this end, OUR coordinates and develops programs and resources that bring undergraduates into the field, the laboratories, and the archives. Whether assisting faculty with research or pursuing their own research under faculty supervision, Berkeley students can experience what it means to be a part of cutting-edge research at a world-class research university. For information on the great var-
Any large institution needs a bureaucracy, and every bureaucracy feeds on paper. Ours is particularly hungry. You will have to fill out many forms. Do so carefully and turn them in on time. When you have to stand in line, bring a book or Walkman, be patient, and stay calm. Remember, you are not alone; if you were, there would be no line.

— Robert Holtermann
College of Letters and Science adviser

The Undergraduate Research Apprentice Program (URAP) is the ideal place for students to begin to put their classroom learning to use. As research apprentices, students gain skills and perspectives as they assist faculty with research. More than 400 students participate in this program each year, working with faculty from more than 50 departments and colleges. Visit the URAP website for a current list of faculty projects: http://research.berkeley.edu/urap/.

When students are ready to embark on research of their own design, the Haas Scholars Program and the Berkeley Beckman Scholars Program offer fellowships that allow students to pursue sophisticated research. For information about these and other programs, go to http://research.berkeley.edu/.

The Office of Undergraduate Research is located in 301 Campbell Hall, (510) 642-3795.

Internships

A wide variety of internships—loosely defined as structured field experience—is available to you on and off campus. The positions may be paid or unpaid, may sometimes carry academic credit, and may have educational and career value. Courses with field components occur principally in the 98, 99, 197, 198, and 199 series. Check the course listings in the catalog for specific information. The following offices have listings of numerous internships, both on and off campus: the Career Center, 2111 Bancroft Way (http://career.berkeley.edu); Work-Study Program, 212 Sproul Hall (workstudy.berkeley.edu); College of Engineering Cooperative Education Program, 306 McLaughlin Hall (www.coe.berkeley.edu/coop); Cal Corps Public Service Center, 505 Eshleman Hall. Individual internships are available through campus-based offices. For detailed information about some of these programs, consult the Cal Internship Directory at http://career.berkeley.edu.

Cooperative Education Program

The Cooperative Education Program is an opportunity for undergraduate and graduate students to integrate classroom experience with supervised practical and professional experience in the field. You may work with government, industry, business, or nonprofit organizations in positions related to your academic and career objectives before graduation. These positions are paid and may be full- or part-time. They may last for one semester or as long as two years, depending upon the type of experience you want.

Two offices offer cooperative education opportunities: the Career Center’s Cal Connections and the Engineering Cooperative Education Program. Each program office has separate application procedures and requirements. If interested, you should contact the appropriate program for specific information.

Engineering Cooperative Education Program

All engineering, computer science, and chemical engineering majors may apply through this office. Positions offered are full-time, paid, for a minimum of one semester. For general requirements, contact the Engineering Co-op Office, 306 McLaughlin Hall, (510) 642-6385. For further information, go to www.coe.berkeley.edu/coop.

Honors Courses

Berkeley offers some honors courses for highly qualified students, usually in their senior year. A few of these courses are available to lower division students. See your major adviser for information.

Individual Majors

If you have interests that fall outside traditional disciplines, you may design your own major to satisfy your individual academic goals. See an adviser for assistance and more information.

Freshman Seminar Program

The Freshman Seminar Program arose from the conviction that early intellectual contact with faculty members would greatly enhance the freshman experience at Berkeley. Professors from nearly every campus department have joined together to offer an impressive array of seminars. The courses numbered 24 (and in some cases 90) bear 1 unit of credit; they are limited to 15 students, and freshmen are given priority for enrollment. The other lower division seminars, most of which are numbered 39, are limited to 25 freshmen and sophomores. Seminars, which emphasize interaction and discussion, provide a counterpart to the learning experience in Berkeley’s large lecture halls. These seminars also offer lower division students an unprecedented opportunity to explore a wide range of majors and even fields of study usually reserved for graduate students. As you browse through this catalog, you will find lower division seminars sponsored by Letters and Science departments as well as by the professional schools and colleges.

A brochure describing each semester’s seminar offerings is mailed to each freshman in time for Tele-BEARS registration. For more information regarding the Freshman Seminar Program, please contact the program office, 333 Campbell Hall, (510) 642-8378 or go to http://fsp.berkeley.edu/.

Sophomore Seminar Program

Sophomore seminars are designed for students considering a major in the sponsoring department. In the College of Letters and Science, they are small, interactive courses in which students will encounter a topic typical of the discipline and become acquainted with the approaches and methods of scholars in that field. Sophomore seminars offer an opportunity for close, regular contact between faculty and students in the crucial second year.
A brochure describing the seminars for the upcoming semester is mailed to every sophomore in Letters and Science in time for Tele-BEARS registration. For more information, visit 333 Campbell Hall, call (510) 642-8378, or go to http://ssp.berkeley.edu.

de-cal: Student-Initiated Courses
The de-cal (Democratic Education at Cal) program promotes leadership and encourages students to initiate classes and internships that will help maximize their educational experience at Berkeley. The program offers students opportunities to sample diverse disciplines for 1-4 units of credit on a passed/not passed basis. It also provides a forum for more advanced, focused study. The program encourages academic interests outside of the boundaries of established disciplines and has a long history of progressive, socially responsible courses. As well as mainstream subjects, de-cal courses are ideal for explorations into issues of culture, race, ethnicity, and gender. They may also involve internships aimed at transforming theoretical knowledge into practical experience. For more information, contact the de-cal office at 320 Eshleman Hall, (510) 642-9127.

Advising and Academic Assistance

College and Department Advisers
The College of Letters and Science has a staff of professional advisers who will help you plan your course of study, fulfill requirements, and eventually choose a major. After you have chosen a major, you will be assigned to an adviser who is a faculty member in your major department. Outside the College of Letters and Science, your adviser will most likely be a faculty member.

Student Learning Center
The Student Learning Center (SLC) Study Strategies Resources Program assists students in managing their current and future course work by introducing appropriate study strategies. Professional staff and trained peer tutors connect students with an elaborate array of resources that enhance students’ retention and academic success. Services are holistic in approach, helping students with a range of courses.

Education 98/198, Strategies for Success at Cal, is a 2-unit, pass/not pass seminar that encourages discussion, emphasizes collaborative learning, and focuses on study strategies. The seminar for freshmen emphasizes time management and procrastination, active reading and learning, effective writing and communication, and test preparation. The seminar for continuing students examines the cognitive, metacognitive, and affective variables that determine success at Cal. By actively engaging in a collaborative problem-solving process with other students, peer mentors, and instructors, students establish goals, monitor progress, and improve their academic success. Education 98/198 assists students with learning disorders in achieving academic and personal success at Cal. This course increases knowledge about specific learning styles and disorders, improves the application of effective learning and study strategies, enhances learning by using assistive technology and campus resources, and develops written and oral communication abilities.

For more information about these courses and the SLC, visit the reception desk at the César Chavez Student Center on lower Sproul Plaza, call (510) 642-7332, or go to http://slc.berkeley.edu.
**Student Athletes**
The Athletic Study Center, located in 179 César Chavez Center, offers academic support services for Berkeley's student athletes. Services are geared to ensuring academic achievement through academic advising, tutoring, study groups, and a computer lab. For more information, call (510) 642-8402 or go to www.asc.berkeley.edu.

**Honor Societies**
Berkeley has a number of honor societies that elect students in recognition of academic excellence. Among these are Phi Beta Kappa, a national honor society; the Prytanean Society, founded in 1900 to honor upper division and graduate women for academic accomplishment and service to the University; the Honors Students Society; Tau Beta Pi, the national honor society for all engineering disciplines and various other engineering honor societies (see the Student Guide to Engineering Societies, available at the Engineers Joint Council office); Alpha Mu Gamma, a national society for students with demonstrated excellence in languages; and individual societies in most language departments. See your adviser for more information.

**Prizes**
Awards for outstanding ability in some area of creative, scholarly, or athletic achievement are available at Berkeley in two general categories: competitive prizes for creative effort or departmental awards for outstanding scholastic achievement. Consult Undergraduate Scholarships, Prizes, and Honors, (510) 642-3498, for more information.

**Scholarship Connection**
Scholarship Connection is Berkeley's clearinghouse for information on scholarships that are funded by sources outside the University. Enrolled Berkeley students may search for awards on Scholarship Connection's online database (http://scholarships.berkeley.edu). In addition to providing information on many externally funded awards, Scholarship Connection also administers the campus recruitment and selection for several highly competitive awards, such as the Rhodes, Marshall, and Truman Scholarships. Scholarship Connection offers workshops and individual advising to help applicants prepare competitive applications for these prestigious awards. For more information, go to http://scholarships.berkeley.edu or contact Scholarship Connection, 345 Campbell Hall, scholarships@learning.berkeley.edu, (510) 643-6929.

**Cal Songs**
**Hail to California**
Hail to California, Alma Mater dear
Sing the joyful chorus, Sound it far and near
Rallying 'round her banner,
We will never fail
California Alma Mater,
Hail! Hail! Hail!

**All Hail**
All hail! Blue and Gold,
Thy colors unfold
O'er loyal Californians,
Whose hearts are strong and bold.

All hail! Blue and Gold,
Thy strength ne'er shall fail;
For thee we'll die!
All hail! All hail!

**CAL Quiz**
No. 10
What was the largest crowd ever to see an event in Memorial Stadium?
(Answer on page 496.)
Ancient cultures unfold on fragile papyrus

Museum scientist Lorna Kirwan examines a glass-mounted papyrus document from Berkeley’s collection, the largest in the Americas. The fragments, from the collection that dates from the third century B.C. to the fourth century A.D., come from a single site, Tebtunis, Egypt. Unearthed in 1899-1900, the texts include early Greek literature and writings that shed light on ancient Egyptian society.
Graduate Education

The main purpose of graduate study is to inspire independence and originality of thought in the pursuit of knowledge. As a graduate student you are expected to achieve mastery of your chosen field through advanced course work, independent study, and research. Graduate education embraces study for all degrees and certificates beyond the bachelor's degree—prin-

The Nature of Graduate Education

Graduate study is the pursuit of knowledge through advanced course work and research. Graduate courses demand a capacity for critical analysis and a specialization of research interests not normally appropriate for 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.

You are accorded considerable liberty in your choice of courses, at the discretion of your graduate adviser, as long as you meet the minimum requirements for academic residence. These courses assume adequate preparation at the upper division level in the subject field (a minimum of 12 units of upper division work basic to the subject matter of the graduate course; this basic work may be pursued in more than one department). You are therefore encouraged to take upper division courses that will give you the background you need for advanced work; you are not confined to graduate courses. Possession of a bachelor's degree does not in itself entitle you to enroll in a graduate course.

Graduate Advisers

Graduate advisers are appointed by the dean of the Graduate Division for each department, school, or group and are announced before the beginning of the fall semester. Graduate advisers (1) assist students in selecting programs of study; (2) act on petitions for study list changes only; (3) maintain records of all students enrolled under their jurisdiction; and (4) supply information requested by the dean of the Graduate Division about a student's progress. In addition, the head graduate adviser (1) endorses applications for candidacy for higher degrees and for qualifying examinations; (2) acts on readmission applications and petitions by graduate students; and (3) assists the dean in the enforcement of regulations, particularly those relating to registration, admission to graduate courses, and maintenance of acceptable scholastic performance.

You may also have an individual or major adviser, usually assigned after you are advanced to candidacy for the doctorate, but frequently appointed in the earlier stages of your training. The individual or major advisers may be the same as the official graduate advisers. You should keep in close touch with your individual adviser and should confer with your official graduate adviser at the beginning of each semester to obtain approval of your program of study.

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

Graduate degree programs have been approved by the Graduate Council and the Coordinating Committee on Graduate Affairs, which must approve any new programs. A list of graduate degrees appears later in this section. For complete information on regulations and procedures for graduate students, see the section "Academic Policies," beginning on page 77.

(continued on next page)
Graduate Admissions

Applying for Admission
You must file a completed application for admission, as well as all additional documents specified in the application booklet (including official transcripts from each college-level institution you previously attended) with the department to which you are applying by the established deadlines. You also must submit a nonrefundable application fee of $60 to the Cashier’s Office. To obtain an application, you may request one from the department of your choice or complete the application online on the Graduate Division web site at www.grad.berkeley.edu/admis.

Many departments admit students only for the fall semester. Information on departmental deadlines and requirements is contained in the application packet. Each department may set its own deadlines within the following ranges: December 1 – January 5, if you are applying for both the fellowship competition and admission for fall semester (Please note: fellowships are awarded only at the beginning of the fall semester); December 1 – February 10, for admission for the fall semester only; and September 1, for admission to the spring semester. The School of Law admits only for the fall semester; the deadline is February 1.

Limited Enrollment
Each graduate program at Berkeley has a maximum enrollment, which limits the number of applicants who may be accepted. Almost invariably, this maximum is smaller than the number of applicants who meet the minimum qualifications for admission. Selection procedures are designed to admit applicants in accordance with their relative merit and promise among those at least minimally qualified. It is to your advantage to inquire early about the possibility of study at Berkeley.

Admissions Requirements
The University requires the following academic qualifications: (1) a degree from an accredited institution, comparable to the bachelor’s degree offered at Berkeley; (2) sufficient undergraduate training to undertake graduate study in the chosen field; and (3) a satisfactory scholastic average. In addition to the general University requirements, certain schools, departments, or graduate groups may require additional records, such as separate applications, reading lists, examples of original work, or the results of qualifying examinations. Information on undergraduate requirements for a major field and on graduate programs and requirements is available in the school or departmental announcements and bulletins and in the “Courses and Curricula” section of this catalog.

Graduate Record Examination (GRE)
Check with the department to which you are applying for specific GRE requirements and deadlines. To register, consult the GRE web site at www.gre.org/, or call (800) GRE-CALL.

International Applicants
International applicants must fulfill all previously stated admissions requirements and have an excellent command of English before beginning graduate study at Berkeley; students cannot be admitted to graduate standing to learn English. If you are applying from a country in which English is not the official language, you must take the Test of English as a Foreign Language (TOEFL) and have the results sent directly to the Graduate Admissions Office. The TOEFL is administered in two formats, paper-and-pencil and computer-based. Either format is acceptable. Register as soon as possible by contacting your Regional Registration Center or TOEFL Services, Educational Testing Service, P.O. Box 6151, Princeton, NJ 08541-6151, USA, or consult the TOEFL web site at www.toefl.org.
The results of institutional administrations of the TOEFL are not acceptable in lieu of the international or special center administrations. If you took the test more than two years ago, you must take it again. Please refer to the application packet on the Graduate Division web site for specific cutoff dates.

Graduate students who do not speak English as a native language must pass a test of spoken English before they can be appointed as a graduate student instructor (GSI). To fulfill this requirement you may take the Test of Spoken English (TSE) in your home country or the Speaking Proficiency English Assessment Kit (SPEAK) at Berkeley. For information on registering to take the TSE, contact the TOEFL/TSE agent in your country or at the address given above. For further information on SPEAK testing and English Language Proficiency courses offered at Berkeley, please refer to the GSI Teaching and Resource Center’s web site at www.grad.berkeley.edu/gsi/langpro.htm.

Note: The TOEFL is not a test of oral English proficiency, and it may not be substituted for the TSE.

Special Circumstances
Readmission
If you have previously registered and withdrawn and want to re-enroll, you must file an Application for Readmission, obtainable from Graduate Degrees, Graduate Division, 302 Sproul Hall, and pay a nontransferable, nonrefundable readmission fee of $60. This fee must accompany the Application for Readmission when first submitted, or the application will not be reviewed. Approval of readmission is not automatic. The Graduate Division and your department, school, or group will review your application and academic record and notify you of their decision.

Duplication of Higher Degrees
Normally, duplication of doctoral-level degrees is not permitted. Your department may petition the dean of the Graduate Division for an exception to this policy if the degree you want is in a field of study distinctly different from the field in which you attained your original degree. A professional degree is not regarded as duplication of an academic degree.

Reactivation of Application
The Graduate Division keeps application materials on file for two years. If you filed an application within the past two years but did not complete the application process, were denied admission, or were admitted but did not register, you may reactivate your previous file by submitting a new application form by the established deadline for the semester in question.

Notification of Action on Admission
A written notice from the dean of the Graduate Division is the only valid proof of admission. Admission to graduate study is limited by the number of places available in the various colleges, schools, graduate groups, and departments of Berkeley. If you have applied for admission and fellowship consideration, you should be notified by April 1 of the action on your applications. If you have applied only, you will be advised as soon as possible after a decision has been reached. Normally, however, acceptance letters for admission only will not be issued until after March for the fall semester.

CAL Quiz
No. 11
Describe the tribute that William Randolph Hearst proposed to build for his mother, UC Berkeley benefactor Phoebe Randolph Hearst, in the 1920s.

(Answer on page 496.)


**Tele-BEARS**

Tele-BEARS is an interactive computer system that allows you to enroll in classes via the Internet. With Tele-BEARS, you always receive the most immediate, up-to-the-moment information regarding your registration and class enrollment.

**How Tele-BEARS Works**

To ensure the fairest possible distribution of courses to the student body, enrollment in classes is spread over two phases and an adjustment period. Phase I, starting toward the end of the previous semester, allows you to enroll in a maximum of 12 units plus one physical education activity course. In Phase II, starting immediately after Phase I, you may complete your enrollment by enrolling in additional courses if necessary. You may then add and drop courses during the adjustment period, which starts one week before instruction and extends through the first three weeks of instruction.

Access to Tele-BEARS is regulated by pre-assigned appointments that are spread throughout each phase period. For security purposes, you are assigned a unique Personal Identification Number (PIN) that must be entered after your Student ID number in order to use Tele-BEARS.

To enroll and register through Tele-BEARS, follow these steps:

**Obtain Your Tele-BEARS Appointments**

Your Tele-BEARS appointments for Phases I and II are made available on the Internet via Bear Facts and Info-BEARS. (See below for information on how to access these systems.) The Office of the Registrar will notify you by e-mail when the appointments are available. If you require academic advising, you also will be required to obtain an Adviser Code (AC) from your graduate adviser. The AC must be entered when you first access Tele-BEARS each semester.

**Enroll in Classes**

With the Schedule of Classes and the General Catalog, you can determine a class schedule. Once you have selected your classes and have obtained your AC from your major adviser (if required), you can use Tele-BEARS to enroll.

**Pay Registration Fees**

A monthly billing statement indicating all University fees due will be mailed to you by the Loans and Receivables Office. You may pay your fees in full or in five installments on the Deferred Payment Plan. Fee payment (either in full or the first installment) is due on August 15 for the fall semester and January 15 for the spring semester.

