Greetings to students, members, and friends of our campus community!

The General Catalog is the foremost guide to the Berkeley academic experience—a hefty volume that testifies to the breadth, depth, and astounding variety of the programs and courses available to our students. The remarkable quantity of these academic opportunities is underpinned by remarkable quality, making Berkeley a nexus of international leadership in every discipline.

Simply put, Berkeley is the best public teaching and research university in the nation. Our students are at the center of an unsurpassed educational experience, learning with the world’s top scholars and with their peers, a student body with a phenomenal range of backgrounds, perspectives, and talents.

This catalog is one of my favorite books—I use it myself to learn more about all that our campus offers, and I have watched students use it to explore new areas of study, discover the connections between fields, and, ultimately, open doors to wherever they want to go academically. The photos throughout the catalog give you a snapshot of some of the amazing faculty members, opportunities, and resources available to Berkeley students, every day and in every discipline.

To our students, relish the hours you spend in Berkeley’s classrooms, labs, and libraries. Make time to explore Berkeley’s richness, in all its many forms.

If you see me on campus, do stop to say hello—I will be eager to know how you are doing and where this catalog has led you at Berkeley.

Yours sincerely,

Robert J. Birgeneau
Chancellor
## General Information

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## Courses and Curricula

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General Catalog, University of California, Berkeley, 2011-13.

All qualified students are welcome. For the University’s Nondiscrimination Statement, see page 536.

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; call (800) 766-1546; or visit calstudentstore.com. The catalog is also online at catalog.berkeley.edu.

UC Berkeley home page: berkeley.edu; UC Berkeley NewsCenter: newscenter.berkeley.edu
# Academic Calendar 2011-12

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<th>Event</th>
<th>Start Date</th>
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<tr>
<td>Tele-BEARS Begins</td>
<td>February 1</td>
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<td>Tuesday</td>
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<tr>
<td>First Six-Week Session</td>
<td>May 23-July 1</td>
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<td>Monday-Friday</td>
</tr>
<tr>
<td>Memorial Day Holiday</td>
<td>May 30</td>
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<td>Monday</td>
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<tr>
<td>Ten-Week Session</td>
<td>June 6-August 12</td>
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<td>Monday-Friday</td>
</tr>
<tr>
<td>Eight-Week Session</td>
<td>June 20-August 12</td>
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<td>Monday-Friday</td>
</tr>
<tr>
<td>Independence Day Holiday</td>
<td>July 4</td>
<td></td>
<td>Monday</td>
</tr>
<tr>
<td>Second Six-Week Session</td>
<td>July 5-August 12</td>
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<td>Tuesday-Friday</td>
</tr>
<tr>
<td>Three-Week Session</td>
<td>July 25-August 12</td>
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<td>Monday-Friday</td>
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## Fall Semester 2011

<table>
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<tr>
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<th>End Date</th>
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<tr>
<td>Tele-BEARS Begins</td>
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<td>Monday</td>
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<td>Fee Payment Due</td>
<td>August 15</td>
<td></td>
<td>Monday</td>
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<tr>
<td>Fall Semester Begins</td>
<td>August 18</td>
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<td>Thursday</td>
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<tr>
<td>Labor Day Holiday</td>
<td>September 5</td>
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<td>Monday</td>
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<tr>
<td>Homecoming</td>
<td>October 14-16</td>
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<td>Friday-Sunday</td>
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<tr>
<td>Veterans Day Holiday</td>
<td>November 11</td>
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<td>Thanksgiving Holiday</td>
<td>November 24-25</td>
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<td>Thursday-Sunday</td>
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<td>January 16</td>
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<td>Monday</td>
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<td>Instruction Begins</td>
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<td></td>
<td>Tuesday</td>
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<td>Presidents’ Day Holiday</td>
<td>February 20</td>
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# Academic Calendar 2012-13