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*Appointments for continuing and readmitted students are usually made available in mid-March for the fall semester and mid-October for the spring semester. Appointments for new students are usually made available in early August for the fall semester and in early January for the spring semester.*
form to the Graduate Admissions Office indicating an intention to register will reserve the registration slot allocated to you. If you do not want to accept the offer of admission, you should complete and return the Declination of Admission section so that your place can be allocated to another applicant. We will send you information about enrolling in classes after we receive your Statement of Intention to Register accepting admission.

**Failure to Register**

If you do not return the Statement of Intention to Register or return it but do not register for the semester in which you were admitted, you must request reactivation of your application if you want to attend any subsequent semester. You have no priority over other applicants for any subsequent semester by virtue of your previous admission.

**Registration**

To maintain good standing as a graduate student, you must register with the Office of the Registrar each semester until you complete all requirements for the degree, unless you have permission from the dean of the Graduate Division to withdraw. You can satisfy the requirement for full-time continuous registration by attending both semesters of an academic year. You must be registered or pay the filing fee, whichever is applicable, for the semester in which your degree is conferred. If you hold a nonimmigrant visa, you must be registered for both semesters of each academic year unless you have special permission from the Immigration Service to do otherwise. Consult the International Student Adviser for further information.

In summary, you must register in any semester in which you are enrolled in formal courses of instruction or are making any use of University facilities, including access to the faculty, except for uses accorded the general public.

If your studies or research requires absence from California for the semester, you must file a petition requesting absence and a reduction of the University registration fee with Graduate Degrees, 302 Sproul Hall.

**Special Information for New Graduate Students**

If you will be a new graduate student, you will not use Tele-BEARS until shortly before the beginning of instruction. You must obtain your AC from your major department and meet with your graduate adviser to approve your class schedule.

**Cancellation of Registration**

Students who have registered and decide before classes begin not to attend Berkeley may cancel by meeting with their graduate adviser. For further information see the section “Academic Policies,” beginning on page 77.

**Class Schedule and Unit Load**

Courses are classified as lower division (numbered 1 through 99); upper division (100-199); graduate (200-299); professional, for teachers or prospective teachers (300-399); special study for preparation for the master's exam (601); and special study for preparation for the doctoral qualifying exam (602). Lower division courses are not counted as part of a full program of study leading to a higher degree. You must be enrolled in 12 units in 200 series (or above) to be considered a full-time student. (For information on courses in the 600 series, see page 79.)

Graduate student instructors and graduate student researchers must normally carry a minimum of 8 units in the 100, 200, and 300 series. The substitution of lower division units taken to prepare for departmental requirements in languages, mathematics, or statistics for upper division units is permitted. Fellowship holders and international students on nonimmigrant visas must carry a full program of 12 units in upper division and/or graduate courses, although individual study in the form of language preparation, comprehensive and qualifying examination preparation, etc., for the Ph.D. degree is taken into account.

In these cases reduced unit loads are accepted as full programs with the consent of the graduate adviser and dean of the Graduate Division.

**Withdrawal**

If you want to withdraw from Berkeley at the end of a semester or while the semester is in progress, you must formally withdraw through your academic unit, which will process your withdrawal online. International students with nonimmigrant visas must consult Services for International Students and Scholars (SISS), International House, 2299 Piedmont Avenue, (510) 642-2818, to determine whether they can withdraw without jeopardizing their visa status. For further information, see “Academic Policies,” beginning on page 77.
### Recent Ratings of Graduate and Professional Schools at U.S. Universities


Berkeley has more top-ranked doctoral programs than any university in the nation, according to a September 1995 report by the National Research Council (NRC). Faculty peers from around the country, using such criteria as quality of research, publications, and teaching, ranked 35 of 36 Berkeley Ph.D. programs in the top 10 of their fields. The NCR study took four years to complete and is considered the most comprehensive of all reports on graduate education. Below are Berkeley's rankings.

#### Anthropology
1. Michigan
2. Chicago
3. Berkeley
4. Harvard
5. Arizona
6. Penn
7. Stanford
8. Yale
9. UCLA
10. UC San Diego

#### Art History
1. Columbia
2. NYU
3. Berkeley
4. Harvard
5. Yale
6. Princeton
7. Johns Hopkins
8. Northwestern
9. Penn
10. Chicago

#### Astrophysics/Astronomy
1. Caltech
2. Princeton
3. Berkeley
4. Harvard
5. Chicago
6. UC Santa Cruz
7. Arizona
8. MIT
9. Cornell
10. Texas (Austin)

#### Biochemistry & Molecular Biology
1. UCSF
2. MIT
3. Berkeley
4. Harvard
5. Chicago
6. Caltech
7. Wisconsin
8. Illinois
9. Wisconsin
10. California
11. UCLA

#### Biological Sciences
1. Stanford
2. MIT
3. Berkeley
4. Caltech
5. Harvard
6. Stanford
7. University of Virginia
8. California (Berkeley)
9. Wisconsin
10. Texas (Austin)

#### Bioinformatics
1. Stanford
2. MIT
3. Berkeley
4. Caltech
5. Harvard
6. Stanford
7. University of Virginia
8. California (Berkeley)
9. Wisconsin
10. Texas (Austin)

#### Cell & Developmental Biology
1. UCSD
2. MIT
3. Rockefeller
4. UCSF
5. Caltech
6. Harvard
7. Stanford
8. UC San Diego
9. Washington
10. Pennsylvania State

#### Comparative Literature
1. Yale
2. Duke
3. Columbia
4. Harvard
5. Princeton
6. Cornell
7. Johns Hopkins
8. UC Irvine
9. Stanford
10. Berkeley

#### Computer Science
1. Stanford
2. MIT
3. Berkeley
4. Carnegie Mellon
5. Cornell
6. Princeton
7. Stanford
8. Berkeley
9. Wisconsin
10. Texas (Austin)

#### Chemistry
1. Minnesota
2. MIT
3. Berkeley
4. Wisconsin
5. Illinois
6. Caltech
7. Stanford
8. Delaware
9. Princeton
10. Texas (Austin)

#### Civil Engineering
1. Stanford
2. Berkeley
3. Caltech
4. Stanford
5. MIT
6. Cornell
7. Columbia
8. Illinois
9. Wisconsin
10. California
11. UCLA

#### Comparative Literature
1. Yale
2. Duke
3. Columbia
4. Harvard
5. Virginia
6. Duke
7. Stanford
8. Cornell
9. Virginia
10. Wisconsin

#### Computer Science
1. Stanford
2. MIT
3. Berkeley
4. Carnegie Mellon
5. Cornell
6. Princeton
7. Stanford
8. Berkeley
9. Wisconsin
10. Stony Brook
11. Texas (Austin)

#### Ecology, Evolution & Behavior
1. Stanford
2. MIT
3. Berkeley
4. Caltech
5. Harvard
6. Stanford
7. Washington
8. Berkeley
9. Wisconsin
10. Texas (Austin)

#### Economics
1. Chicago
2. Duke
3. Berkeley
4. UC Davis
5. Stanford
6. Berkeley
7. Berkeley
8. Penn
9. Northwestern
10. Minnesota

#### Electrical Engineering
1. Stanford
2. MIT
3. Illinois
4. Berkeley
5. Caltech
6. Michigan
7. Cornell
8. Purdue
9. Princeton
10. USC
11. UCLA

#### English
1. Berkeley
2. Yale
3. Harvard
4. Virginia
5. Duke
6. Stanford
7. Stanford
8. Penn
9. Columbia
10. Chicago

#### French
1. Yale
2. Princeton
3. Duke
4. Columbia
5. Penn
6. Stanford
7. Berkeley
8. Cornell
9. Michigan
10. UC Irvine

#### Geography
1. Penn State
2. Wisconsin
3. Minnesota
4. UCSB
5. Ohio State
6. Berkeley
7. Syracuse
8. UCLA
9. Clark
10. Washington
11. Texas (Austin)

#### History
1. Yale
2. Berkeley
3. Princeton
4. Harvard
5. Columbia
6. UCLA
7. Stanford
8. Chicago
9. Johns Hopkins
10. Wisconsin

#### Industrial Engineering
1. Georgia Tech
2. Berkeley
3. Yale
4. Michigan
5. Texas A&M
6. Northwestern
7. Stanford
8. Virginia Poly
9. Penn State
10. Wisconsin

#### Linguistics
1. MIT
2. Stanford
3. UCLA
4. UMass (Amherst)
5. Penn
6. Berkeley
7. Chicago
8. Ohio State
9. Cornell
10. UC Santa Cruz

#### Materials Science
1. MIT
2. Northwestern
3. Cornell
4. Berkeley
5. Illinois
6. Stanford
7. UMass (Amherst)
8. UCSD
9. Penn State
10. Penn

#### Mathematics
1. Berkeley
1. Princeton
2. MIT
3. Harvard
4. Princeton
5. Yale
6. Stanford
7. Washington
8. Virginia
9. Johns Hopkins
10. Wisconsin

(continued on next page)
## Graduate Education

### Berkeley Faculty 2002-03

- Full-time, ladder-rank: 1,608
- Male: 75%
- Female: 25%
- Ethnic minority: 17%
- Nobel laureates: 8
- National Academy of Sciences: 124
- National Academy of Engineering: 69
- Guggenheim fellows: 137
- MacArthur fellows: 19
- Pulitzer Prize winners: 81
- Alfred P. Sloan faculty fellowships, 1984-98: 62
- National Medal of Science, 1982-98: 16

### Professional Schools

In 2003, *US News & World Report* published results of a study ranking professional programs at U.S. universities on the basis of reputation plus such factors as student selectivity, faculty resources, and research activity. Below are rankings of the schools and programs that Berkeley offers.

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<tr>
<th>Discipline</th>
<th>Rank</th>
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<tbody>
<tr>
<td><strong>Business</strong></td>
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<tr>
<td>1. Harvard</td>
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<td>2. Stanford, Penn (Wharton)</td>
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<td>3. MIT, Northwestern (Kellogg)</td>
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<td>4. Columbia</td>
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<td>5. Berkeley (Haas), Duke (Fuqua)</td>
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<tr>
<td><strong>Education</strong></td>
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<td>1. Harvard</td>
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<td>2. Stanford</td>
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<td>3. UCLA</td>
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<td>4. Teachers College, Columbia</td>
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<td>5. Penn</td>
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<td>6. Oregon</td>
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<td>7. Michigan (Ann Arbor)</td>
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<td>9. Northwestern, Wisconsin (Madison)</td>
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<td>10. Berkeley</td>
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<td><strong>Engineering</strong></td>
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<td>1. MIT</td>
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<td>3. Berkeley</td>
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<td><strong>Law</strong></td>
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<td>1. Yale</td>
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<td>8. Virginia</td>
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<td>9. Northwestern, Wisconsin (Madison)</td>
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<td>10. Berkeley (Boalt Hall), Cornell</td>
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<tr>
<td><strong>Public Health</strong></td>
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<tr>
<td>1. Johns Hopkins</td>
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<td>2. Harvard, North Carolina (Chapel Hill)</td>
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<td>3. Washington</td>
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<td>4. Michigan (Ann Arbor)</td>
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<td>5. Columbia</td>
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<td>6. California (Berkeley, UCLA)</td>
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<td>7. Berkeley, UCLA</td>
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<tr>
<td><strong>Social Work</strong></td>
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<td>1. Michigan</td>
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<td>2. Washington (St. Louis)</td>
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</tbody>
</table>
Overheard on tennis court near campus:

"I may have tenure, but you have youth."

"Ah, but you have wisdom."

"If I had wisdom, I wouldn’t have hit the ball down the center of your court."

—Anon
Noted Alumni
1868-1899

James H. Budd, 1873
Governor of California, 1895-99. Strong supporter of 1897 bill in state legislature that doubled the state's financial commitment to UC, from one cent to two cents per $100 of taxable property in the state.

George Edwards, 1873
Professor of mathematics, 1874-1918; Edwards Field and Stadium named after "Colonel" Edwards.

Rosa Lettitia Scrivner, 1874
First female graduate, only female member of the class; committee of Scrivner and eight women in Class of 1876 selected colors blue and gold for the University.

Josiah Royce, 1875
Eminent philosopher, professor at Harvard, California historian; Royce Hall at UCLA named in his honor.

Florence Prag, 1887
Described in Blue and Gold yearbook as "guileless and inexperienced"; later, as Florence Prag Kahn, served as U.S. Representative from California

Franklin Lane, 1887
US Secretary of the Interior, 1913-20
(continued on next page)

Science and Mathematics Education, Ph.D.†
Slavic Languages and Literatures, M.A., Ph.D.
Social Welfare, M.S.W., Ph.D.
Sociology, M.A.,* Ph.D.
Sociology and Demography, Ph.D.†
South and Southeast Asian Studies, M.A., Ph.D.
Special Education, Ph.D. (joint degree program with San Francisco State University)
Statistics, M.A., Ph.D.
Urban Design, M.U.D.†
Vision Science, M.S., Ph.D.†
Wood Science and Technology, M.S., Ph.D.†

Certificate in Russian and East European Studies
The Certificate in Russian and East European Studies has been developed to serve graduate students in the humanities and social sciences who wish to broaden their knowledge of the Russian and East European area. To be eligible you must be in good academic standing and currently enrolled in a graduate program at Berkeley in a field related to the Russian/East European area. The program is to include at least 18 semester units in three or more disciplines, not including that in which you have received or are planning to receive your master's or doctoral degree. Advanced language courses in grammar, composition, or conversation may not be used to fulfill this requirement. Of the 18 required units, at least 6 must be at the 200 level; the remaining units may be at the 100 or 200 level. Applications and further information about the certificate program are available at the Center for Slavic and East European Studies, 361 Stephens Hall.

Certificate of Completion of Residency Program in Optometry
The School of Optometry offers an Optometric Residency Program leading to the Certificate of Completion. This is a 12-month program of graduate professional training in an optometric specialty area selected by the residents, and is designed to expand and refine their professional and specialty skills. The prerequisite for entrance is a Doctor of Optometry degree. For information, contact the Residency Director, Tang Eye Center, 2222 Bancroft Way #4300, (510) 642-8802, or send e-mail to residency@spectacle.berkeley.edu.

Joint Doctoral Programs
UC Berkeley and UC San Francisco
There are two intercampus joint degree programs between Berkeley and the University of California, San Francisco: Bioengineering and Medical Anthropology. For Bioengineering you should apply to the Berkeley campus. You will have access to facilities and faculty on both campuses. For Medical Anthropology, you should apply to the campus most appropriate to your research interests, but you will have access to facilities and faculty on both campuses through intercampus exchange registration. For information, write to the Department of Anthropology or the Graduate Group in Bioengineering (467 Evans Hall #1762).

UC Berkeley and the Graduate Theological Union
There are two kinds of programs that include the facilities of the Graduate Theological Union (GTU) in Berkeley: the "casual program" and the joint Ph.D. programs. The casual program is open to all students in the GTU community and all graduate students at Berkeley. This program allows you to register on one campus and take courses on the other, subject to the appropriate academic approvals. You may obtain applications and deadlines from Graduate Degrees, 302 Sproul Hall.

The Joint Doctoral Program is offered in two areas and is open only to students who intend to work toward the Ph.D. degree. You must be admitted to both the Graduate Theological Union and the University, because the degrees are conferred jointly by both institutions.

To apply to Near Eastern Religions, you must first have an M.A. (or its equivalent) in Near Eastern Studies or in a related field and must have at least two ancient languages suitable to the proposed program.

To apply to Jewish Studies, you must have an undergraduate preparation that includes at least six university-level courses in Jewish studies, at least two years of university-level Hebrew language courses or the equivalent, minimal proficiency in another foreign language, and an undergraduate major in Jewish studies, history, comparative literature, sociology, philosophy, anthropology, political science, religious studies, or Near Eastern Studies.

You may use the extensive library holdings of the GTU and supplement your program with selected courses in Palestinian archaeology, Biblical studies, Semitic epigraphy, and philology. For information about the programs, a catalog, and application forms, write to the Graduate Theological Union, 2400 Ridge Road, Berkeley, CA 94709.

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

Concurrent Degree Programs
Concurrent degree programs provide a broad integrated curriculum in which units are shared between two disciplines. You should direct inquiries to the departments or schools involved.

Architecture, M.Arch.—City and Regional Planning, M.C.P.

Architecture, M.Arch.—Civil and Environmental Engineering, M.S.
Architectural Studies: Brant Ward, M.Arch. — Landscape Architecture, M.L.A.
Asian Studies: M.A. — Law, J.D.
Business Administration: M.B.A. — Asian Studies, M.A.
Business Administration: M.B.A. — Law, J.D. (Berkeley)
Business Administration: M.B.A. — Law, J.D. (Hastings)
Business Administration: M.B.A. — Public Health, M.P.H.
City and Regional Planning: M.C.P. — Civil and Environmental Engineering, M.S.
City and Regional Planning: M.C.P. — Law, J.D. (Berkeley)
City and Regional Planning: M.C.P. — Law, J.D. (Hastings)
City and Regional Planning: M.C.P. — Public Health, M.P.H.
Economics: M.A. / Ph.D. — Law, J.D.
Journalism: M.J. — Asian Studies, M.A.
Journalism: M.J. — Latin American Studies, M.A.
Journalism: M.J. — Law, J.D.
Jurisprudence and Social Policy: J.D./M.A./Ph.D.
Landscape Architecture: M.L.A. — Architecture, M.Arch.
Landscape Architecture: M.L.A. — City and Regional Planning, M.C.P.
Public Health: M.P.H. — School of Medicine, San Francisco, M.D.
Public Policy: M.P.P. — Engineering, M.S.
Public Policy: M.P.P. — Law, J.D.
Public Policy: M.P.P. — Public Health, M.P.H.
Social Welfare: M.S.W. — Law, J.D.

International and Area Studies
The Graduate Group in International and Area Studies (IAS) offers M.A. degrees in conjunction with graduate degree programs in professional schools and Ph.D. programs in the social science disciplines. Only current graduate students may apply. No freestanding degree in IAS is offered.

Designated Emphasis
The designated emphasis is a specialization, such as a new method of inquiry or an important field of application, that is relevant to two or more existing doctoral degree programs. The designated emphasis is designed to complement existing Ph.D. programs, and it provides opportunities for interdisciplinary study with faculty from other departments. For a list of current designated emphases, see page 67.

Teaching Credentials
Courses leading to the multiple subject or single subject teaching credentials are offered on the Berkeley campus. For details, please consult the Announcement of the School of Education.

Requirements for Graduate Degrees

The Master’s Degree
Berkeley offers instruction leading to both academic and professional degrees. For specific regulations governing the professional master’s degrees, see the individual announcements of the colleges and schools. This section will deal primarily with the academic master’s degree.

Academic Residence Requirement
A minimum of two semesters of academic residence is required for the master’s degree. Academic residence is defined as enrollment in at least 4 units in 100-200 series courses. Specific subject requirements and performance levels are set by the schools, departments, and groups.