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<td>September 3</td>
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<td>November 12</td>
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<tr>
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<td>November 22-23</td>
<td>Thursday-Friday</td>
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<tr>
<td>Martin Luther King Jr. Holiday</td>
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<td>Monday</td>
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<tr>
<td>Instruction Begins</td>
<td>January 22</td>
<td>Tuesday</td>
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<tr>
<td>Presidents’ Day Holiday</td>
<td>February 18</td>
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<td>March 29</td>
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<td>May 3</td>
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<tr>
<td>Reading, Review, Recitation Week</td>
<td>May 6-10</td>
<td>Monday-Friday</td>
</tr>
<tr>
<td>Instruction Ends</td>
<td>May 10</td>
<td>Friday</td>
</tr>
<tr>
<td>Final Examinations</td>
<td>May 13-17</td>
<td>Monday-Friday</td>
</tr>
<tr>
<td>Spring Semester Ends</td>
<td>May 17</td>
<td>Friday</td>
</tr>
</tbody>
</table>

**Summer Sessions 2013**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tele-BEARS Begins</td>
<td>February 4</td>
<td>Monday</td>
</tr>
<tr>
<td>Memorial Day Holiday</td>
<td>May 27</td>
<td>Monday</td>
</tr>
<tr>
<td>First Six-Week Session</td>
<td>May 28-July 3</td>
<td>Tuesday-Wednesday</td>
</tr>
<tr>
<td>Ten-Week Session</td>
<td>June 10-August 16</td>
<td>Monday-Friday</td>
</tr>
<tr>
<td>Eight-Week Session</td>
<td>June 24-August 16</td>
<td>Monday-Friday</td>
</tr>
<tr>
<td>Independence Day Holiday</td>
<td>July 4</td>
<td>Thursday</td>
</tr>
<tr>
<td>Second Six-Week Session</td>
<td>July 8-August 16</td>
<td>Monday-Friday</td>
</tr>
<tr>
<td>Three-Week Session</td>
<td>July 29-August 16</td>
<td>Monday-Friday</td>
</tr>
</tbody>
</table>

*Note: The above dates may change. See opa.berkeley.edu/academiccalendar/calendar.aspx for up-to-date calendar information.*
INFORMATION GUIDE

Helpful Resources
General Catalog
catalog.berkeley.edu
by mail or in person:
Cal Student Store
University of California, Berkeley
108 MLK Jr. Student Union
Berkeley, CA 94720-4504
Attn: Mail Order Dept.
by telephone:
(800) 766-1546
by visiting:
calstudentstore.com
Schedule of Classes
schedule.berkeley.edu
Resource:
A reference guide for new Berkeley students
resource.berkeley.edu
College and School
Announcements
(available at some colleges and schools)
University of California, Berkeley Policies Applying to Campus Activities, Organizations, and Students
students.berkeley.edu/uga/regs.stm
University of California, Berkeley
Berkeley, CA 94720
General information:
(510) 642-6000
TTY: (510) 642-9900
berkeley.edu
Admissions, Graduate
318 Sproul Hall
(510) 642-7405
TTY: (510) 642-7405
grad.berkeley.edu/admissions
Admissions, Undergraduate
110 Sproul Hall
(510) 642-3175
TTY: (510) 642-8396
admissions.berkeley.edu
Advising, Career
2111 Bancroft Way
(510) 642-1716
TTY: (510) 642-0592
career.berkeley.edu
Advising, Student Life
119 César Chávez Student Center
(510) 642-7224
slas.berkeley.edu
Alumni Association
Alumni House
(510) 642-7026 or (888) CAL-ALUM (225-2586)
alumni.berkeley.edu
Associated Students (ASUC)
Eshleman Hall, 2nd Floor
(510) 642-1431
asuc.org
Athletics, Intercollegiate
Hass Pavilion
Media Relations office:
(510) 642-5363
Ticket office: 2223 Fulton Street
64-BEARS (2-3277) or (800) GO-BEARS (462-3277)
calbears.com
Bear Facts
bearfacts.berkeley.edu
Berkeley Art Museum
2626 Bancroft Way
(510) 642-0808
Recorded information: (510) 642-0808
TTY: (510) 642-8734
bampfa.berkeley.edu
Botanical Garden
200 Centennial Drive
(510) 643-2755
botanicalgarden.berkeley.edu
Career Center
2111 Bancroft Way
(510) 642-1716
TTY: (510) 642-0592
career.berkeley.edu
Center for Student Leadership
102 Sproul Hall
(510) 642-5171
campuslife.berkeley.edu/csl