Transfer of Credit from Other Institutions
To request a transfer of units, ask your graduate adviser to make a formal request to the dean of the Graduate Division specifying the units and courses involved. Your credits may be transferable if (1) the units involved are equivalent to work normally offered within your current program of study, (2) the grade recorded was at least a B, and (3) you have a superior scholastic record (at least a 3.3) at both your original institution and at Berkeley. No more than 4 semester or 6 quarter units are transferable, and the work must have been completed previously in graduate status at an institution of high standing. The units transferred cannot be used to reduce the minimum required in the 200 series courses or the minimum residence requirement.

Work that formed part of the program for a master’s degree previously conferred (either at the University of California or elsewhere) may not be applied toward a current degree program. Credit for graduate work that you completed on other campuses of the University of California may be granted in excess of 6 quarter units or 4 semester units. Requests may be made at the time of advancement to candidacy.

Concurrent Enrollment — University Extension
Courses taken concurrently through University Extension but held on the Berkeley campus under the instruction of a regular member of the Berkeley faculty are generally not applicable toward a Berkeley master’s degree. These courses are intended to provide Extension students with an opportunity to take courses that would not ordinarily be available to them. Concurrent enrollment cannot replace normal registration by Berkeley graduate students, nor may it be used to accumulate credit toward a Berkeley degree by an individual not formally admitted to graduate standing at Berkeley.
Amount and Distribution of Work
If you work toward an academic master’s degree on the Berkeley campus, you will pursue one of two plans, as determined by your school, department, or group.

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

Plan II requires at least 24 semester units of upper division and graduate courses, followed by a comprehensive final examination administered by your school, department, or group. At least 12 of the units must be in graduate courses in your major subject.

Your graduate adviser will guide you regarding distribution of course work among departments. Please note that departments, schools, and groups may have performance standards that are higher than the minimum B average required by the Graduate Division. Further requirements are specified by the major department.

Advancement to Candidacy
When you complete the requirements for your degree, you will automatically be admitted to candidacy for the master’s degree; you must make a formal application to the dean of the Graduate Division no later than the end of the fifth week of the semester in which your degree will be awarded. The application must be approved by the head graduate adviser in your major school, department, or group and must include a precise statement of the studies on which the application is based. If you are to submit a thesis, however, you should consult your adviser as early as possible about advancement to candidacy so that the appropriate committee can be formed. You will not receive the degree unless you have been advanced to candidacy.

The Master’s Thesis
If you are following Plan I, described above, you must submit a thesis, double-spaced on approved paper, with a minimum left-hand margin of 1 1/2 inches.

The thesis must be unbound and without perforations. The type must be adequate for photographic reproduction. Following approval by your thesis committee, two copies are filed with the Graduate Division. Further information regarding the organization and format of the thesis is available from Graduate Degrees, 302 Sproul Hall, or go to www.grad.berkeley.edu/grad/

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

You must submit your thesis to a committee of three members of the faculty appointed by the dean of the Graduate Division. One member of the committee should be chosen from a department other than that of your major subject, you are required to confer with all members of your committee before beginning your thesis; since the committee is not appointed until you are advanced to candidacy, you should not begin thesis work before advancement in order to avoid extensive revisions. You are responsible for placing the completed thesis in the hands of your committee members.

Three years is the normal time period allowed for completion of the thesis. Candidacy for the master’s degree will lapse automatically at the end of that time. You can be reinstated, however, upon the recommendation of the graduate adviser to the dean at the time your thesis committee members have approved a final draft of your thesis.

If all three members of your committee approve the thesis, they sign your thesis title page. You then file two copies of the thesis with the Graduate Division for later deposit in the University library. If any member of your committee doubts the acceptability of the thesis, the committee chair convenes the committee to discuss it. If the committee reaches agreement on its acceptability, the thesis is signed and filed as described above.

If the committee continues to disagree, the thesis is sent to the dean of the Graduate Division with a brief statement of each committee member’s opinion. If all members of the committee reject the thesis, it is sent to the dean with a statement to that effect by the committee chair. In cases of a split vote, the Administrative Committee of the Graduate Council makes the final decision.

The Doctoral Degree
Berkeley offers both academic and professional degrees. Professional degree programs are outlined in the individual announcements of the colleges and schools offering them. The general procedures given in this section apply primarily to the academic doctoral degree.

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

Programs of Study
Programs of study for doctoral degrees are more individualized than those for master’s degrees, permitting more specialization within a field or the establishment of connections among fields. Nevertheless, if you are seeking a doctoral degree, you must have your program
of study approved by the graduate adviser of the department or group to which you are admitted or later transferred. University policy requires continuous registration from entrance until receipt of the degree, unless a formal withdrawal is granted by the dean of the Graduate Division.

Your major department will offer the majority of your course work, but it is recommended that you enroll in courses offered by other units that are related to your field(s) of interest. You should confer with your graduate adviser to select the sequence of courses that will best prepare you for the qualifying examinations and your proposed research work.

Academic Residence Requirement
A minimum of two years or four semesters of academic residence is required for the Ph.D. degree. For a joint doctoral degree, a minimum of one year of academic residence is required at each campus. Academic residence is defined as enrollment in at least 4 units in 100-200 courses. The period during which you are allowed to be in candidacy is limited; after its expiration your candidacy for the degree will lapse. You should consult your department or the Graduate Division for the time permitted in candidacy.

Foreign Language Requirement
The foreign language requirement ensures that you have the ability to acquire wide knowledge in your field of study and to keep up with foreign developments in your field. You are urged to complete the foreign language requirement early in your graduate career. You must fulfill the foreign language requirement before admission to the qualifying examinations and advancement to candidacy. Each graduate program may have somewhat different foreign language requirements. If you are a prospective student, you are urged to inquire about the foreign language requirement as soon as possible and, if you can, to fulfill it while still an undergraduate. In some graduate programs, applicants for admission must have satisfied the foreign language requirement before applying.

Qualifying Examinations
Before you are admitted to candidacy, you must pass a qualifying examination administered by a four- or five-member committee approved by the Graduate Council. An oral component is required. You must be registered in the semester in which you take the examinations, and you must have removed any previous deficiencies in training, including incomplete grades in courses that your graduate adviser required for your program. You must have maintained at least a B average in all course work that you undertook in graduate status, and you must have fulfilled the language requirement(s).

Please note: Departments, schools, and groups may have performance standards that are higher than the minimum B average required by the Graduate Division.

Advancement to Candidacy
You must apply for advancement to candidacy, on a form furnished by the Graduate Division, no later than the semester following the one in which you passed your qualifying examination. For students whose majors are eligible for the Dean’s Normative Time Fellowship Program (see the Normative Time list below), applications for advancement to candidacy must be submitted by the deadline for this program: the last day of the fall semester for a fall advancement and June 30 for a spring advancement. The completed form, to be filed with Graduate Degrees, 302 Sproul Hall, is available from the Graduate Division web site. It must bear the endorsement of the head graduate adviser and dissertation chair. You must pay a fee of $65 when you file the application, and you must have completed all requirements for the doctoral degree except the dissertation before you may be advanced to candidacy.

Reduced Nonresident Tuition
For graduate students who have been advanced to candidacy for the doctorate, the annual nonresident tuition fee is reduced by 75 percent, subject to the understanding that: (a) graduate doctoral students may receive the reduced nonresident tuition rate for a maximum calendar period of three years; and (b) all such students who continue to be enrolled or who re-enroll after the three-year period will be charged the full nonresident tuition rate that is in effect at that time.

Normative Time—Doctoral Students
Normative time is defined as the elapsed calendar time in years that under normal circumstances would be needed to complete all requirements for the doctoral degree, assuming that a student is engaged in full-time, uninterrupted study and is making desirable progress toward the degree. During the entire period of study, you must be registered continuously, except when you are on approved withdrawal status or during the semester when the filing fee is used.
The primary goals of the Normative Time concept are to provide incentives to both students and instructional units to reduce the average time taken to complete requirements for the doctoral degree, to facilitate a greater degree of continuity in doctoral studies, and to provide a more equitable assessment of fees for doctoral students after advancement to candidacy.

Normative Time benchmarks are implemented as follows:

1. Upon entry to a Berkeley graduate program, you proceed with course work in the normal fashion until you have completed all requirements for advancement to candidacy, the first benchmark measuring your degree progress.

2. There are two categories of Normative Time awards: (a) the Dean’s Normative Time Fellowship, for which students in most humanities, social sciences, and professional school programs are eligible, and (b) the Block Grant Program for students primarily in engineering and physical science majors.

3. Candidacy for the doctorate is of limited duration. When students are advanced to candidacy, the Graduate Division informs them of the number of semesters they are eligible to be candidates, based on normative time calculations for each discipline. The Graduate Division will terminate the candidacy of students who do not complete the requirements within that time, plus a two-year grace period.

For more information on lapsing and termination of candidacy, see the Graduate Studies Handbook, available in department offices and on the Graduate Division web site.

The following normative times in semesters have been established for doctoral programs only. These times do not include the acquisition of a master’s degree.

African American Studies (10)*
Agricultural and Environmental Chemistry (13)
Agricultural and Resource Economics (12)
Ancient History and Mediterranean Archaeology (14)*
Anthropology (12)*
Appied Mathematics (11)
Applied Science and Technology (11)
Architecture (12)*
Asian Studies (10)*
Astrophysics (12)
Biomedical Engineering (10)
Biophysics (12)
Biostatistics (10)
Buddhist Studies (10)*
Business Administration (10)
Chemical Engineering (10)
Chemistry (10)
City and Regional Planning (10)*
Classical Archaeology (14)*
Classics (14)*
Comparative Biochemistry (10)
Comparative Literature (14)*
Computer Science (10)
Demography (10)*
Earth and Planetary Science (10)
East Asian Languages and Cultures:
  Chinese (12),* Japanese (12)*
Economics (10)*
Education (12)*
Endocrinology (10)
Energy and Resources (10)
Engineering (10)
  Nuclear Engineering (12)
English (12)*
Environmental Health Sciences (10)
Environmental Science, Policy, and Management (10)
Epidemiology (12)
Ethnic Studies (12)*
French (10)*
Geography (12)*
Geology (see Earth and Planetary Science)
Geophysics (see Earth and Planetary Science)
German (12)*
Health Services and Policy Analysis (12)
Hispanic Languages and Literatures (10)*
History (12)*
  Additional Languages (14)*
History of Art (14)*
Infectious Diseases and Immunity (10)
Information Management and Systems (12)*
Integrative Biology (10)
Italian Studies (12)*
Jewish Studies (with GTU) (10)*
Jurisprudence and Social Policy: Ph.D. (12)*
Landscape Architecture and Environmental Planning (10)*
Latin American Studies (12)*
Logic and the Methodology of Science (11)
Mathematics (11)
Medical Anthropology (with UCSF) (12)*
Microbiology (10)
Molecular and Biochemical Nutrition (10)
Molecular and Cell Biology (10)
Music (12)
Ethnomusicology (14)
Near Eastern Religions (with GTU) (10)*
Near Eastern Studies (14)*
Neuroscience (10)
Ocean Engineering (10)
Performance Studies (10)*
  Ancient Philosophy (12)*
Philosophy (10)*
Physics (12)
Plant Biology (10)
Political Science (12)*
Psychology (10)
Public Health (10)
Public Policy (12)*
Rhetoric (12)*
Romance Languages and Literatures: French (12),*
  Italian (12)*, Spanish (12)*
Scandinavian Languages and Literatures (12)*
Science and Mathematics Education (10)

*This major is eligible for the Dean’s Normative Time Fellowship.
you are to work under one of two plans, as adopted by the department, school, or group:

**Plan A:** The Administrative Committee of the Graduate Council appoints a committee of five Academic Senate members which determines whether you have met the requirements for the degree. Three members of the committee, one of whom must be from a department other than that of your major subject, guide you in research and judge the merits of your dissertation. The entire committee conducts a final oral examination dealing with the relationship between your dissertation and the general field of study in which the subject of the dissertation lies. Admission to the final oral examination may be restricted to the members of the committee, members of the Academic Senate, and guests of equivalent rank from other institutions.

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

After your committee has approved your dissertation, two copies must be filed with the Graduate Division by a deadline specified by that office. You must also file an abstract of the dissertation, no longer than 350 words and signed by the committee chair.

See the “Master’s Thesis” section for procedures to be followed if committee members disagree about the acceptability of your dissertation.

Programs using Plan A and Plan B are listed below.

**Plan A**

- Buddhist Studies
- Interdisciplinary Program
- Logic and the Methodology of Science
- Near Eastern Religions

**Plan B**

- African American Studies
- Agricultural and Environmental Chemistry
- Agricultural and Resource Economics
- Ancient History and Mediterranean Archaeology
- Anthropology
- Applied Mathematics
- Applied Science and Technology
- Architecture
- Asian Studies
- Astrophysics
- Bioengineering
- Biophysics
- Biostatistics
- Business Administration
- Chemical Engineering
- Chemistry
- Chinese Language
- City and Regional Planning
- Classical Archaeology
- Classics
- Comparative Biochemistry
- Comparative Literature
- Computer Science
- Demography
- Earth and Planetary Science
- Economics
- Education

### The Candidate’s Degree

The degree “Candidate in Philosophy,” which gives formal recognition to a definite state of progress toward the doctorate, may be awarded when you are advanced to candidacy for the Ph.D. degree. The list of graduate degree programs that award the “Candidate in Philosophy” degree is available from Graduate Degrees, 302 Sproul Hall.

### Annual Review of Doctoral Candidates

The Graduate Council requires all doctoral students who have been advanced to candidacy to meet annually with at least two members of their dissertation committees to discuss progress during the last year and to set goals for the next. Students who are away from campus may complete the evaluation by mail. Departments may use their own form or one developed by the Graduate Division for this purpose. A copy of the evaluation must be forwarded to the Graduate Division, 302 Sproul Hall.

### The Doctoral Dissertation

The dissertation, the product of independent investigation under faculty supervision, is the most important requirement for the doctoral program; the degree is never granted for completion of course work only, no matter how extensive. The dissertation must be submitted to the committee in charge (see below) and must receive its approval. The dissertation must be filed according to the procedures established by the Graduate Council regarding the presentation of dissertations. The format of the doctoral dissertation is similar to that outlined in the section on the master’s thesis. Further information on formatting and how to file is available from the Graduate Division or its web site at www.grad.berkeley.edu/degrees.

You are to work under one of two plans, as adopted by the department, school, or group:

**Plan A:** The Administrative Committee of the Graduate Council appoints a committee of five Academic Senate members which determines whether you have met the requirements for the degree. Three members of the committee, one of whom must be from a department other than that of your major subject, guide you in research and judge the merits of your dissertation. The entire committee conducts a final oral examination dealing with the relationship between your dissertation and the general field of study in which the subject of the dissertation lies. Admission to the final oral examination may be restricted to the members of the committee, members of the Academic Senate, and guests of equivalent rank from other institutions.

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

After your committee has approved your dissertation, two copies must be filed with the Graduate Division by a deadline specified by that office. You must also file an abstract of the dissertation, no longer than 350 words and signed by the committee chair.

See the “Master’s Thesis” section for procedures to be followed if committee members disagree about the acceptability of your dissertation.

Programs using Plan A and Plan B are listed below.

**Plan A**

- Buddhist Studies
- Interdisciplinary Program
- Logic and the Methodology of Science
- Near Eastern Religions

**Plan B**

- African American Studies
- Agricultural and Environmental Chemistry
- Agricultural and Resource Economics
- Ancient History and Mediterranean Archaeology
- Anthropology
- Applied Mathematics
- Applied Science and Technology
- Architecture
- Asian Studies
- Astrophysics
- Bioengineering
- Biophysics
- Biostatistics
- Business Administration
- Chemical Engineering
- Chemistry
- Chinese Language
- City and Regional Planning
- Classical Archaeology
- Classics
- Comparative Biochemistry
- Comparative Literature
- Computer Science
- Demography
- Earth and Planetary Science
- Economics
- Education
Endocrinology
Energy and Resources
Engineering
Engineering Science
Environmental Health Sciences
Environmental Science, Policy, and Management
Epidemiology
Ethnic Studies
French
Geography
Health Services and Policy Analysis
Hispanic Languages and Literatures
History
History of Art
Infectious Diseases and Immunity
Information Management and Systems
Integrative Biology
Italian Studies
Japanese Language
Jewish Studies
Jurisprudence and Social Policy
Landscape Architecture and Environmental Planning
Latin American Studies
Linguistics
Mathematics
Medical Anthropology
Microbiology
Molecular and Biochemical Nutrition
Molecular and Cell Biology
Molecular Toxicology
Music
Near Eastern Studies
Neuroscience
Ocean Engineering
Performance Studies
Philosophy
Physics
Plant Biology
Political Science
Psychology
Public Health
Public Policy
Rhetoric
Romance Languages and Literatures—Emphases: French, Italian, Spanish
Scandinavian Languages and Literatures
Science and Mathematics Education
Slavic Languages and Literatures
Social Welfare
Sociology
Sociology and Demography
South and Southeast Asian Studies
Special Education
Statistics
Vision Science
Wood Science and Technology

Minimum Requirements
All the procedures and regulations described above and in the preceding section on master’s degrees constitute the minimum requirements for higher degrees, as set by the Graduate Division. Each academic unit may adopt additional requirements, as approved by the dean of the Graduate Division and the Graduate Council, according to the demands of its field of study.

Academic Opportunities

Exchange Programs
Berkeley students participating in any of the following exchange programs, with the exception of the Intercampus Exchange Program, will not automatically receive credit for taking course work at the host campus. The courses will be posted in the memorandum column of your transcript. If you want to transfer units, see page 59, “Transfer of Credit from Other Institutions.” No more than 4 quarter or 6 semester units are transferable toward the master’s degree only.

Intercampus Exchange Program
If you are a graduate student registered on any campus of the University, you may go to another campus of the University as an Intercampus Exchange Graduate Student with the approval of your graduate adviser, the chair of the department in which you want to study, the dean of the Graduate Division on the home campus, and the dean of the Graduate Division on the host campus.

You may obtain an application form for the Intercampus Exchange Program for Graduate Students from the office of the dean of the Graduate Division on your home campus. You should complete and file the application form at least three weeks before the opening of the term of enrollment on the host campus. (Please note that all other UC campuses are on the quarter system.)

This privilege is available to graduate students who would like to associate with scholars or fields of study not available on the home campus, or who seek the use of special facilities and collections. Whenever possible, you should make personal arrangements with faculty members on both campuses to ensure that the courses, seminars, or facilities will be available to meet your needs. This privilege will be granted where there is evidence of serious and high-quality scholarship.

As an intercampus exchange student, you register and pay fees on your home campus but have library, health services, and other student privileges on your host campus. You should make arrangements with the Office of the Registrar to follow the enrollment procedure of the host campus so that the grades you obtain in courses taken on the host campus will transfer to your record on the home campus. Exchange students are considered graduate students in residence on the home campus and are not formally admitted to the host graduate school and department. Unless specifically restricted, fellowship recipients may participate in the Intercampus Exchange Program.
Stanford-Berkeley Exchange Program
If you have a superior academic record, you may participate in the Stanford-Berkeley Exchange Program when it is considered desirable for you to take a limited number of courses that are offered at Stanford but not at Berkeley. Participation in the program must be approved by the Graduate Division and your department. Normally, you will not be allowed to participate in this program until you have completed a year of graduate study at Berkeley. Participants 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 want to take courses at Berkeley. If you apply for this program, you must enroll in at least one course at Berkeley. You may obtain further information and an application form from Graduate Degrees, 302 Sproul Hall.

Exchange Program with Hayward, Mills, San Francisco, and Sonoma
You may also participate in exchange programs with California State University, Hayward; Mills College; San Francisco State University; and Sonoma State University. With the approval of the Graduate Division and your department, you may register and pay applicable fees at Berkeley and be exempt from tuition and fees at the host campus. You may enroll for only one course per semester at the host campus.

The Exchange Scholar Program
The Exchange Scholar Program is designed to enable doctoral students with superior academic records to study at one of the participating institutions to take advantage of educational opportunities that are not available at Berkeley. Normally, you are eligible to become an exchange scholar only after you have completed one year in a Berkeley graduate degree program. You may take courses or conduct research with particular faculty at the host institution for no more than one year while remaining registered at Berkeley. Participating institutions are Berkeley, Brown University, University of Chicago, Columbia University, Cornell University, Harvard University, Massachusetts Institute of Technology, University of Pennsylvania, Princeton University, Stanford University, and Yale University. You may obtain further information and an application from Graduate Degrees, 302 Sproul Hall.

Please note: Guidelines for participation in the exchange program with Stanford University are outlined above under the Stanford-Berkeley Exchange Program.

CAL Quiz
No. 13
What was Foresters’ Circle, and where is it today?
(Answer on page 496.)
Studying Abroad
Graduate students may participate in the University of California Education Abroad Program (EAP). EAP offers a diverse range of programs, most of which are available to graduate students, in more than 30 countries. Several of the programs do not require foreign language proficiency for participation. Approval from your department and from the Graduate Division is required. For further information, contact the office of Berkeley Programs for Study Abroad, 160 Stephens Hall #2302, University of California, Berkeley, CA 94720-2302, (510) 642-1356; e-mail: eapucb@uclink.berkeley.edu.

Interdisciplinary Groups
Berkeley has established graduate programs in a number of fields that cut across conventional departmental lines yet comprise distinct cores of knowledge. These programs are administered by groups of faculty from several related departments and, in certain instances, from several campuses. If you are enrolled in these programs you 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 gives you access to a range of facilities not ordinarily open to students enrolled in departmental programs. In some cases (e.g., medieval studies), a faculty committee is appointed specifically to advise you and the interested departments on setting up a program that will best meet the departments’ and your views of the intellectual quality of the proposed programs. Since groups have no budgets or facilities of their own (with the exception of the Energy and Resources Group), however, most applicants, to be accepted by a particular group, must first obtain the sponsorship of one of its faculty members.

Following is a current list of graduate groups on the Berkeley campus:

Group in Agricultural and Environmental Chemistry
111F Koshland Hall #3102
(510) 642-5167
pmb.stud@nature.berkeley.edu

Group in Ancient History and Mediterranean Archaeology
7303 Dwinelle Hall #2600
(510) 643-8741
casmaadm@socrates.berkeley.edu

Group in Applied Science and Technology
230 Bechtel Engineering Center #1708
(510) 642-8790
astprogram@coe.berkeley.edu

Group in Asian Studies
2223 Fulton Street, Room 524, #2318
(510) 642-0333
asianst@uclink4.berkeley.edu

Group in Bioengineering (with UCSF)
459 Evans Hall #1762
(510) 642-5860
bioeng@coe.berkeley.edu

Group in Biophysics
Mailing address: 401 Barker Hall #3202
(510) 642-0379
biophysics@uclink.berkeley.edu

Group in Biostatistics
140 Warren Hall #7360
(510) 642-3241
biostats@stat.berkeley.edu

Group in Buddhist Studies
7303 Dwinelle Hall #2540
(510) 642-4219
casmauga@socrates.berkeley.edu

Group in Comparative Biochemistry
117 Morgan Hall #3104
(510) 642-2863
compbio@nature.berkeley.edu

Group in Endocrinology
3060 Valley Life Sciences Building #3140
(510) 643-7330
rpauling@uclink.berkeley.edu

Group in Energy and Resources
310 Barrows Hall #3050
(510) 642-1760
dbridges@socrates.berkeley.edu

Group in Environmental Health Sciences
19 Warren Hall #7360
(510) 643-5160
ehs_div@uclink.berkeley.edu

Group in Epidemiology
19 Warren Hall #7360
(510) 643-9912
rtj@uclink4.berkeley.edu

Group in Ethnic Studies
506 Barrows Hall #2570
(510) 642-6643
ethnicst@socrates.berkeley.edu

Group in Folklore
110 Kroeber Hall #3710
(510) 642-2092
folklore@socrates.berkeley.edu

Group in Health Services and Policy Analysis
19 Warren Hall #7360
(510) 643-8571
sphinfo@socrates.berkeley.edu

Group in Infectious Diseases and Immunity
233 Warren Hall #7360
(510) 642-2613
alyness@uclink.berkeley.edu

CAL Quiz
No. 14
Oska, the University’s spirit mascot, is a Golden Bear with some particular characteristics. Who plays Oska and what does he say when he appears at spirit rallies and athletic contests? (Answer on page 496.)
Group in International and Area Studies
101 Stephens Hall #2306
(510) 642-4466
ias@uclink4.berkeley.edu

Group in Jewish Studies (with GTU)
250 Barrows Hall #1940
(510) 642-6162
shattuck@uclink.berkeley.edu

Group in Latin American Studies
101 Stephens Hall #2306
(510) 642-4466
lasgrad@uclink4.berkeley.edu

Group in Logic and the Methodology of Science
731 Evans Hall #3840
(510) 642-0665
logic@math.berkeley.edu

Program in Medieval Studies
7305 Dwinelle Hall
(510) 642-4218
casmaoff@socrates.berkeley.edu

Group in Microbiology
111E Koshland Hall #3102
(510) 642-5167
pmb.stud@nature.berkeley.edu

Group in Molecular and Biochemical Nutrition
117 Morgan Hall #3104
(510) 642-2863
mbn@nature.berkeley.edu

Group in Molecular Toxicology
117 Morgan hall #3104
(510) 643-2863
moltx@nature.berkeley.edu

Group in Near Eastern Religions (with GTU)
250 Barrows Hall #1940
(510) 642-6162
shattuck@uclink.berkeley.edu

Group in Neuroscience
349 Mulford Hall #3190
(510) 642-8915
ksmarkow@uclink4.berkeley.edu

Group in Ocean Engineering
230 Bechtel Engineering Center #1708
(510) 642-8790
oceaneng@coe.berkeley.edu

Group in Performance Studies
101 Dwinelle Annex #2560
(510) 642-1677
phdrama@uclink4.berkeley.edu

Group in Range Management
145 Mulford Hall #3114
(510) 642-6410
espmgradproginfo@nature.berkeley.edu

Group in Romance Languages and Literatures
5309 Dwinelle Hall
(510) 642-8037

Group in Science and Mathematics Education
4533 Tolman Hall #1670
(510) 642-4207
kate@socrates.berkeley.edu

Group in Sociology and Demography
2232 Piedmont Avenue
(510) 642-9800

Group in Urban Design
202 Wurster Hall #2000
(510) 642-2965
kris@uclink4.berkeley.edu

Group in Vision Science
524 Minor Hall #2020
(510) 642-9804
vissci@spectacle.berkeley.edu

Group in Wood Science and Technology
1301 So. 46th Street, Bldg. 478
Richmond, CA 94804-4698
(510) 215-4250
connie.price-campbell@ucop.edu

Advisory Group:
(not a degree program)

Committee for Certificate in Russian and East European Studies
c/o Center for Slavic and East European Studies
361 Stephens Hall #2304
(510) 642-3230

Designated Emphasis Groups:

Group in Communication, Computation, and Statistics
c/o Department of Statistics
367 Evans Hall #3860
(510) 642-2781

Group in Film Studies
c/o Film Studies
7408 Dwinelle Hall #2670
(510) 642-1415

Group in Women, Gender, and Sexuality
c/o Department of Women’s Studies
3329 Dwinelle Hall #1070
(510) 642-8513

CAL Quiz
No. 15
Identify three items that are named for former Berkeley chancellors.

(Answer on page 496.)
Individual Doctoral Programs

To allow you to work in a field that, in its breadth, falls between that of a department and an interdisciplinary group, the Graduate Division permits the informal establishment of ad hoc programs leading to the Ph.D. degree. You will be considered for an interdisciplinary program only if you have completed at least two semesters of graduate study in a doctoral program on this campus and have shown superior academic performance in your graduate studies here. To apply for an individual major, you must prepare a proposal for a course of study under the sponsorship of five 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. You must complete degree requirements in accordance with Plan A of the Graduate Council policies, and the degree is awarded in a field that the council approves for you. For more information, contact Graduate Degrees, 302 Sproul Hall, (510) 642-7330.

Teaching and Research Appointments

Many departments make graduate student instructorships available to qualified graduate students, and departments, centers, and institutes often seek qualified graduate students for research appointments. For specific information see the section “Fees and Financial Aid,” beginning on page 69.

Internships

A number of internships are available to graduate as well as undergraduate students. For information see “Research and Internships” on page 45.

General Rules and Academic Policies

A brief summary follows of some of the general rules and policies you are subject to as a graduate student. For more exhaustive coverage, see the section “Academic Policies,” beginning on page 77.

Standards of Scholarship

You must receive a grade of A, B, C (including pluses and minuses), or S in your course work to satisfy degree requirements. You will not receive course credit for courses graded below C-. You must maintain a grade-point average of 3.0 in all upper division and graduate course work taken as a graduate student. Your department, school, or group may establish more stringent standards.

Probation and Dismissal

You are subject to probation and dismissal if your grade-point average falls below 3.0 or that required by your department, school, or group; if your written work is substandard; or if you fail to make adequate progress toward the degree. If you wish to appeal your dismissal, follow the instructions contained in the Graduate Appeal Procedure. This policy is available from the Graduate Dean’s Office, 424 Sproul Hall, (510) 642-5972, or from the Graduate Division web site at www.grad.berkeley.edu/current/.

Normative Time

For information about normative time (the time needed to complete all requirements for the doctoral degree), see page 61.

Academic Residence

In order to meet the academic residence requirement for higher degrees—not to be confused with state residence, defined in the Appendix—every graduate student must enroll in and complete a minimum of 4 units of upper division and/or graduate courses per required semester of academic residence. Only courses in the 100 or 200 series satisfy this requirement. The minimum requirement for a master’s degree is one year of academic residence; for a doctoral degree, the minimum is two years.

Visiting Scholar and Postdoctoral Appointment Program

Berkeley is host to more than 2,000 visitors from other universities, colleges, research laboratories, and government agencies who conduct research using University facilities. For information about the Visiting Scholar and Postdoctoral Appointment (VSPA) program, see the Appendix.
Fees and Financial Aid

Native Tongues

Asian-language texts bring East Asia to life

Berkeley’s East Asian Library might not be your first stop if you are looking for a good book on the region — the library, one of the best outside of Asia, contains only materials written in Chinese, Japanese, or Korean. Yet the multilingual flock to its cozy setting to peruse dictionaries, documents, and rare books and scrolls. The library eventually will be housed in the Chang-Lin Tien Center of East Asian Studies, soon to be under construction.
Fees and Financial Aid

It is very important that you carefully consider the total financing of your education, from your first term at Berkeley to completing your degree objective. If financial help will be needed beyond funds that you or your family are able to provide, you should make the necessary applications for financial assistance well in advance of enrollment. You should pay particular attention to early deadlines for application for grants, scholarships, Federal Work-Study, Federal Perkins, and Federal Direct Stafford/Ford Loans. While the needs and resources of each student differ, the University can provide a general list of fees and expenses normally encountered. Note that fees are subject to change without notice.

Part of your fees may be refunded if you cancel your registration before the opening day of the semester or withdraw before the beginning of the sixth week of classes of any semester. (See pages 84 and 85 for schedules of prorated fees.) A circular on refunds, Student Fees and Deposits, is also available from the Office of Undergraduate Admissions, 110 Sproul Hall.

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

### Required Fees

**University Registration Fee**—$356.50 per semester. This fee is paid by all students and covers normal expected usage of facilities such as laboratories and gymnasiums (except for instructional programs associated with these facilities) and services such as counseling, placement, and health.

**Educational Fee**—This fee is paid by undergraduate California residents at $1,493 per semester, by California resident graduate students at $1,583 per semester, and by all other students at $1,678 per semester. A portion of this fee may be temporary. The educational fee is used to support a portion of the student services costs of the educational program, such as financial aid, social and cultural activities, Admissions and Registrar operations, counseling and career guidance, student affirmative action, and academic tutoring. In exceptional circumstances the educational fee may be reduced by one-half for part-time undergraduate students. Approval of part-time undergraduate study is made only in exceptional cases and is based on considerations of occupation, family responsibility, and health. Applications must be approved by the appropriate dean before the start of each term. A fee reduction will be made only if you enroll in no more than two courses.

**Berkeley Campus Fee**—This fee is paid by all students in the amount of $98.75 per semester. It provides support for a wide range of activities sponsored by the ASUC, including work with academic and administrative units of the campus. It covers use of the Student Union, helps pay construction costs of the Union building, and assists with the provision of ethnic studies on the Berkeley campus.

**Class Pass Transit Fee**—This fee, required of all students, gives students unlimited transportation on the local bus system (AC Transit) for $34.20 per semester.

The fees in this section are those in effect for the spring 2003 semester. At press time, fees for future semesters had not been determined. Please go to the Office of the Registrar’s web site at http://registrar.berkeley.edu.

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**CAL Quiz
No. 16**

Where did the marble “dog lions” or “foo dogs” outside Durant Hall originally stand, and where did they come from?

(Answer on page 496.)

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Each year, the night before the Big Game with Stanford, students cheer for the Bears at a bonfire rally in the Greek Theatre.
The figures listed below were those in effect for the academic year 2002-03. Fees and estimates of expenses for subsequent years had not been determined when this catalog went to press; for current information, call (510) 642-6442 or visit the Financial Aid Office's web site at http://uga.berkeley.edu/fao.

**Undergraduate Residence Halls**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room and Board (includes food, housing, and utilities)</td>
<td>$10,608</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>$1,108</td>
</tr>
<tr>
<td>Personal Expenses</td>
<td>$1,156</td>
</tr>
<tr>
<td>Transportation</td>
<td>$604</td>
</tr>
<tr>
<td><strong>Total Living Expenses</strong></td>
<td>$13,476</td>
</tr>
<tr>
<td>Fees (for two semesters)</td>
<td>$3,829</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>$506</td>
</tr>
<tr>
<td><strong>Total Budget (for California resident)</strong></td>
<td><strong>$17,811</strong></td>
</tr>
<tr>
<td>Nonresident Tuition and Fees</td>
<td>$12,379</td>
</tr>
<tr>
<td><strong>Total Nonresident Budget</strong></td>
<td><strong>$30,190</strong></td>
</tr>
</tbody>
</table>

**Undergraduate Off Campus**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room and Board (includes housing and utilities)</td>
<td>$5,596</td>
</tr>
<tr>
<td>Food</td>
<td>$2,338</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>$1,108</td>
</tr>
<tr>
<td>Personal Expenses</td>
<td>$1,390</td>
</tr>
<tr>
<td>Transportation</td>
<td>$994</td>
</tr>
<tr>
<td><strong>Total Living Expenses</strong></td>
<td>$11,426</td>
</tr>
<tr>
<td>Fees (for two semesters)</td>
<td>$3,829</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>$506</td>
</tr>
<tr>
<td><strong>Total Budget (for California resident)</strong></td>
<td><strong>$15,761</strong></td>
</tr>
<tr>
<td>Nonresident Tuition and Fees</td>
<td>$12,379</td>
</tr>
<tr>
<td><strong>Total Nonresident Budget</strong></td>
<td><strong>$28,140</strong></td>
</tr>
</tbody>
</table>

**Undergraduate Commuter (lives with relatives)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room and Board (includes food, housing, and utilities)</td>
<td>$2,220</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>$1,108</td>
</tr>
<tr>
<td>Personal Expenses</td>
<td>$1,246</td>
</tr>
<tr>
<td>Transportation</td>
<td>$1,430</td>
</tr>
<tr>
<td><strong>Total Living Expenses</strong></td>
<td>$6,004</td>
</tr>
<tr>
<td>Fees (for two semesters)</td>
<td>$3,829</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>$506</td>
</tr>
<tr>
<td><strong>Total Budget (for California resident)</strong></td>
<td><strong>$10,339</strong></td>
</tr>
</tbody>
</table>

**Grad/Law/Optometry**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room and Board (includes food, housing, and utilities)</td>
<td>$12,408</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>$1,108</td>
</tr>
<tr>
<td>Personal Expenses</td>
<td>$2,644</td>
</tr>
<tr>
<td>Transportation</td>
<td>$1,220</td>
</tr>
<tr>
<td><strong>Total Living Expenses</strong></td>
<td>$17,380</td>
</tr>
<tr>
<td>Fees (for two semesters)</td>
<td>$4,009</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>$556</td>
</tr>
<tr>
<td><strong>Total Budget (for California resident)</strong></td>
<td><strong>$21,945</strong></td>
</tr>
<tr>
<td>Nonresident Tuition and Fees</td>
<td>$11,322</td>
</tr>
<tr>
<td><strong>Total Nonresident Budget</strong></td>
<td><strong>$33,267</strong></td>
</tr>
</tbody>
</table>

- Students enrolled in the UC Berkeley Extension Fall Program for Freshmen are assessed fees through the Office of the Registrar. For information call (510) 642-5990.
- M.B.A. students in the Haas School of Business are assessed an additional fee of $6,000; books and supplies are estimated to be $2,000. Fees and books for the evening program are $26,512.
- Students in the Boalt School of Law pay an additional $6,658 in fees and books; and JSP students, an additional $30.
- Graduate students in the School of Optometry are assessed an additional $3,000.

**CAL Quiz No. 17**

Who was the only person who inspired the name of two campus library facilities?

(Answer on page 497.)
University Health Insurance Fee—Undergraduates, $253 per semester; graduate students, $278 per semester. All students attending the University of California, Berkeley must be covered by major medical health insurance. All students are therefore automatically enrolled in the University Major Medical Health Insurance Plan, which provides for specialized care and hospitalization and supplements campus care services provided by University Health Services (UHS) at the Tang Center. The cost for the plan is billed with registration fees each semester. Payment for both the fall and spring semesters provides major medical coverage for the entire calendar year, including summer. You may waive out of the University’s plan and not pay the fee if you can show proof of coverage comparable to the University’s plan. For more information, contact the Student Health Insurance Office, University Health Services, Tang Center, 2222 Bancroft Way, or call (510) 642-5700.