Child Care and Family Services
2610 Channing Way
(510) 642-1827
berkeley.edu/work/child.shtml

Counseling and Psychological Services
2222 Bancroft Way
(510) 642-9494
uhs.berkeley.edu/students/counseling

Disabled Students’ Program
260 César Chávez Student Center
(510) 642-0518
TTY: (510) 642-6376
dsp.berkeley.edu

Educational Opportunity Program (EOP)
119 César Chávez Student Center
(510) 642-7224
slas.berkeley.edu

Financial Aid, Graduate
201 Sproul Hall
(510) 642-0485
grad.berkeley.edu/financial

Financial Aid, Undergraduate
211 Sproul Hall
(510) 642-6442
students.berkeley.edu/finaid

Gender Equity Resource Center
202 César Chávez Student Center
(510) 643-5730
geneq.berkeley.edu

Health Services
UHS Tang Center
2222 Bancroft Way
Medical services: (510) 642-2000
Nurse advice line: (510) 643-7197
Student Health Insurance Plan office:
(510) 642-5700
Urgent care: (510) 642-3188
uhs.berkeley.edu

Housing, Campus
2610 Channing Way
(510) 642-4108
housing.berkeley.edu/livingatcal

Housing—Cal Rentals
2610 Channing Way, 2nd Floor
(510) 642-3642
calrentals.housing.berkeley.edu

Interfraternity Council (Fraternities)
calgreeks.com

International Student Admissions, Graduate
318 Sproul Hall
(510) 642-7405
grad.berkeley.edu/international

International Student Admissions, Undergraduate
110 Sproul Hall
(510) 642-3175
admissions.berkeley.edu

International Student and Scholar Advising
Berkeley International Office
International House
2299 Piedmont Avenue
(510) 642-2818
internationaloffice.berkeley.edu

Library Information
Main Library Information Desk
(510) 642-6657
TTY: (510) 642-0704
lib.berkeley.edu

Night Safety Services/BearWALK Service
(510) 642-WALK (9255)
bearwalk.berkeley.edu

Orientations, Undergraduate
New Student Services
CalSO (Cal Student Orientation)
2610 Channing Way
nss.berkeley.edu
Summer Bridge: (510) 642-5983
summerbridge.berkeley.edu

Financial Aid, Graduate
201 Sproul Hall
(510) 642-0485
grad.berkeley.edu/financial

Financial Aid, Undergraduate
211 Sproul Hall
(510) 642-6442
students.berkeley.edu/finaid

Gender Equity Resource Center
202 César Chávez Student Center
(510) 643-5730
geneq.berkeley.edu

Health Services
UHS Tang Center
2222 Bancroft Way
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Student Health Insurance Plan office:
(510) 642-5700
Urgent care: (510) 642-3188
uhs.berkeley.edu

Soda Hall is a state-of-the-art center for research and teaching in computer science.
CAL Quiz
No. 1
What is the origin of the UC motto, “Let There Be Light”? (Answer on page 532.)

Materials Science and Engineering Professor Tom Devine uses a bike’s one thousand-plus parts—rims, spokes, bushings, tierods, brake levers, steering tubes, aluminum lugs—to demonstrate common principles of engineering. By the end of the class, students will understand why their steel or aluminum frames sometimes break.

Pacific Film Archive
2575 Bancroft Way
(510) 642-1412
Recorded information: (510) 642-1124
TTY: (510) 642-8734
bampfa.berkeley.edu

Panhellenic Association, College (Sororities)
calgreeks.com

Personnel Office (Human Resources)
2150 Shattuck Avenue, Suite 750
(510) 642-9046
TTY: (510) 643-9421
hrweb.berkeley.edu

Police
1 Sproul Hall
(510) 642-6760
TTY: (510) 642-6760
Emergency: 911; from a cell phone: (510) 642-3333
police.berkeley.edu

Sexual Assault Services
2222 Bancroft Way
Social Services:
Sexual Assault Counseling and Advocacy
(510) 642-6074; after hours: (510) 643-7197
Health Promotion:
Sexual Assault Prevention and Education
(510) 642-7202
Urgent Medical Care:
(510) 642-3188
TTY: (510) 643-1233
uhs.berkeley.edu/students/medical/sexualassault.shtml

Sports, Intramural, and Recreational
Recreational Sports Facility
2301 Bancroft Way
(510) 643-6822
calbears.berkeley.edu/intrasports

Student Learning Center
César Chávez Student Center
Lower Sproul Plaza
(510) 642-7332
TTY: (510) 642-7332
sle.berkeley.edu

Study Abroad
Berkeley Programs for Study Abroad
160 Stephens Hall
(510) 642-1356
studyabroad.berkeley.edu

Summer Sessions
1995 University Avenue
(510) 642-5611
summer.berkeley.edu

Tele-BEARS
telebears.berkeley.edu

Tours, Campus
Visitor Services
101 Sproul Hall
(510) 642-5215
visitors.berkeley.edu

Transcripts
Office of the Registrar
120 Sproul Hall
(510) 642-0668
registrar.berkeley.edu

UC Berkeley Extension
1995 University Avenue
(510) 642-4111
extension.berkeley.edu

Vision Care
School of Optometry Clinics
200 Minor Hall
(510) 642-2020
Tang Center: (510) 643-2020
cal-eye-care.org

Visitor Services
101 Sproul Hall
(510) 642-5215
visitors.berkeley.edu
About Berkeley

Berkeley’s focal point of student life, student ideas

New ideas, fresh perspectives, and lively discussion are the lifeblood of a university, and Sproul Plaza, Berkeley’s historic hub of student engagement, pulses with them every day. Student activism is alive and well here — with tabling by student groups of every persuasion, myriad rallies, and lively student-government campaigns. Such energy and passion make it the place to be.
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 interpreted 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 (1914), 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 became a president that lasted three decades. His principal concern was academic excellence, and he was committed to attracting 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. Twenty 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 50-53.

### 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 over 35,500 students, a distinguished faculty, over 350 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 103,000). 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 eight Nobel laureates, 135 members of the National Academy of Sciences, 91 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.

---

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

First classes open at Berkeley.

1887: The Associated Students of the University of California is formed to resolve conflicting interests of numerous student societies.

1890s: Overseas students, particularly from East and South Asia and South America, begin coming to UC, starting an unbroken tradition of foreign students at the Berkeley campus.

1897: UC Regent Phoebe Apperson Hearst funds an international competition for an architectural plan for the Berkeley campus. The competition brings international attention to the University and, after 1900, results in the construction of numerous stately campus buildings in the Beaux Arts style, from Hearst Mining to Haviland Hall.

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.

1910: Sather Gate, one of the campus’s principal landmarks, is completed.

1912: Doe Library is dedicated.

(continued on next page)
Research programs at Berkeley are conducted within teaching departments, institutes, and centers (sometimes referred to as Organized Research Units or ORUs). Institutes and centers are established and administered separately from the teaching units. They are interdisciplinary in nature and 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. Institutes and centers 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.

See the Appendix in this catalog for a listing of research centers and institutes, museums, and field stations or visit vcresearch.berkeley.edu/research-units.

Commitment to Teaching

Every year, the Berkeley campus honors several of its outstanding faculty members by presenting them with the Distinguished Teaching Award (teaching.berkeley.edu/hta.html). More than 227 faculty members from all over campus have been recognized 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 them 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 Studies, Asian American and Asian Diaspora Studies, Chicano Studies, and Native American Studies—reflect this diversity.

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, Davis began classes in 1909, the Los Angeles campus in 1919, Riverside in 1954, Santa Barbara in 1958, San Diego in 1960, and Santa Cruz and Irvine in 1965. UC Merced opened as UC’s 10th campus in fall 2005. The University has five 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 8,800, and the total enrollment is about 220,000 students, most of them California residents. Nearly 25 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 eight divisions—Academic Affairs, Agriculture and Natural Resources, Business Operations, External Relations, Finance, General Counsel, Health Sciences and Services, and Laboratory Management. 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 in this catalog or visit universityofcalifornia.edu/regents/brochure.pdf.

The Academic Senate, consisting of faculty and certain other teaching titles, 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.

1941: After Pearl Harbor, President Roosevelt’s Executive Order 9066 interned thousands of West Coast Japanese-Americans, including many Berkeley students and residents. In 2009, the Berkeley campus holds a ceremony awarding degrees to 42 of the student internees.