Nonresident Tuition—Undergraduates, $6,122 per semester; graduate students, $5,566 per semester. At the time of registration, you are classified as a resident or nonresident for tuition purposes. Only U.S. citizens and holders of immigrant visas can qualify for resident classification. Under California law you may be classified as a resident for tuition purposes if you have lived in California for more than one year immediately before the day instruction begins at the last of the campuses to open for a semester. Residence is the combination of physical presence within California, intent to live in California permanently, plus demonstrated financial independence for the two years immediately preceding the request for residence classification. Nonresidents must pay a nonresident tuition fee each semester. For detailed information regarding the establishment of California residence, see the Appendix or write to the Legal Analyst, Residence Matters, 1111 Franklin St., 8th Floor, Oakland, CA 94607-5200.

Additional Fees and Expenses

Late Fee Payment—Payments must be received, not postmarked, by the deadline indicated on the Campus Accounts Receivable System (CARS) statement. A $50 fee will be charged if registration fees are not paid by that date. All other delinquent accounts over $50 will be assessed penalties as follows:

- $20 on accounts one month past due;
- $25 on accounts two months past due and monthly thereafter until the account is brought current.

Returned Check Charges—A processing charge of $50 is assessed when the bank returns a check for payment of registration fees. A processing charge of $20 is assessed for all other returned checks.

Late Enrollment—$50. Continuing students who fail to call Tele-BEARS by the end of the Adjustment Period are liable for this fee.

Reinstatement after having been dropped from University rolls—$10.

Collection Costs—Additional costs may be assessed on any defaulted debts requiring remedial collection activity. These costs may include applicable attorney’s fees.

Men’s and Women’s Athletic Events—Student season tickets are available for purchase at the Athletic Ticket Office for football and men’s basketball. Admission to other events is free to all Berkeley students with student ID. For additional information, call (510) 642-3277.

Fee Schedule*

At the time of registration, by mail or in person, students pay the following fees each semester:

<table>
<thead>
<tr>
<th>Undergraduates</th>
<th>Fees per Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residents</td>
<td>$2,235.45</td>
</tr>
<tr>
<td>Nonresidents</td>
<td>8,542.45</td>
</tr>
<tr>
<td>Graduate Students</td>
<td>Fees per Semester</td>
</tr>
<tr>
<td>Residents</td>
<td>$2,350.45</td>
</tr>
<tr>
<td>Nonresidents</td>
<td>8,011.45</td>
</tr>
</tbody>
</table>

Additional Fees for Law, M.B.A., Optometry, and UCB-UCSF Joint Medical Program Students—Students in the Schools of Law and Optometry, the M.B.A. programs in the Haas School of Business, and the UCB-UCSF Joint Medical Program are subject to different fee schedules. For information, call the individual schools or programs or go to http://registrar.berkeley.edu.

Financial Aid

The Financial Aid Office is located on the second floor of Sproul Hall. Please refer to the directory to the left for the addresses and telephone numbers of the various units. You may obtain detailed information about the various kinds of student aid available to Berkeley students from the Financial Aid web page at http://uga.berkeley.edu/fao.

Students may apply for a variety of financial aid funds, including grants, scholarships, work-study, and loans. Financial aid applications and supporting information will be sent to entering undergraduate and graduate students. Students renew their financial aid applications via the Internet at www.fafsa.ed.gov. The deadline for filing is March 2.

*These are the fees that were in effect for the spring 2003 semester. Fees for subsequent semesters had not been determined when this catalog went to press. Please go to http://registrar.berkeley.edu for current information.
All financial aid except fellowships, honorary scholarships, teaching and research appointments, and prizes is granted on the basis of financial need. Financial need is the difference between the cost of attendance for the academic year and the amount you and your family can contribute toward those costs. Prizes are awarded on the basis of competition or outstanding ability in some area of creative or scholarly endeavor. Most scholarships are awarded on the basis of academic performance and financial need. For detailed information on scholarships and prizes, go to www.berkeley.edu/scholarships.

Much of the funding for graduate students comes from sources other than the Financial Aid Office. Fellowships are awarded through the Graduate Division. Information and applications are available at the Graduate Division, 318 Sproul Hall.

Reserve Officers Training Corps

The University of California, as a land-grant institution established by the Morrill Act of 1862, offers courses and programs in military training. This training is voluntary and affords you the opportunity to qualify for a commission as an officer in the Army, Navy, Air Force, or Marine Corps while completing your college education. Reserve Officers Training Corps (ROTC) courses are offered by three departments: Aerospace Studies (Air Force), Military Science (Army), and Naval Science (Navy and Marine Corps). Scholarship programs are available; they carry a monthly stipend and pay for tuition, books, and most fees for qualified students. Individual programs are described under Military Officers Education Program in the courses section of this catalog.

Veterans’ Educational Benefits

The Veterans Services Unit in the Office of the Registrar certifies eligible veterans, dependents, surviving spouses, and reservists for educational benefits. As the campus liaison to the Veterans Administration and the State Department of Veterans Affairs, Veterans Services can answer all questions regarding your eligibility for benefits and can assist you with counseling and referrals. A veterans’ work-study program, a tutorial assistance program, and a fee waiver program are also available.

If you are a veteran newly admitted to Berkeley, please submit a certified copy of your Certification of Release or Discharge from Active Duty (form DD-214). You may also need to submit certified copies of your marriage certificate, dependent children’s birth certificates, and final divorce decree, if applicable. If you are a veteran’s dependent, you must provide your spouse or parent’s VA claim number and social security number. The VA pamphlet, “A Summary of Veterans Administration Benefits,” is available upon request. If you have questions or need more information, you may write to the Veterans Services Unit, Office of the Registrar, 120 Sproul Hall, or call (510) 642-1592.

The strongest advice I can give anyone coming to Cal is this: Do NOT give up! Part of your education at Berkeley comes from your experience of surviving at Cal. And by surviving I mean dealing with mix-ups with financial aid, getting classes, declaring your major, connecting with your professors, and getting housing, all while trying to learn in an environment where 30,000 other people are trying to do the same thing. It is an experience that will serve you for the rest of your life. You learn to be resourceful and tenacious.

Adan Tejada,
Lieutenant, UCPD
Since I came to Berkeley, I’ve worked continuously on campus, both as a publications intern and as a work-study student. Work-study has expanded my marketable skills 100 percent.

4th-year student

Fellowships, Graduate Scholarships, and Academic Appointments for Graduate Students

Numerous programs—from fellowships, grants-in-aid, and loans to assistantships, subsidized housing, and child care programs—provide ways in which you can reduce the costs of graduate school. Some of the programs are need-based and are administered through the Financial Aid Office. These programs are discussed in preceding paragraphs. Others are merit-based and are administered through the Graduate Division Fellowships and Appointments Offices and the academic departments. For detailed information about all the sources available to you, consult the “Graduate Application for Admission and Fellowships,” available online at www.grad.berkeley.edu/admissions/grad_app.shtml. The following paragraphs discuss merit-based fellowships, graduate scholarships, and teaching and research appointments, the primary sources of non-loan financial aid for graduate students.

Fellowships and Graduate Scholarships

Applications for University fellowships and graduate scholarships are considered only once a year. Awards are made for the academic year beginning with the fall semester. U.S. citizens and permanent residents are required to complete the Free Application for Federal Student Aid (FAFSA) for determination of financial need.

In assigning awards, the Committee on Fellowships and Graduate Scholarships and your academic preparation, intellectual potential, and evidence of industry and motivation.

In addition to departmental block grants and fellowships funded by the Graduate Division, the following fellowships are awarded in open competition:

The Berkeley Fellowships for Graduate Study.

Fellowships are awarded to entering doctoral students of outstanding achievement and high promise. These five-year awards are based on continued excellence in the fellow’s advanced degree program. They carry an annual stipend of $17,000 plus fees (and tuition if necessary) for three years. The first year includes an additional $3,000 summer stipend. Departments provide two years of support in the form of teaching or research appointments.

University Predoctoral Humanities Fellowships.

Entering humanities students who enroll in M.A./Ph.D. or Ph.D. programs and plan to pursue careers in teaching and research are eligible for this fellowship. It provides $15,000 for two years plus fees, and nonresident tuition for domestic students the first year and for international students the first two years. The first year includes an additional $3,000 summer stipend. For the third and fourth years, departments provide support in the form of teaching or research appointments.

The Chancellor’s Opportunity Predoctoral Fellowships.

Fellowships are awarded to entering doctoral students who contribute to the level of diversity within their disciplines or the graduate community at large. Recipients may have shown academic achievement despite challenges such as economic, social, and/or educational obstacles. To be eligible, you must be a U.S. citizen or permanent resident. Fellowships provide fees plus an annual stipend of $17,000 for three years, plus nonresident tuition for the first year only. The first year includes an additional $3,000 summer stipend. Departments provide two years of support in the form of teaching or research appointments.

Eugene Cota-Robles Fellowships.

Fellowships are awarded to students who contribute to the level of diversity within their disciplines or the graduate community at large. Recipients may have shown academic achievement despite challenges such as economic, social, and/or educational obstacles. The four-year awards carry an annual stipend of $15,000 for two years (and nonresident tuition if necessary for the first year only). The first year includes an additional $3,000 summer stipend. Departments provide two years of support in the form of teaching or research appointments. To be eligible, you must be a U.S. citizen or permanent resident and plan a career in teaching and research.

Graduate Opportunity Four-Year Fellowships.

Fellowships are awarded to students who contribute to the level of diversity within their disciplines or the graduate community at large. Recipients may have shown academic achievement despite challenges such as economic, social, and/or educational obstacles. To be eligible for this award, you must be a U.S. citizen or permanent resident. The four-year awards, for doctoral students only, carry an annual stipend of $15,000 plus fees for the first two years and a departmental teaching or research appointment for the third and fourth years. The first year includes nonresident tuition if required, and an additional $3,000 summer stipend.
Graduate Opportunity Program Fellowships.
Fellowships are awarded to students who enroll in doctoral programs and contribute to the level of diversity within their disciplines or the graduate community at large. Recipients may have shown academic achievement despite challenges such as economic, social, and/or educational obstacles. GOP awards provide doctoral students with a stipend up to $15,000 per year for two years, plus fees and nonresident tuition for the first year. The first year includes an additional $3,000 summer stipend. Departments provide two years of support in the form of teaching or research appointments. A third year of fellowship support may be available for GOP fellows in their final dissertation/writing year and who are within the normative time of their departments.

Regents Intern-Fellowships. Entering humanities or social science students who enroll in an M.A./Ph.D. or Ph.D. program and plan to pursue careers in teaching and research are eligible for this fellowship, which provides four years of support: two years of fellowship support ($15,000 stipend, plus a $3,000 summer stipend and nonresident tuition and fees the first year; $15,000 plus fees the second year) and two years of departmental teaching or research appointments.

Foreign Language and Area Studies (FLAS) Fellowships. The U.S. Department of Education allocates fellowship funds to institutions of higher education that offer advanced training in modern foreign language and area studies. Area studies is defined as a program of comprehensive study of aspects of a society or societies including geography, history, culture, economy, politics, international relations, and languages. To be eligible, you must be a citizen or permanent resident of the U.S., show potential for high academic achievement, and plan to enroll in a course in the language of award.

Departmental Block Grant Fellowships. Awards are based on scholastic records, evidence of ability to do research or other creative work, and promise of productive scholarship. Awards are assigned by the student’s home department. Please see below and your department for information about the application process.

Fellowship Application Procedure. If you are applying for admission/fellowship, you must file the combined Graduate Application for Admission and Fellowships according to instructions included in the application.

If you are applying for admission for the spring semester, you should see your department for an award to begin the following fall semester.

If you are a continuing or returning graduate student at Berkeley, you may obtain the necessary fellowship application materials from your department or graduate group.

The fellowship application deadlines for new students range from December 15 to January 5, depending on the department; see the Application for Admission and Fellowships for deadlines. Continuing students should see their departments before January 5.

Announcement of Awards. Awards are announced by April 1 and must be accepted or declined, in writing, by April 15.

Fellowship Supplementation. Fellows receiving stipends of $7,500 or more may be employed no more than 25 percent time per semester as teaching or research assistants or in similar educationally relevant positions. Any exception to this policy must be approved by the dean of the Graduate Division upon recommendation of the graduate adviser.

Graduate Opportunity Program (GOP)
The Graduate Opportunity Program is part of the University’s commitment to diversity and excellence. The purpose of the program is to assist in increasing the numbers of historically underrepresented groups that have faced obstacles to social opportunities so that more may complete graduate degree programs at the University.

The Graduate Opportunity Program helps students meet the cost of their education and provides support services in an effort to maintain a more diverse graduate student community. For master’s students, the GOP award provides a stipend up to $10,000 for one year, plus tuition and fees. If master’s students are later admitted to a doctoral program, they will be eligible for a second year of GOP support.

Prospective students who wish to be considered for a GOP Award should complete Form C of the Graduate Application for Admission and Fellowships.

CAL Quiz
No. 19
What was the University’s first postal address?
(Answer on page 497.)
zens and permanent residents are required to complete the Free Application for Federal Student Aid (FAFSA) for determination of financial need.

Application fee waivers are also available for economically disadvantaged students. The request forms are available at the Graduate Admissions Office and the Graduate Opportunity Program Office.

For further information, contact the Graduate Opportunity Program, Graduate Division, University of California, Berkeley; Berkeley, CA 94720-5900, (510) 643-6010. E-mail: gop@uclink4.berkeley.edu.

**Academic Appointments**

Academic appointments are an important source of financial support for Berkeley graduate students, although their availability varies from department to department. As part of an offer of admission, some departments may propose a combination of teaching and research appointments as part of a financial support package. Other departments may expect graduate students to arrange for appointments once they have been admitted.

Graduate students appointed by the University to most academic titles must meet minimum academic requirements, such as GPA and a limit on incomplete grades, and be registered and enrolled in at least 8 units per semester in 100-200 level courses. Units in the 600 series may be substituted for 200-level units when appropriate. Lower division units taken to prepare for departmental requirements (languages, mathematics, statistics) may be substituted for 100-level units. Most positions are eligible for fee remissions in addition to salary. For more information on eligibility requirements and the availability of appointments, contact the department for which you wish to work. Departments occasionally may list openings with the Career Center.

Graduate students are restricted to working no more than half time regardless of the positions they hold. To ensure proper academic progress, the University may not appoint candidates for higher degrees in any capacity at more than half time during the academic year without the express consent of the dean of the Graduate Division. Summer appointments may be full time.

GSIs, acting instructors, readers, tutors, nursery school assistants, and community teaching fellows are covered by a collective bargaining agreement with the United Automobile Workers (UAW). Under the language of the contract, students hired in these titles are referred to as ASEs (academic student employees). You will find this acronym used in the contract and in campus communications. Information on anticipated appointments for the next academic year can be found on the Labor Relations web site at http://hrweb.berkeley.edu/lrlabor.htm.

**Teaching Appointments.** Many departments make graduate student instructor (GSI) positions available to qualified graduate students, providing them with stipends of $1,414 to $1,683 per month for half-time appointments (2002-03 rate). GSIs must be registered full-time students and are limited to working half time or less. They are chosen for scholarly achievement and promise as teachers, and they serve under active supervision of the regular faculty. Some departments require their students to complete a specified minimum period of teaching as part of their Ph.D. programs.

Graduate students who do not speak English as a native language must pass a test of spoken English before they can be appointed as a graduate student instructor. To fulfill this requirement you can take the Test of Spoken English (TSE) before enrolling at Berkeley or the Speaking Proficiency English Assessment Kit (SPEAK) once you have enrolled at Berkeley. For information on registering to take the TSE, contact the TOEFL/TSE agent in your country or write to TOEFL Services, Educational Testing Service, P.O. Box 6151, Princeton, NJ 08541-6151, USA. For further information on SPEAK testing and English Language Proficiency courses offered at Berkeley, please refer to the GSI Teaching and Resource Center’s web site at www.grad.berkeley.edu/gsi/lang-pro.htm.

**Note:** The TOEFL is not a test of oral English proficiency, and it may not be substituted for the TSE. The TSE is not a requirement for admission.

**Research Appointments.** If you are a qualified registered full-time graduate student, you may seek a research appointment in the departments, centers, and institutes of the University. Graduate student researchers (GSRs) perform research broadly related to their degree programs in an academic department or research unit under the direction of a faculty member or authorized principal investigator. Stipends range from $1,219 to $2,389 per month for a half-time appointment (2002-03 rate). The duration and extent of such an appointment may vary. If interested, you should apply directly to the department, center, or institute in which you wish to work.

**Stipends and Fee Remissions.** Stipend figures for all positions mentioned above are subject to United States income tax deductions. Figures given are gross, not net, and do not reflect deductions. If you are offered an appointment, you should obtain information about payment schedules, since payment for work performed is later than the deadline for payment of registration fees. For teaching appointments, payment is in five equal installments per semester.

Appointments of GSRs and graduate students who are covered by union contracts may include coverage of the premium for the Student Health Insurance Plan (SHIP) and a partial remission of registration fees. Doctoral students appointed as GSRs at or above 45 percent time for the entire semester may be eligible for remission of fees and nonresident tuition if they meet certain other criteria. See your department to determine eligibility. For more information on appointments and fee remissions, go to the Graduate Division appointments web site at www.grad.berkeley.edu/grad/appointments/index.shtml.
There are few more dynamic “classrooms” than the San Francisco Bay for students of engineering, natural sciences, policy, design, and the environment. In the Water Resources Center Archives, students pore over photos and plans for the bay’s famous bridges, each offering lessons in design, environmental protection, and public policy. The archives are a unique repository of books, reports, manuscripts, and photos relating to water, with an extensive collection on the bay.
The Semester System

Under the semester system on the Berkeley campus, the academic year is divided into two semesters and one summer session. Quarter units, either earned previously at Berkeley or at another institution, are converted to semester units by multiplying by two-thirds; for example, 180 quarter units equal 120 semester units.

Courses and Units

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

Grades

The work of all students on the Berkeley campus is reported in terms of the following grades: A (excellent), B (good), C (fair), D (barely passing), F (failure), P (passed at a minimum level of C-), NP (not passed), S (satisfactory, passed at a minimum level of B-), U (unsatisfactory), I (work incomplete due to circumstances beyond the student's control, but of passing quality), IP (work in progress; final grade to be assigned upon completion of entire course sequence). The grades A, B, C, and D may be modified by plus (+) or minus (-) suffixes. A course in which the grades A, B, C, D, or P (undergraduate students only) is received is counted toward degree requirements. A course receiving the grade S (graduate students only) is similarly counted unless otherwise specified in the course description. A course in which the grade F, NP, or U is received is not counted toward degree requirements. A course in which the grade of I or IP is received is not counted toward degree requirements until the I or IP is replaced by grade A, B, C, D, P, or S.

Grade Points

Grade points per unit are assigned as follows: A=4, B=3, C=2, D=1, and F=none. When attached to the grades A, B, C, or D, plus (+) grades carry three-tenths of a grade point more per unit, and minus (-) grades three-tenths of a grade point less per unit than unsuffixed grades, except for A+, which carries 4.0 grade points per unit as does the A.

Grade-Point Average

Your grade-point average is computed on courses undertaken in the University of California, with the exception of courses undertaken in University Extension. Grades A, B, C, D, and F are used in determining your grade-point average; grades IP, P, S, NP, and U carry no grade points and are excluded from all grade-point computations. Grade I, if assigned before fall 1973, is included and is computed as an F; an I grade assigned fall 1973 and later is excluded from computations. For additional information, see “Repetition of Courses” below.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Units</th>
<th>Grade Points</th>
</tr>
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</tr>
<tr>
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</tr>
<tr>
<td>C-</td>
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<tr>
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</tr>
<tr>
<td>Average</td>
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</tr>
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</table>

Special Provisions—Graduate Students

Only courses graded A, B, C (with or without plus or minus signs), or S are accepted in satisfaction of degree requirements. Courses graded below C- do not yield unit credit toward a higher degree, regardless of your overall grade-point average. Graduate students must maintain a minimum grade-point average of 3.0 in all upper division and graduate course work undertaken in graduate standing in the University of California or its exchange programs. Please note that departments, schools, and groups may have a higher performance standard than the minimum B average required by the Graduate Division. You must also work full time at your academic or professional program unless a program with fewer units is approved by your graduate adviser. In addition, you must successfully complete all course work required by your department, school, or group program, be advanced to candidacy, pass the required examinations, and fulfill other requirements specified for the program.

For a course extending over more than one semester in which evaluation of your performance is deferred until the end of the final semester, provisional grades of in progress (IP) may be assigned in the intervening semesters. The provisional grades are replaced by the final grade if you complete the full sequence. If you do not complete the full sequence, the Berkeley Division of the Academic Senate is authorized to regulate the award of credit.
With the consent of the department involved, graduate students may enroll in courses in the 600-series. These courses are evaluated by means of the grades satisfactory and unsatisfactory (S and U). They prepare you for appropriate master’s or doctoral examinations and do not count toward academic residence or the unit requirements for a higher degree. You may earn 1-8 units of 601 or 602 per semester or 1-4 units per summer session and accumulate a maximum of 16 units in 601 and 602, respectively, toward examination preparation. No credit is allowed for work graded unsatisfactory.

Passed/Not Passed and Satisfactory/Unsatisfactory Grades

If you are an undergraduate in good academic standing (2.0 grade-point average or better, or in good academic standing under the academic probation regulations of your college or school), you may elect to take letter-graded courses on a passed/not passed basis, and if you are a graduate student in good academic standing, you may elect to take letter-graded courses on a satisfactory/unsatisfactory basis with the consent of your department, school, or group. Credit for courses taken on these bases is limited to one-third of the total units that you have taken and passed on the Berkeley campus at the time your degree is awarded. Included in this one-third are any units completed in an Education Abroad program, or on another University of California campus in an intercampus exchange program, or in a joint doctoral program. For graduate degree programs, grades of Satisfactory assigned in courses numbered 299 and in courses of the 300, 400, or 600 series are excluded from this computation. If you enroll in a course offered only on a passed/not passed or satisfactory/unsatisfactory basis, you will be graded P/NP if an undergraduate and S/U if a graduate.

A course that is required in or prerequisite to your major may be taken on a P/NP or S/U basis only upon approval of the faculty of your school or college.

If you are a special or limited-status student, you may take courses on a P/NP basis at the discretion of the dean of your college or school. You may not repeat on a P/NP basis a course that you have previously taken on a letter-graded basis.

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

If you want honors at graduation, you should consult your college, school, or division for additional restrictions.

Your level of performance must correspond to a minimum letter grade of C- if you are to receive a passed grade, and to a B- if you are to receive a satisfactory grade.

These rules may be further limited by the faculties of the various schools and colleges and by the Graduate Council.

Grade I (Incomplete)

The grade I may be assigned if your work in a course has been of passing quality but is incomplete for reasons beyond your control. Prior arrangements must be made with the instructor, because in assigning the I grade the instructor is required to specify the reasons to the department chair.

For graduate students, the I grade will remain on the record until the required work is completed. Graduate students must finish the course requirements as soon as possible. To remove an I grade from your record, you must file the appropriate petition and fees with the Office of the Registrar, 120 Sproul Hall.

Although I grades are not counted in computing the grade-point average, it is important to remove them quickly. In order to hold an academic appointment, graduate students may have no more than two I grades on their academic records. You should seek the advice of the Graduate Division if you have further questions concerning I grades.

For undergraduate students, an I grade received in the fall semester must be replaced by the first day of instruction in the following fall semester.

An I grade received in the spring semester or Summer Session must be replaced by the first day of instruction in the following spring semester.

When you complete the required work or deferred examination, grade points will be assigned if you receive a grade of A, B, C, or D. If you repeat the course, grade points will then be assigned to the earned grade if the dean has given prior written approval to repeat it. If you repeat the course without the approval of the dean, the I grade will be converted to an F and the repeated course will be treated the
same as any other course in which you receive an F. The dean of your college or school may extend the deadline for undergraduate completion of an I grade. For undergraduates, except as noted below, any I grade which has not been replaced within the above deadlines will, at the end of that time, be converted to grade F (or NP if taken passed/not passed). After that time, but not retroactively, the grade is counted in computing your grade-point average.

Exceptions: Within the above deadlines for completing an I grade, undergraduate students may notify the dean that they have not attempted completion and will not complete the work required for removal of the I grade, and may request that the grade not be replaced by an F (or NP). This procedure is limited to a maximum of two courses. Once the decision has been made, it is irrevocable; the course cannot afterward be completed by any means, including repetition of that course or any equivalent course.

If a degree is conferred before the end of the above deadlines following the assignment of an I grade, the grade will not be converted to an F (or NP). However, you still have the option of removing the I grade within the above deadlines.

If you are an undergraduate student with 12 or more units of I on your record, you may not register without the permission of the dean.

All students who receive an I grade must file a Petition for Grade and Grade Points in an Incomplete Course, available on the web at registrar.berkeley.edu and at the Office of the Registrar, 120 Sproul Hall. You should file the petition with the department in which you received the I grade as soon as you and the instructor have established the date you completed the course. The filing fee is $5, payable at the Registrar’s Office. You must make arrangements to complete the course at least 30 days before the deadline. The final grade cannot be recorded until you have filed the petition with the department and paid the fee.

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

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

Changes of Grade
All grades except I and IP (see above) are considered final when assigned by an instructor at the end of a term. An instructor may request a change of grade when a computational or procedural error occurred in the original assignment of a grade, but a grade may not be changed as a result of re-evaluation of your work. No final grade may be revised as a result of re-examination or the submission of additional work after the close of the term.
Grade Appeal Process*
If you have a grievance about grades, you may appeal. You have grounds for appeal if you feel that considerations of race, politics, religion, sex, or sexual harassment affected your grades, or that your work was evaluated by other criteria that do not directly reflect your performance of the course requirements. The following formal procedure may not be activated unless you, the instructor in charge, an ombudsperson (or any mutually accepted third party), and the department chair have failed to resolve the dispute informally. The procedure, once initiated, is to be completed at the unit level within 20 days and at the Senate level within 40 days if both parties are in residence and the University is in regular session. The formal process must be initiated within two semesters of the alleged offense.

Appeal of Grades in Courses and Examinations
Each department or other instructional unit, or group of units teaching similar disciplines, must establish a standing Grievance Committee chair. For each case this chair will appoint an ad hoc Grievance Committee composed of three faculty members, only two of whom may be from the same unit, and two students in good standing appointed by the student association(s) of the unit(s). If no student association exists, the students are to be appointed by the ASUC or the Graduate Assembly. (The student members must have passed courses or an examination in the unit(s) at least at the level of the disputed course or examination and have been in residence for at least one year.) If you are dissatisfied with the outcome of the informal discussion, you may submit the case in writing to the Grievance Committee, which will obtain a written response from the instructor and will provide all parties the opportunity to present additional information orally or in writing. The Grievance Committee’s recommendation to the Committee on Courses, including minority view, if any, must be given in writing.

If the Committee on Courses finds in your favor, it may change a failing grade to a P or S, drop a course retroactively, retain the course but eliminate the grade from the GPA, or adopt the letter grade, if any, that was recommended by four of the five members of the Grievance Committee of the unit(s).

Repetition of Courses
You may repeat only courses in which you received a grade of D+, D-, F, NP, or U. You may repeat an I grade subject to limitations listed below (see Grade I). Courses in which you received a grade of D+, D-, or F and courses that you undertook for a letter grade but for which you received a grade of F may not be repeated on a passed/not passed basis. Repetition of a course more than once requires approval by the dean of the college, school, or division in which you are enrolled at the time you repeat the course. Without this approval, a course repeated more than once will not be included in the grade-point average, but a passing grade in the repeated course will be accepted in satisfaction of unit requirements for the degree. Degree credit for a repeated course will be given only once, but the grade assigned at each enrollment is permanently recorded. If you repeat courses in which you received a grade of D+, D, D-, or F, the units are counted only once and only the most recently earned grades and grade points are used for the first 12 units repeated. In case of further repetitions, the grade-point average is based on all grades assigned and total units attempted. If, however, you receive a grade of I upon repetition of a course, the grade of D+, D, D-, or F will continue to be computed in the grade-point average until the I grade is replaced. If you repeat an I in a letter-grade course, the I will lapse to an F unless you have permission of the dean of your college or school to retain the I grade for a longer period.

Credit by Examination

Undergraduate Students
You may earn credit by examination in two ways:
1. If you are a new or re-entering undergraduate student, on the recommendation of the Board of Admissions you may be allowed credit by examination for knowledge that you acquired since graduation from high school, either by independent study or at another institution, and for which you have not been allowed advanced standing credit. You should apply to the Office of the Registrar for credit.
2. If you are a student in good standing and currently registered in a regular session, you may qualify for course credit by examination. You may apply for credit to the dean of your college or school on the Petition for Credit by Examination, obtainable from the Office of the Registrar. You may apply for credit by examination in any course listed in the current General Catalog that pertains to the regular sessions at Berkeley. However, the subject in which you want to be examined should be one in which, in the opinion of the instructor in charge or the department, knowledge can be tested by examination. You must file a separate petition for each course for a fee of $5 per course. In certain laboratory, field, or practice courses, neither a written nor an oral examination may be a satisfactory test. You may not receive credit by examination (1) if the credit would duplicate credit that you presented for admission to the University, or (2) in elementary courses in your native language if it is not English. The examination must cover the entire course and be administered at one sitting of no longer than three hours. It may be the regularly scheduled final examination for the class, provided that the examination meets the foregoing criteria. The result of the examination may not be reported to the Office of the Registrar.

*Grade grievance procedures are under review and subject to change. For current information, please check with the department with which you would like to appeal your grade.
only as Passed or Satisfactory, according to the regulations governing the assignment of these grades. Further information concerning credit by examination may be obtained from the Office of the Registrar.

**Graduate Students**

If you are a graduate student in residence, you may petition to receive a limited amount of course credit toward your 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. You must be registered for at least 4 units of upper division and/or graduate course work at the time you take the examination and you must be in good academic standing (3.0 grade-point average or better). The final result of the examination will only be reported as satisfactory or unsatisfactory. You may obtain the petition from the Office of the Registrar. Approval to take these examinations must be given by the dean of the Graduate Division and by the course instructor, or, if no instructor is designated, by the department chair.

**Midterm and Final Examinations**

The number of midterm examinations varies at the discretion of the instructor. Deficient grades for undergraduate students whose work at midterm is of D, F, or NP quality are posted on Bearfacts during the ninth week of the semester. Final examinations are required in all undergraduate nonlaboratory courses, with the exception of courses that the *Schedule of Classes* indicates do not require a final examination. This requirement allows you to demonstrate mastery of course material while providing the instructor with written evidence for evaluation. You may be re-examined only to complete an incomplete grade, not to raise any other grades. The examination may last no longer than three hours and must be administered at the time announced in the *Schedule of Classes*. Any deviation from this announced time, including take-home examinations, requires approval from the Committee on Courses. This requirement guarantees you ample prior notice of the examination time and eliminates conflict with other examinations.

Instructors or departments must return your final examinations or copies of them, or retain them for 13 months after the date of the examination. They must give you access to retained examinations under the supervision of the instructor or a designee. You have a right to pay for and keep photocopies of your retained examinations. The department is responsible for ensuring compliance with this regulation for all faculty, including visiting faculty and faculty on leave.

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**Other Academic Policies**

**Grade Reports and Transcripts**

After grades are recorded for a semester, they are available on Bearfacts. Transcripts for registered students may be ordered on the web approximately 30 days after the date of the last final exam. Alumni and students who are not registered may order transcripts at the Office of the Registrar, 120 Sproul Hall. See the Office of the Registrar’s web site at http://registrar.berkeley.edu for further information. At times other than the end of the semester, the normal period required for processing and issuing transcripts for both registered and former students is 7 to 10 working days after receipt of your request. The charge for each transcript of every undergraduate, graduate, or separate Summer Sessions record is $5 per copy. The total amount due must accompany the application. If you urgently need a transcript that would normally take 7 to 10 days to issue, it can be made in 24 hours at a special charge of $12 for each copy. Rush transcripts also can be ordered by fax at (510) 643-7490, using your Visa, Mastercard, or Discover Card.

**Cal Photo ID Cards**

Your Cal photo ID card is your official identification as a student at Berkeley. If you have not already had your photograph taken for the card, you should do so as soon as possible. If you are a newly admitted student, you can have your photograph taken as soon as you receive your Tele-BEARS registration form for the semester. The first card is free; replacement cards are $10 (nonrefundable). For more information, go to the Cal Photo ID Office, 110 César Chavez Student Center, lower Sproul Plaza, or call (510) 643-6839.
Change of Name or Address
Changes to your local or permanent address or telephone number can be entered directly on the Bear Facts system (see page 38). You can also change your address at your department or college/school dean's office. If you have changed your name, go to the Office of the Registrar, 120 Sproul Hall, and complete a Change of Name form.

Graduate Student Appeals
Through the Graduate Appeal Procedure, graduate students have the right to appeal academic or administrative decisions that have resulted in termination of their graduate status or have interfered with their progress toward a degree.

Students should first initiate an appeal at the administrative level at which the disputed action took place. The Graduate Council requires each instructional unit to maintain copies of its current internal appeal procedure for information and use by its graduate students. If the action occurred in the student's department, the department must make all reasonable efforts at informal and formal resolution, as stated in the Graduate Appeal Procedure, before the student may take the matter to the next level, which is the Graduate Division.

Students who are not satisfied with the outcome of attempts to resolve the source of the grievance in their home units may consult with the Ombudsperson ((510) 642-5754). To submit the appeal to the Graduate Division web site at www.grad.berkeley.edu/current/index.shtml.

Probation and Dismissal—Graduate Students
Graduate students are subject to probation and dismissal for academic deficiencies at the discretion of the dean of the Graduate Division under the policies established by the Graduate Council of the Academic Senate. Probation may be initiated by the dean of the Graduate Division or by recommendation of your head graduate adviser. The most common reasons for probation are a low GPA, written work of substandard quality in courses central to your program of study, or failure to make adequate progress toward the degree. You may appeal dismissal from graduate standing. The Graduate Appeal Procedure is available on the Graduate Division web site at www.grad.berkeley.edu/current/index.shtml or from Graduate Degrees, 302 Sproul Hall. The procedure may not be used for complaints regarding actions based solely on faculty evaluation of the academic quality of a student's performance, or decanal evaluations of a student's appropriate academic progress, unless the complaint alleges that the actions may have been influenced by non-academic criteria.

Access to Records
You are entitled by law and University policy to examine and challenge most of the records that the University maintains on you. These records are confidential and in most circumstances may be released to third parties only with your prior consent. Such matters are detailed in the Berkeley Campus Policy Governing Disclosure of Information from Student Records, available in the Office of the Registrar, 120 Sproul Hall.

Classroom Note-Taking and Recording Policy
As part of the education and learning experience, enrolled students routinely take course lecture notes. With the permission of the instructor, students may record lectures as well. Lecture notes and recordings involve issues related to the intellectual property rights of instructors and the University's regulation of commercial activity on campus. To protect these rights, the University has adopted policies governing note-taking in classrooms:

- Unless approved by the chancellor, commercial activity at Berkeley is prohibited.
- Note-taking services for Berkeley courses are provided exclusively by the campus's Black Lightning Lecture Notes (BLLN). No outside entity is authorized to perform this service for UC Berkeley courses.
- Course notes may not be sold or distributed without the express written approval of the instructor.
- The instructor retains the right to approve the designated note taker in advance. The note taker must be a student enrolled in the class, unless otherwise authorized by the instructor.
- The instructor has the right to negotiate the terms and conditions with BLLN, including, but not limited to, royalties.

Students violating these policies can be charged under Section III.B.7 of the Code of Student Conduct. The full text of this policy is available in the Appendix.

CAL Quiz
No. 24
What Berkeley professor traced and described the San Andreas Fault, conducted the research that proved the Golden Gate Bridge could be built, and has a campus tunnel named for him? (Answer on page 497.)
Coming from an extremely conservative community, it took me a while to get used to the fact that at Cal it’s okay to be gay. I summoned up enough courage by the beginning of second semester and encountered nothing but positive reactions from friends. Never underestimate the value of friendships you’ve made, because although it may sound corny, friends will help you get through the hard times.  
2nd-year student

Leaving Berkeley

Cancellation or Withdrawal of Registration
If you do not wish to attend the University for a semester and instruction has not yet begun, you must formally request a cancellation of your registration from the University. If instruction has already begun and you find it necessary to stop attending classes, you must formally request a withdrawal from the University. Whether you cancel or withdraw, any classes in which you are enrolled will be dropped from your schedule, and you will no longer be eligible to attend for that semester or any future semester until you are readmitted.

Cancellation
You can cancel your registration by Tele-BEARS or by notifying the Office of the Registrar in writing before the first day of instruction for the semester. You can also go to your college or school dean’s office (undergraduates); your major department (graduate students); or the Office of the Registrar, Student Services, 120 Sproul Hall, to have your cancellation processed electronically.