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

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 as a center of activism that is still strong in the public mind.

1980: Professor of Slavic Languages and Literature Czeslaw Milosz wins the Nobel Prize for literature.

(continued on next page)
1980s: The Berkeley campus becomes one of the first major universities in the country where there is no majority ethnicity among the undergraduate students.

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.

1997: Chancellor Robert Berdahl announces ambitious SAFER plan to improve seismic safety on campus and guide retrofitting and new construction of campus buildings. Over the next decade, numerous construction projects result in permanent upgrades to over half the square footage identified as needing improvement.

1999: Berkeley launches Health Sciences Initiative, a bold new effort to understand and solve today’s major health problems by uniting physical and biological scientists and engineers.

Haas Pavilion, a striking remodel of the old Harmon Gym, opens with double the seating capacity of the former structure.

(continued on next page)

Academic Resources

The University Library

Berkeley’s library system (lib.berkeley.edu) offers 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 17 subject specialty libraries serving particular academic disciplines. All libraries promote information literacy and academic success by teaching students and faculty how to use a wide range of print and online information resources 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 ten million volumes, 114,000 current serial publications (53,000 are electronic), six million microform items, 400,000 maps, 88,000 sound recordings, 44,000 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 150,000 volumes, is designed as a core collection of “best books” in the liberal arts, serving a broad campus readership of undergraduates and non-specialists. The Gardner Stacks, a four-story underground addition connecting Doe and Moffitt libraries, houses the humanities and social science research collection. You can enter the Gardner Stacks through either Doe or Moffitt libraries. Access is limited to card holders, including UC faculty, students, and staff. The UC community can find personalized research and reference assistance related to humanities and social sciences on the second floor of Doe Library.

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, and the equipment to use these materials.

The Bancroft Library, devoted primarily to the documentation of western North America, maintains the largest collection of Mark Twain archives in the world. The Bancroft Library returned to its newly renovated space in the Doe Annex in 2008. The new C. V. Starr East Asian Library contains rare editions of early manuscripts, scrolls, woodblock and engraved maps, stone rubbings, and bronze inscriptions. Special collections elsewhere in the library system include some of the rarest books and illuminated manuscripts in the world.

For information about the campus libraries or help in using the online catalogs, ask at the Reference Desk in Doe Library (510) 643-6657, or consult the library’s website at lib.berkeley.edu

Affiliated Libraries

The library system also includes 11 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 complement the University library collections and primarily serve the teaching and research needs of faculty and students, 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 44) and graduate education (page 61).

Lawrence Hall of Science

The Lawrence Hall of Science (LHS) 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. Ongoing and traveling exhibits emphasize hands-on discovery for the general public, and LHS welcomes visitors 362 days a year. Recent additions to the hall include “Ingenuity in Action,” “Science on a Sphere,” “Forces That Shape the Bay,” and “KidsLab.”

LHS serves schools and families throughout Northern California and beyond with classes, workshops, science shows, festivals, and an extensive summer day camp program.

LHS can accommodate a wide range of events and is available for rental by campus and outside groups for meetings, reunions, corporate events, receptions, and weddings.

Science curricula developed at LHS are used throughout the world. Teacher-training workshops actively involve participants in curriculum development. Teachers from throughout the United States participate in professional development programs at LHS.

Berkeley students are a key part of the LHS staff, and more than 100 students each year are hired as assistants for teaching, administrative services, and research and evaluation. See the Career Center on campus for job opportunities.

LHS is open daily from 10 a.m. to 5 p.m. There is an admission fee; Berkeley students are admitted free. Transportation to and from LHS is available on a shuttle bus on weekdays, excluding UC holidays. For more information, visit lawrencehallsofscience.org or call (510) 642-5132.
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, the UC Botanical Garden, the UC Museum of Paleontology, and the University and Jepson Herbaria. This consortium makes up the largest university-based natural history museum in the world. 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 A. Hearst Museum of Anthropology

Facilitating scholarly research and educating undergraduate and graduate students are among the primary functions of the Hearst Museum. The museum also presents changing exhibits and programs 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 artifacts from California, as well as archaeological collections from Peru and Egypt. The exhibit gallery and Hearst Museum Store are open Wednesday through Sunday from 10 a.m. to 4 p.m., Sundays noon to 4:30 p.m., and closed on holidays. General admission is free. Groups of 20 or more require advance booking and are charged a modest admission fee. The gallery is wheelchair accessible. For further information, call (510) 642-3682 or email phama@berkeley.edu. You can also visit hearstmuseum.berkeley.edu.