Withdrawal
You must notify your adviser at your college or school dean’s office (undergraduates) or your major department (graduate students), who will process your withdrawal electronically; you do not need to file a petition at the Office of the Registrar. If you are withdrawing for medical reasons, you should contact University Health Services at the Tang Center, 2222 Bancroft Way, after notifying your adviser. If you are an international student on an F-1 or J-1 visa, you must see an adviser at Services for International Students and Scholars, International House, 2299 Piedmont Avenue, since your visa status may be jeopardized. If you have a student loan, you are required to have an exit interview at the Loans and Receivables Office, 192 University Hall.

Withdrawal Adjustments
All withdrawal adjustments are applied to students’ CARS accounts and may be applied to any outstanding debts. Late fees are not refundable. Students who withdraw and who are participating in the Deferred Payment Plan are likely to have a remaining financial obligation to the University.

Return of financial aid funds to aid programs complies with the 1998 Reauthorization of the Federal Higher Education Act. The amount of financial aid to be returned is determined by the amount for which the student is not eligible, based upon the number of days in the semester the student was not enrolled, divided by the total number of days in the term. The percentage derived from this is applied to the amount of aid the student was awarded, and the result is returned to aid programs.

Financial aid adjustments are no longer related to registration fee adjustments. Registration fees are adjusted by University policy (see below), and this policy has not changed. UC Berkeley has adopted the federal rules for all other financial aid. Therefore, all aid is subject to the formula above, which requires repayment of the unearned aid based on the percentage of time unattended. If you withdraw, the disparity between registration fee adjustments and aid that must be repaid will result in you having to repay far more than in the past.

If you withdraw before the disbursement of aid, you may still be eligible for a disbursement. The records of all withdrawing financial aid students with undisbursed aid or Pell eligibility will be reviewed, and you will be notified of the option to receive disbursement of this aid, if applicable. If you withdraw, it is imperative that you update your address(es) with the office of the registrar so that you are able to receive this notice.

Important: If you leave but do not formally withdraw, you will be presumed to have left at the midpoint of the semester. Your fees will not be adjusted, but most likely will have to return one-half of any aid received.

For more information, go to www.uga.berkeley.edu/fao/withdrawal.htm or contact the Financial Aid Office, second floor, Sproul Hall, (510) 642-6442 (undergraduates) or (510) 642-0485 (graduate students, Law, and Optometry).

Registration Fee Adjustments
The amount of registration fees that you may be responsible for at the time of your withdrawal or cancellation is prorated according to the effective date of your withdrawal or cancellation, according to the tables below. Note that the health insurance and Class Pass fees are nonrefundable and therefore remain assessed at 100 percent for all withdrawals, regardless of the effective date.

Schedule of Prorated Fees for New Students Who Have Had Federal Financial Aid Applied to Their CARS Accounts and Withdraw During Their First Academic Term

<table>
<thead>
<tr>
<th>Days</th>
<th>Prorated Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-7</td>
<td>0%</td>
</tr>
<tr>
<td>8-14</td>
<td>10%</td>
</tr>
<tr>
<td>15-28</td>
<td>20%</td>
</tr>
<tr>
<td>29-35</td>
<td>30%</td>
</tr>
<tr>
<td>36-49</td>
<td>40%</td>
</tr>
<tr>
<td>50-56</td>
<td>50%</td>
</tr>
<tr>
<td>57-63</td>
<td>60%</td>
</tr>
<tr>
<td>64 or more</td>
<td>100%</td>
</tr>
</tbody>
</table>

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<tbody>
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<td>0%</td>
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<tr>
<td>8-14</td>
<td>10%</td>
</tr>
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<td>15-28</td>
<td>20%</td>
</tr>
<tr>
<td>29-35</td>
<td>30%</td>
</tr>
<tr>
<td>36-49</td>
<td>40%</td>
</tr>
<tr>
<td>50-56</td>
<td>50%</td>
</tr>
<tr>
<td>57-63</td>
<td>60%</td>
</tr>
<tr>
<td>64 or more</td>
<td>100%</td>
</tr>
</tbody>
</table>
Schedule of Prorated Fees for All Continuing and Readmitted Students and New Students Who Have NOT Had Federal Financial Aid Applied to Their CARS Accounts

<table>
<thead>
<tr>
<th>Days</th>
<th>Prorated Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>0%</td>
</tr>
<tr>
<td>2-11</td>
<td>10%</td>
</tr>
<tr>
<td>12-27</td>
<td>50%</td>
</tr>
<tr>
<td>28-53</td>
<td>75%</td>
</tr>
<tr>
<td>54 or more</td>
<td>100%</td>
</tr>
</tbody>
</table>

Returning to Berkeley

Attending Berkeley After Cancellation

New Students: If you cancelled your registration and wish to attend Berkeley in a future semester, you must submit a new application for admission. Your previous admission status will have no bearing on the decision for admission in the future.

Continuing Students: If you cancelled your registration and wish to attend Berkeley in a future semester, you must submit an Application for Readmission (see “Attending Berkeley After Withdrawal,” below).

Attending Berkeley After Withdrawal

If you withdrew from the University and wish to return in a future semester, you must submit an Application for Readmission, available at the Office of Undergraduate Admissions, 110 Sproul Hall (for undergraduates) and at Graduate Degrees, 302 Sproul Hall (for graduate students). The filing dates are April 15 for the fall semester and August 15 for the spring semester. For more information, see page 36 (undergraduates) or page 52 (graduate students).

Note: If you are an undergraduate in the Colleges of Engineering, Environmental Design, or Letters and Science, you may be subject to a “semester out” rule; consult your college dean’s office for more information.

Graduation from Berkeley

Undergraduate Students

Declaration of Candidacy. If you expect to complete work for your degree by the end of a semester, you must declare your candidacy by entering the appropriate code during the first call to the Tele-BEARS registration system. As an alternative, you may declare your candidacy at the beginning of the semester by completing the appropriate petition in the Office of the Registrar, 120 Sproul Hall, or call (510) 643-6173. You have until the end of the fifth week of classes in which to declare.

Nonregistered students. If you are not registered at the time you want to declare candidacy, you may come in person to 120 Sproul Hall to fill out the form “Candidate for Bachelor’s Degree” or call (510) 642-5990 by the end of the fifth week of classes.

Degree check. The Office of the Registrar will check your records to ensure that you have completed the University requirements (American History and Institutions and Subject A, 120 units, and are in good academic standing) and the Berkeley campus American cultures requirement. Your college or school will check for the fulfillment of major, department, and college or school requirements.

Confirmation of Candidacy. Your Confirmed Class Schedule will indicate whether or not you have been advanced to candidacy. If you think there has been an error, go to 120 Sproul Hall.

Certificate of Completion. A Certificate of Completion is official proof that you have been granted the degree for which you were working. Undergraduates may request a certificate from 120 Sproul Hall, and it will be mailed from six to ten weeks after the end of the semester.

Graduate Students

Before a graduate degree can be conferred, candidates must have been advanced to candidacy and complete the master’s thesis or doctoral dissertation and any required comprehensive or oral examinations. For detailed procedures and requirements, see the section “Graduate Education,” beginning on page 49.

Commencement

Commencement exercises to honor students who have earned baccalaureate and graduate degrees and to give recognition and awards to students who are graduating with distinction are held each year in May. Students who have earned their degrees in the previous fall semester or in Summer Sessions are welcome to participate. The ceremonies are held by individual schools or colleges or, in the College of Letters and Science, by individual department. There are about 60 ceremonies each year. The ceremonies consist of speakers and the presentation of degrees and awards and are followed...
by a reception, sometimes a dance, and for at least one department a picnic and volleyball game.

Students may rent caps and gowns through the ASUC and may make arrangements for photographs to be taken or videotapes made. See your department office for additional information.

Diplomas

Diplomas are not given out at Commencement but are available approximately four months afterward. You may pick up your diploma at 120 Sproul Hall or request that it be sent to you for a mailing fee of $8 domestic and $14 international. (These fees are subject to change.) The Office of the Registrar will retain diplomas for five years only.

Student Conduct and Appeals

Student Conduct

When you enroll 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 Life, 102 Sproul Hall. You should pay particular attention to the booklet Berkeley Campus Regulations Implementing University Policies.

Cheating or Plagiarism

Achievement and proficiency in subject matter include your realization that neither is to be achieved by cheating. An instructor has the right to give you an F on a single assignment produced by cheating without determining whether you have a passing knowledge of the relevant factual material. That is an appropriate academic evaluation for a failure to understand or abide by the basic rules of academic study and inquiry. An instructor has the right to assign a final grade of F for the course if you plagiarized a paper for a portion of the course, even if you have successfully and, presumably, honestly passed the remaining portion of the course. It must be understood that any student who knowingly aids in plagiarism or other cheating, e.g., allowing another student to copy a paper or examination question, is as guilty as the cheating student.

Sexual Harassment Policy

The Berkeley campus actively supports the official policy of the University of California on sexual harassment, which states: “The University of California is committed to creating and maintaining a community in which students, faculty, and administrative and academic staff can work together in an atmosphere free of all forms of harassment, exploitation, or intimidation, including sexual. Specifically, every member of the University community should be aware that the University is strongly opposed to sexual harassment and that such behavior is prohibited by law and by University policy. It is the intention of the University to take whatever action may be needed to prevent, correct, and, if necessary, discipline behavior which violates this policy.”

The campus has a special complaint procedure designed to facilitate prompt and confidential resolution of sexual harassment complaints. If you believe that you have been a victim of sexual harassment, have questions about the definition of sexual harassment or about the special complaint procedure, or have questions about the interrelationship between the special complaint procedure and other campus procedures, you may address your inquiries to the Title IX Compliance Officer, (510) 643-7985. Copies of the procedure are available in 200 California Hall.

Sexual Harassment/Assault Advocacy and Education Program

The Sexual Harassment/Assault Advocacy and Education Program, coordinated by the campus Gender and Equity Resource Center, provides educational workshops for student groups and confidential advocacy and support for individuals who may have experienced harassment or an assault. Short-term crisis intervention counseling is also available. For further information, call (510) 642-4786. University Health Services also offers sexual assault prevention workshops ((510) 642-7202), immediate response to sexual assault ((510) 642-6074), and services for recent survivors and those working to recover from a past assault.

Student Grievance Procedure

The Berkeley campus Student Grievance Procedure (Appendix II to the Berkeley Campus Regulations Implementing University Policies) gives you an opportunity to resolve complaints alleging discrimination based on race, color, national origin, sex, handicap, age, and sexual orientation. You may also use the procedure to resolve any complaints you may have alleging that any other rules or policies of the Berkeley campus were inappropriately applied and resulted in an injury to you. The procedure is not applicable to certain kinds of complaints for which other appropriate appeals procedures exist, such as a grade appeal based on the application of nonacademic criteria. (See “Appeal of Grades in Courses and Examinations” on page 81 for a description of the grade appeal process.) The procedure contains important time limitations and provisions about the interrelationship between this procedure and other campus complaint procedures. Copies of the procedure are available in 102 Sproul Hall.

Graduate students should consult the Graduate Division for information about grievance procedures.
For 75 years, students have basked in the “tranquility of a beautiful haven” (as one alumnus put it) that is the Morrison Library, an exquisite room for recreational reading in the main library. Monthly throughout the academic year, the room is host to Lunch Poems, noontime poetry-readings under the direction of English professor Robert Hass, former U.S. poet laureate. Poets Gary Snyder, the late June Jordan, and Robert Pinsky are among the many who have made the series a favorite.
Colleges, Schools, and Interdisciplinary Programs

88

The Walter A. Haas School of Business

Walter A. Haas School of Business

Office: S545 Student Services Building #1900
http://haas.berkeley.edu/index_net.htm
Dean:
Tom Campbell, Ph.D.

Associate Deans:
Tülin Erdem, Ph.D. (Academic Affairs)
Andrew W. Shogan, Ph.D. (Instruction)
Jay S. Stowsky, Ph.D. (School Affairs and Initiatives)

Directors:
Jennifer Chatman, Ph.D. (Ph.D. Program)
Jane Thompson, M.S., M.A. (Evening & Weekend Program)
David H. Downes, Ph.D. (M.B.A. Program)
Dan Himelstein, M.Sc. (Undergraduate Program)
Robert Glessen, M.A., M.B.A. (Berkeley-Columbia Executive M.B.A. Program)
John O’Brien, M.S. (Master’s in Financial Engineering Program)

For full coverage of the school’s degree programs, curricula, and requirements, see page 143.

College of Chemistry

Office of the Dean: 420 Latimer Hall #1460
http://chemistry.berkeley.edu

Undergraduate Majors Office: 420 Latimer Hall #1460, (510) 642-3452. Graduate information: contact individual departments
Dean:
Clayton H. Heathcock, Ph.D.

Associate Dean (Undergraduate Affairs):
Herbert L. Strauss., Ph.D.

Assistant Dean (Services):
K. Peter C. Vollhardt, Ph.D.

Assistant Dean (College Relations):
Jane L. Scheiber, A.B.

Organizational Units
Chemical Engineering
Department Office: 201 Gilman Hall #1462, (510) 642-2291
Chair: Arup K. Chakraborty, Ph.D.

Chemistry
Department Office: 419 Latimer Hall #1460, (510) 642-5882
Chair: Charles Harris, Ph.D.

For full coverage of the college’s degree programs, curricula, and requirements, see page 161 and the individual departments.

Graduate School of Education

Office: 1501 Tolman Hall, (510) 642-3726
E-mail: gse_info@uclink.berkeley.edu
http://gse.berkeley.edu

Dean:
P. David Pearson, Ph.D.

For full coverage of the school’s programs, curricula, and requirements, see page 209.

College of Engineering

Office of the Dean: 320 McLaughlin Hall, (510) 642-7594
Dean:
A. Richard Newton, Ph.D.

Associate Deans:
David M. Auslander, Ph.D. (Research and Student Affairs)
James Casey, Ph.D. (Interdisciplinary Studies)
Keith C. Crandall, Ph.D. (Capital Projects)
Stanley G. Prussin, Ph.D. (Special Programs)
Paul K. Wright, Ph.D. (Distance Learning and Instructional Technology)
Organizational Units

Bioengineering
Department Office: 459 Evans Hall #1762, (510) 642-5825
Chair: Thomas F. Budinger, M.D., Ph.D.

Civil and Environmental Engineering
Department Office: 760 Davis Hall #1710, (510) 642-3261
Chair: Adib Kanafani, Ph.D.

Electrical Engineering and Computer Sciences
Department Office: 231 Cory Hall #1770, (510) 642-3214
Chair: S. Shankar Sastry, Ph.D. (Acting)
Associate Chair, Electrical Engineering: Jan M. Rabaey, Ph.D.

Computer Science Division
Division Office: 389 Soda Hall #1776, (510) 642-1024
Associate Chair: Christos Papadimitriou, Ph.D.

Industrial Engineering and Operations Research
Department Office: 4135 Etcheverry Hall #1777, (510) 642-5484
Chair: Candace A. Yano, Ph.D.

Materials Science and Engineering
Department Office: 577 Evans Hall #1760, (510) 642-3801
Chair: Thomas M. Devine, Jr., Ph.D.

Mechanical Engineering
Department Office: 6195 Etcheverry Hall #1740, (510) 642-1338
Chair: J. Karl Hedrick, Ph.D.

Nuclear Engineering
Department Office: 4153 Etcheverry Hall #1730, (510) 642-5010
Chair: Per F. Peterson, Ph.D.

Interdisciplinary Studies
Program Office: 230 Bechtel Engineering Center #1708, (510) 642-8790
Associate Dean: James Casey, Ph.D.
For full coverage of the college's degree programs, curricula, and requirements, see page 232.

College of Environmental Design

Undergraduate Office: 232 Wurster Hall, (510) 642-0832
Dean: Harrison Fraker, Jr., M.F.A., F.A.I.A.
Assistant Dean—Undergraduate Administration: W. Mike Martin, Ph.D.

School of Information Management and Systems

Office: 102 South Hall, (510) 642-1464
http://www.sims.berkeley.edu
Dean: Hal R. Varian, Ph.D.
For full coverage of the school's degree programs, curricula, and requirements, see page 286.

Graduate School of Journalism

Office: 121 North Gate Hall, (510) 642-3383
http://www.journalism.berkeley.edu
applysoj@uclink.berkeley.edu
Dean: Orville Schell, M.A.
For information about the school's degree program, course offerings, and requirements, see page 303, or visit the school's web site.

School of Law, Boalt Hall

Admissions Office: 5 Boalt Hall, (510) 642-2274
http://www.law.berkeley.edu
Dean: Robert Berring, Jr., M.L.S., J.D. (Interim)
Associate Deans:
David Lieberman, Ph.D.
Jan Vetter, LL.B.
Assistant Deans:
Louise A. Epstein, M.A.
Victoria Ortiz, J.D.
Vice Chair, Jurisprudence and Social Policy: Charles J. McClain, Jr., Ph.D., J.D.
For full coverage of the school's degree programs, curricula, and requirements, see page 311.
College of Letters and Science
Office: 113 Campbell Hall, (510) 642-1483
http://ls.berkeley.edu/
Executive Dean, Letters and Science:
Ralph J. Hexter, Ph.D. (Humanities)
Divisional Deans:
W. Geoffrey Owen, Ph.D. (Biological Sciences)
Ralph J. Hexter, Ph.D. (Humanities)
Mark A. Richards, Ph.D. (Physical Sciences)
George W. Breslauer, Ph.D. (Social Sciences)
Kwong-loi Shun, Ph.D. (Undergraduate Division)
Associate Deans of the Undergraduate Division:
Steven Botterill, Ph.D.
Richard A. Rhodes, Ph.D.
Assistant Deans:
Kam-Biu Luk, Ph.D.
Hertha D. Wong, Ph.D.
Organizational Units
African American Studies
American Studies
American History and Mediterranean Archaeology
Anthropology
Art
Practice of Art
History of Art
Asian American Studies
Astronomy
Biostatistics
Buddhist Studies
Celtic Studies
Chemistry
Chicano Studies
Classics
Cognitive Science
College Writing Programs
Comparative Literature
Computer Science
Demography
Development Studies
Dutch Studies
Earth and Planetary Science
East Asian Languages and Cultures
East European Studies
Economics
Law and Economics
English
Environmental Sciences
Ethnic Studies
Ethnic Studies Graduate Group
Film
Folklore
French
Geography
German
History
Integrative Biology
Interdisciplinary Studies
Italian Studies
Latin American Studies
Legal Studies
Linguistics
Logic and the Methodology of Science
Mass Communications
Mathematics
Medieval Studies
Middle Eastern Studies
Molecular and Cell Biology
Music
Native American Studies
Near Eastern Studies
Peace and Conflict Studies
Philosophy
Physical Science
Physics
Political Economy of Industrial Societies
Political Science
Psychology
Religious Studies
Rhetoric
Scandinavian
Science and Mathematics Education
Slavic Languages and Literatures
Social Welfare
Sociology
South and Southeast Asian Studies
Spanish and Portuguese
Statistics
Theater, Dance, and Performance Studies
Undergraduate and Interdisciplinary Studies
Women’s Studies
For full coverage of the college’s degree programs, curricula, and requirements, see page 321.