Botanical Garden

The UC Botanical Garden at Berkeley is a living museum, featuring one of the most diverse plant collections in North America. Established in 1890, the garden moved in the 1920s to its current 34-acre location at 200 Centennial Drive, Berkeley, overlooking San Francisco Bay. The garden is open to the public and is famous for its large number of rare and endangered species. It is a member of the Berkeley Natural History Museums group. This premier collection ranks among the world’s leaders in the quality and diversity of its plants and their scientific importance. The collection comprises over 12,000 different kinds of plants from all around the world, collected from the wild with scientific data.

The collection is displayed in beautiful, naturalistic plantings arranged by geographic region. The collection is derived from California, Asia, southern Africa, the Mediterranean region, South America, Australia, Mexico and Central America, the New World deserts, and eastern North America. Greenhouse collections include cacti and succulents, carnivorous plants, ferns, and orchids. Ethnobotanical collections include heritage roses, European herbs, Chinese medicinal herbs, and crops of the world.

The garden, a national leader in developing environmental education curricula, is building a program in plant conservation. The garden is available for University research projects and class teaching purposes. Free guided tours are offered to the public on Thursday, Saturday, and Sunday at 1:30 p.m. Group tours, including school tours, are available by arrangement. The garden is open from 9 a.m. to 5 p.m. every day except Thanksgiving, December 24, 25, and 31, January 1, Martin Luther King Jr. Day, and the first Tuesday of each month. Admission is free for garden members, faculty, students, and staff.

2001: Two of four California Institutes for Science and Innovation—unique UC/ state/industry research partnerships—are funded by the state at Berkeley with other UC campus partners. CITRIS (the Center for Information Technology Research in the Interest of Society), headquartered at Berkeley, looks for new IT solutions to tough challenges, and QB3 (the California Institute for Quantitative Biomedical Research) develops solutions for urgent issues in the fields of health, energy, and the environment.

Seven-year Campaign for the New Century raises $1.4 billion for Berkeley, the most ever raised by a public university without a medical school.

2006: Cosmologist George Smoot wins the Nobel Prize in physics, becoming Berkeley’s 20th faculty laureate.

The Richard C. Blum Center for Developing Economies is launched at Berkeley to achieve significant—and financially sustainable—solutions to problems affecting the nearly 3 billion people living on less than $2 a day.

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2007: Berkeley leads a collaboration to create an Energy Biosciences Institute and wins $500 million in private-sector funding from BP for the research effort. The institute will focus on biofuels, turning plants into transportation fuels.

The Stanley Biosciences and Bioengineering Facility opens, bringing the campus a new style of interdisciplinary building, housing work in physical sciences, biosciences, and engineering.

2008: The C. V. Starr East Asian Library, the first freestanding structure at a U.S. university erected solely for East Asian collections, opens its stately bronze doors. The collections contain more than 900,000 volumes—primarily written in Chinese, Japanese, and Korean.

A landmark fundraising campaign to raise $3 billion by 2013, the Campaign for Berkeley is launched to support Berkeley’s role as the nation’s preeminent public teaching and research university through scholarships, fellowships, professorships, and increased support for instruction and research.

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Admission is $9; $7 seniors (65 and older) and juniors (13-17); $2 children (5-12); and free for children under 5. Note: Admission is free to all on the first Thursday of the month. Transportation to and from the garden is available on a campus shuttle bus on weekdays, excluding UC holidays. For further information, call (510) 643-2755 or visit botanicalgarden.berkeley.edu.

**Berkeley Language Center (BLC)**

BLC’s mission is to support the learning and teaching of heritage and foreign languages on the Berkeley campus, and it offers a wide variety of pedagogical and technological services to students and language instructors, such as an applied linguistics library, a lecture series and pedagogy workshops, and a fellowship program. BLC also houses an extensive collection of language resource materials, including foreign language media, computer labs and high-tech classrooms, a multimedia development lab, an audio recording and digitizing studio, media duplication services, and archival collections of linguistic fieldwork and noteworthy University speeches and events. For further information, visit blc.berkeley.edu or call (510) 877-4002.