College of Natural Resources
Office of Instruction and Student Affairs:
245 Mulford Hall, (510) 642-0542
Office of the Dean: 101 Giannini Hall, (510) 642-7171
www.cnr.berkeley.edu
Dean:
Paul Ludden, Ph.D.
Executive Associate Dean:
Barbara Allen-Diaz, Ph.D.
Associate Dean—Instruction and Student Affairs:
Lynn Huntsinger, Ph.D.
Associate Dean—Academic Affairs: Lewis Feldman, Ph.D.
Associate Dean—Forestry and Capital Projects: Richard Standiford, Ph.D.

Organizational Units
Agricultural and Resource Economics
Department Office: 207 Giannini Hall, (510) 642-3345
Chair: Anthony C. Fisher, Ph.D.

Environmental Science, Policy, and Management
Department Office: 145 Giannini Hall, (510) 643-8074
Chair: Steve Beissinger, Ph.D.

Environmental Sciences
Department Office: 260A Mulford Hall, (510) 643-4647
Co-Director: J. Keith Gilless, Ph.D.

Nutritional Sciences and Toxicology
Department Office: 119 Morgan Hall, (510) 642-6490
Chair: Leonard Bjeldanes, Ph.D.

Plant and Microbial Biology
Department Office: 111 Koshland Hall, (510) 642-5167
Chair: Andrew Jackson, Ph.D.

Graduate Programs
Agricultural and Environmental Chemistry
Office: 111E Koshland Hall, (510) 642-5167
Head Adviser: Benito O. de Lumen, Ph.D.

Agricultural and Resource Economics
Office: 203 Giannini Hall, (510) 642-3347
Head Adviser: Jeffrey LaFrance, Ph.D.

Comparative Biochemistry
Office: 117 Morgan Hall, (510) 643-2863
Head Adviser: Jack Kirsch, Ph.D.

Environmental Science, Policy, and Management
Office: 133 Mulford Hall, (510) 642-6410
Head Adviser: Nick Mills, Ph.D.

Forestry (M.F.)
Office: 133 Mulford Hall, (510) 642-6410
Head Adviser: Kevin O’Hara, Ph.D.

Microbiology
Office: 111E Koshland Hall, (510) 642-5167
Chair: Tom Bruns, Ph.D.

Molecular and Biochemical Nutrition
Office: 117 Morgan Hall, (510) 643-2863
Head Adviser: Joseph Napoli, Ph.D.

Molecular Toxicology
Office: 117 Morgan Hall, (510) 643-2863
Head Adviser: Leonard Bjeldanes, Ph.D.

Plant Biology
Office: 111E Koshland Hall, (510) 642-5167
Head Adviser: Tom Bruns, Ph.D.

Range Management (M.S.)
Office: 133 Mulford Hall, (510) 642-6410
Head Adviser: Barbara Allen-Diaz, Ph.D.

Wood Science and Technology
Office: Building 478, Richmond Field Station, (510) 231-9452
Head Adviser: Frank Beall, Ph.D.

For full coverage of the college’s degree programs, curricula, and requirements, see page 366.

School of Optometry
Office of the Dean: 351 Minor Hall, (510) 642-3414
Office of Admissions: 390 Minor Hall, (510) 642-9537
http://spectacle.berkeley.edu
Dean: Dennis M. Levi, O.D., Ph.D.
Associate Dean for Clinical Sciences: Gunilla Haegerstrom-Portnoy, O.D., Ph.D.
Associate Dean for Basic Sciences: Suzanne M.J. Fleiszig, O.D., Ph.D., F.A.A.O.
Associate Dean for Patient Care/Academic Clinic Coordinator: Edward J. Revelli, O.D.
Associate Dean for Student Affairs: Michael G. Harris, O.D., J.D., M.S.
Special Assistant to the Dean for Professional Affairs: Weylin G. Eng, O.D.
Director of Residency Programs: Christina A. Wilmer, O.D., F.A.A.O.
Residency Supervisor: Mika Moy, O.D., F.A.A.O.
Chair Group in Vision Science: Stanley A. Klein, Ph.D.
Director of Continuing Education: Anthony J. Adams, O.D., Ph.D., F.A.A.O.

For full coverage of the school’s degree programs, curricula, and requirements, see page 380.

“Doctors of optometry are independent primary health care providers who specialize in the examination, diagnosis, treatment and management of diseases and disorders of the visual system, the eye and associated structures as well as the diagnosis of related systemic conditions.”
The official definition of an optometrist, adopted by the American Optometric Association Board of Trustees
School of Public Health

Office of the Dean and
Student Services and Admissions:
19 Earl Warren Hall, (510) 642-6531
http://sph.berkeley.edu

Dean:
Stephen Shortell, Ph.D.

Associate Deans:
Z. I. Sabry, Ph.D.
Denise Herd, Ph.D.
Teh-wei Hu, Ph.D.

For full coverage of the school’s degree programs, curricula, and requirements, see page 412.

Richard & Rhoda Goldman School of Public Policy

Office: 2607 Hearst Avenue, (510) 642-4670
http://gspp.berkeley.edu

Dean:
Michael Nacht, Ph.D.

Assistant Dean:
Michael R. Treviño, M.Ed., J.D.

For full coverage of the school’s degree programs, curricula, and requirements, see page 423.

School of Social Welfare

Office: 120 Haviland Hall, (510) 642-4341
http://socialwelfare.berkeley.edu

Dean:
James Midgley, Ph.D.

Associate Dean:
Lorraine Midanik, Ph.D.

Coordinator of Academic Programs:
Paul Terrell, D.S.W.

Director of Field Work:
Bart Grossman, Ph.D.

Assistant Dean for Administration:
James C. Steele

For full coverage of the school’s degree programs, curricula, and requirements, see page 442.

Interdisciplinary Programs

Interdisciplinary Education

In some sense, all knowledge is interdisciplinary. Ideas, approaches, and problems do not cluster themselves “naturally” into disciplines. The organization of knowledge into specialized academic departments is a result of the complicated historical development of the modern university. Therefore, students will find that topics and methodologies are often shared by many disciplines and departments.

When we refer to interdisciplinary education we generally mean one of four approaches:

1. the attempt to unify and synthesize ideas, as in a course on Topics in Western Civilization;
2. the attempt to broaden traditional disciplines, as in the development of subfields such as political economy or social psychology;
3. the study of new fields that are emerging outside departmental boundaries, such as cognitive science, bioengineering, and mass communications;
4. the attempt to solve problems or address specific issues by bringing together work from a number of disciplines and fields.

Students at Berkeley can pursue an interdisciplinary education formally by deciding to major in one of the interdisciplinary group or field majors, or informally by including special interdisciplinary courses in their curriculum or clustering their elective courses with an interdisciplinary focus.

Interdisciplinary Degrees

Many colleges and schools have their own interdisciplinary degree programs at both the undergraduate and graduate levels. (See Interdisciplinary Graduate Groups in the index.) Some offer, or collaborate in offering, special interdisciplinary courses.

Undergraduate and Interdisciplinary Studies (UGIS) administers some of the largest interdisciplinary programs serving undergraduates in the College of Letters and Science. All of its major programs cut across departmental boundaries; many cut across college boundaries as well. The field major in interdisciplinary studies allows students to develop their own...
areas of specialization under faculty supervision. UGIS also offers undergraduate majors in American studies, cognitive science, environmental sciences, mass communications, and religious studies. Interdisciplinary minor programs are available in creative writing, lesbian, gay, bisexual, and transgender studies (LGBT), and religious studies.

UGIS also sponsors interdisciplinary courses of general interest, such as the courses on Western civilization and ethics. The College Courses, sponsored by the College of Letters and Science, also give undergraduates an interdisciplinary view of a topic, time, or place. Students should consult Undergraduate and Interdisciplinary Studies (301 Campbell Hall, (510) 642-0108) for more information on these programs. See also the interdisciplinary majors and minors listed under International and Area Studies, and the listings for individual colleges.

**Electives with an Interdisciplinary Focus**

Students may organize their interests in interdisciplinary clusters by choosing elective courses from a number of departments in Letters and Science and professional schools and colleges. For example, a student interested in literature will find courses in all the foreign language departments, in Ethnic Studies, in Rhetoric, in history courses, in social theory courses, etc., as well as in the Departments of English and Comparative Literature. Economic issues are addressed in courses offered by many Letters and Science departments including Political Science, Sociology, African American Studies, History, Geography, etc., and in courses offered by professional schools and colleges (Business, Public Policy, City Planning, Natural Resources) as well as in the Department of Economics. Students interested in religion will find courses in South and Southeast Asian Studies, History, Middle Eastern Studies, etc., as well as in Religious Studies. In addition, a number of departments offer cross-listed courses which use interdisciplinary methods. These are listed in departmental offerings. (You may consult your college adviser for help in planning your course of study to include an interdisciplinary focus.)

### Environmental Studies at Berkeley

Environmental studies at Berkeley include courses, curricula, research, and public service that cover aspects of sciences and arts, engineering and management, law and policy, and planning and design. Several degree-granting programs specifically emphasize aspects of the environment, and hundreds of courses in other departments apply the principles of those disciplines to issues in the environment. By judiciously selecting courses, students can develop curricula that bridge the boundaries among departments and take advantage of the diverse resources from several programs.

The chart on pages 94-95 identifies the principal degree-granting environmental curricula described in more detail under corresponding headings in this catalog. Further detail is available in the announcements of individual colleges and schools.

### International and Area Studies

Berkeley’s international teaching programs and centers for research and outreach are part of our rich multicultural environment. International issues are the focus of six undergraduate and three graduate interdisciplinary majors offered by the International and Area Studies Teaching Programs. Through the undergraduate group majors in Asian studies, development studies, Latin American studies, Middle Eastern studies, peace and conflict studies, and political economy of industrial societies, you can focus your education on a variety of geographical or issue-oriented areas and topics. You can also enjoy the advantages of close relationships with many of the centers of research affiliated with International and Area Studies. These centers sponsor concerts, lectures, special events, conferences, and seminars and assist the teaching programs in bringing internationally renowned scholars and faculty to teach courses in the IAS Teaching Programs as well as departments in the humanities, sciences, and social sciences. In addition, the teaching programs collaborate with the various centers in promoting student internships and research opportunities. For more information about International and Area Studies at Berkeley, contact the IAS Teaching Programs Office, 101 Stephens Hall, (510) 642-4466, iasp@uclink.berkeley.edu, www.ias.berkeley.edu, or one of the research centers listed to the right.
Environmental Studies at Berkeley

The majors in the chart below are suggested for students interested in environmental programs and course work. This list includes basic, applied, planning, design, policy, and integrated environmental science areas at Berkeley. Students with interests in these areas should contact individual departments to determine which programs would best meet their needs.

<table>
<thead>
<tr>
<th>Major</th>
<th>Department</th>
<th>College/School</th>
<th>Undergraduate</th>
<th>Graduate</th>
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<td><strong>Interdepartmental Graduate Groups</strong></td>
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<td>Interdepartmental Graduate Groups</td>
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<tr>
<td><strong>College of Chemistry</strong></td>
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<td>Civ. &amp; Env. Engineering: Environmental Engineering Program</td>
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<tr>
<td>Civ. &amp; Env. Engineering: GeoEngineering Program</td>
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<td>Political Economy of Industrial Societies</td>
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### Environmental Studies at Berkeley (continued from previous page)

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<th>Major</th>
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<td>Environmental Science</td>
<td>College of Natural Resources</td>
<td>College of Natural Resources</td>
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<td>Environmental Science, Policy, &amp; Management</td>
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<td>Microbial Biology</td>
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<td>Nutrition</td>
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<td>Physiology &amp; Metabolism</td>
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<td>Range Science</td>
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<td>Resource Management</td>
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<td>Toxicology</td>
<td>Nutritional Sciences and Toxicology</td>
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</table>

### School of Public Health

<table>
<thead>
<tr>
<th>Major</th>
<th>Department</th>
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<th>Undergraduate</th>
<th>Graduate</th>
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<tr>
<td>Biostatistics</td>
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<td>Environmental Health Sciences</td>
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<tr>
<td>Epidemiology</td>
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<td>School of Public Health</td>
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</table>
Library is home to 10 centuries of music

The Jean Gray Hargrove Music Library is the place to be for students who take music courses, perform for fun, or want to hear something new. Students examine a 15th-century volume of Gregorian chant, part of a large collection of rare materials that enriches teaching, study, and performance. The library will be housed in its own new building, with expanded and updated facilities, beginning in early 2004.
Key to Symbols

The following symbols are used in the departmental faculty lists in the “Courses and Curricula” section that follows:

* Professor of the Graduate School: An honorific title to recognize emeritus faculty who continue to be active in the graduate teaching and research programs of the department

† Recipient of Distinguished Teaching Award

“Above the Line” and “Below the Line”

The faculty lists of many departments are divided by a short line that separates full members of a department from members affiliated with the department by a “courtesy appointment.” Faculty members whose names appear above the line are full members of the department. Faculty members whose names appear below the line are affiliated with the department but are not members of it.

Organization of “Courses and Curricula” Section

In the following section of the catalog, the colleges and professional schools, departments, interdepartmental groups, special studies, special projects, and other nondepartmental units are listed alphabetically. Introductions to the colleges and schools discuss the scope and educational goals of each and list the departments and organizational units within them. Interdepartmental Studies courses are reproduced together under that heading as well as in each sponsoring department. Cross-listed courses (identified with the prefix C) are also listed in each sponsoring department.

Course Listings

Note: Not all of the courses listed in the following section are offered every year. For current information, see the Schedule of Classes or consult with departmental advisers.

You should carefully note prerequisites for courses, although they are sometimes waived at the discretion of the instructor.

Courses with double numbers (for example, English 1A-1B) are two-semester sequences that usually begin in the fall semester. Except as noted, each course in a sequence is normally prerequisite to the one following, and you may normally receive credit for completing the first half of a sequence.

The number in parentheses following the course title indicates the credit value; the abbreviation in parentheses indicates the semester in which the course is offered: (F) fall, (SP) spring. Since this is a two-year catalog and course offerings are not yet known for the 2004-05 academic year, these notations apply to 2003-04 only. Summer Sessions courses are listed separately in the Summer Sessions Catalog except for a few courses that are part of a department’s degree requirements.

Prefixes to Course Numbers

• Course numbers preceded by the letter C indicate that the course is cross-listed with a course in another department—i.e., Italian Studies C103 (a hypothetical example) is identical to a course offered in the Department of French as French C112. The course with which a “C” course is cross-listed is identified at the end of the course description.

• Course numbers preceded by the letter E indicate that the courses are offered in the evening M.B.A. program.

• Course numbers preceded by the letter H are special honors courses that may be subject to restrictions imposed by the department.

• Course numbers preceded by the letter N are not identical summer versions of a regular term course.

• Course numbers preceded by the letter R satisfy the Reading and Composition requirement.

Suffixes to Course Numbers

• Course numbers followed by AC satisfy the American Cultures requirement.

Course numbers are assigned as follows:

1-99

Lower division courses, including courses designated by a letter. Open to freshmen and sophomores; not acceptable for upper division credit.
100-196
Upper division courses. You must ordinarily have completed at least one lower division course in the given subject or two years of college work.

98, 99, 197, 198, 199
Special Studies courses. (See limitations listed below.) Effective fall 1983, you may use no more than 16 semester units of courses numbered 98, 99, 197, 198, and 199 to meet requirements for the bachelor’s degree. Exceptions to this rule may be granted by the dean of your college or school.

197
Field study (upper division). Courses with this number are restricted to passed/not passed grading. To take them you must have completed 60 units of undergraduate study and be in good academic standing (2.00 grade-point average or better). Exceptions to these rules may be granted by the dean of your college or school.

98, 99, 198, 199
These courses allow you to pursue study of special topics, in groups or individually, under the direction of a faculty member. You may aggregate no more than 4 units of credit for independent studies or group studies in a single semester.

98
Directed group study by lower division students. Each section of a 98 course must receive approval by the chair of the department, based upon a written proposal by the instructor who is to supervise the course. Only a grade of passed/not passed is to be assigned. The dean of your college or school, on advice of the instructor, may authorize exceptions to the grading limitation.

99
Supervised independent study by academically superior, lower division students. You must have a 3.3 GPA and prior consent of the instructor who is to supervise the study, and you must submit a written proposal to the chair of the department for approval. Only a grade of passed/not passed is to be assigned. The dean of your college or school, on advice of the instructor, may authorize exceptions to the grading limitation.

198
Directed group study (upper division). Each section of a 198 course must receive approval by the chair of the department, based upon a written proposal by the instructor who is to supervise the course. To enroll in 198 courses, you must have completed at least 60 units of undergraduate study and be in good academic standing (2.00 grade-point average or better). Only a grade of passed/not passed will be assigned. The dean of your college or school may, on the advice of the instructor and department concerned, authorize exceptions to the above limitations.

199 Supervised independent study (upper division). You must have prior approval of your major adviser, the instructor who is to supervise the study, and the chair of the department. Approval must be based on a written proposal that you submit to the chair. The instructor must indicate consent in writing. To enroll in 199 courses, you must have completed at least 60 units of undergraduate study and must be in good academic standing (2.00 grade-point average or better). Only a grade of passed/not passed will be assigned. The dean of your college or school, on the advice of the instructor, may authorize exceptions to the above limitations.

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

300-399
Professional courses for teachers or prospective teachers.

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

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

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

Experimental Courses
The University offers a number of experimental courses. Information about these courses is contained under (1) Self-Paced Courses, discussed in the Appendix; and (2) some of the Interdepartmental Studies courses, listed in the Interdepartmental Studies section of this catalog as well as in each sponsoring department.

Use of Animals in the Instructional Program
Certain courses offered at the University of California, Berkeley require the use of animals, living or preserved, vertebrate or invertebrate, and/or their preserved and/or extracted parts, in the course of instruction. Such animal use is determined judiciously by the instructors of the courses to be necessary and appropriate to the intellectual and technical education of students. All use of animals in teaching and research is approved by the campus Animal Care and Use Committee. It is the responsibility of students to ascertain course requirements before enrollment, and the responsibility of instructors to provide that information clearly and unequivocally. Should the students find enrollment in such courses not appropriate to their interests or beliefs, they should see their advisers to recommend alternative courses, or, if appropriate, alternative majors.
Courses and Curricula

Their Own Words

First-hand accounts animate history of the West

The Regional Oral History Office in Berkeley’s Bancroft Library chronicles the history of the West — particularly California — in the words of those who lived it. Student David Washburn interviews local resident Mary Lou Cordova for his senior thesis on how World War II changed the lives of local Mexican Americans. Dozens of topics — from UC history to California’s wine, mining, and biotechnology industries — have been documented, all available to students and scholars.