**Berkeley Summer Sessions**

More than 600 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 choose from five sessions of varying lengths; evening and online courses are also available. They can also earn credit by participating in special programs, including international travel study and domestic or international academic internships.

All Summer Sessions courses are taught by both regular and visiting faculty. Fees vary with the number of units taken and type of student (UC or visiting). For more information, visit summer.berkeley.edu.

**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, East Bay; Holy Names University; Dominican University; John F. Kennedy University; St. Mary’s College; and University of New Orleans. In addition, Berkeley students may attend a class each semester at any of the other UC campuses, California state universities, 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.

**UC Berkeley Extension**

UC Berkeley Extension is the continuing and professional education branch of the University, linking the campus to the community. A self-supporting unit of the University, Extension offers more than 1,500 courses each year. Evening and weekend courses offer opportunities to prepare for career advancement, earn college credit, pursue intellectual and cultural interests, keep abreast of current research, and examine critical issues in society. For students seeking a planned sequence of study, Extension offers more than 80 multicultural professional certificates and specialized programs of study in fields such as marketing, finance, sustainable design, and biotechnology.

While courses are open to the public, 90 percent of 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 in each field of study.

UC Berkeley Extension courses are held at locations around the Bay. Extension also offers a travel/study program at Oxford University; residential programs and certificates for international students; custom-designed contract training programs; and more than 150 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) is required, and enrollment for credit is optional. You may obtain full details and an application form at extension.berkeley.edu/info/concurrent.html.

For more information, call (510) 642-4111, visit extension.berkeley.edu, or write to UC Berkeley Extension, 1995 University Ave., Suite 110, Berkeley, CA 94704-7000.

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**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 is the major visual arts center serving the University community. Facilities include galleries, a fine arts bookstore, a sculpture garden, a café, and a film theater and film library. Every year, the museum presents approximately 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.

The museum’s film program, the Pacific Film Archive (PFA), is one of the major film exhibition centers in the country, offering programs of international cinema to the public. BAM/PFA maintains a study collection of 12,000 prints and 8,000 books and provides a media information service and facilities for both film study and research screenings.

BAM/PFA’s extensive education program includes guided tours in the galleries; lectures by art historians, film critics, and scholars from a wide variety of disciplines; as well as talks by contemporary artists and filmmakers.

On most Friday nights, the BAM/PFA galleries are open until 9 p.m. for L@TE: Friday Nights at BAM/PFA, an eclectic art and performance series in Gallery B. Performances typically begin at 7:30 p.m.; doors open at 5 p.m. with DJs in the lobby or Gallery B at 6:30 p.m.

Gallery hours are 11 a.m. to 5 p.m. Wednesday through Sunday, and L@TE Fridays until 9 p.m. Admission to gallery exhibitions and L@TE is free for Berkeley students, staff, and faculty. Tickets for PFA Theater are $5.50 for Berkeley students and $6.50 for staff and faculty. For more information, contact BAM/PFA at 2626 Bancroft Way, (510) 642-0808; PFA Theater at 2575 Bancroft Way, (510) 642-1437; or visit bampfa.berkeley.edu.
Music, Drama, Dance

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, University Wind Ensemble, University Gospel Chorus, University Baroque Ensemble, 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 the arts. Credit is offered for a full range of courses in the theory, history, literature, and culture of performance and for all aspects of participation in theater and dance productions staged on campus: acting, dancing, playwriting, directing, designing, stagecraft, and choreography. For information, call (510) 642-1677, email tdpsugadvisor@berkeley.edu, or visit tdps.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, on Lower Sproul Plaza, and for Cal Day; comedy nights in The Bear’s Lair; free sneak previews, special events, trivia games, 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 visit superb.berkeley.edu.

Cal Performances—Cal Performances is the internationally respected performing arts presenter at UC Berkeley bringing to campus the best music, dance, and theater from around the world. Registered Berkeley students receive a half-price discount and $10 student rush tickets, as available. Berkeley faculty and staff receive a $5 discount. For information or reservations, call (510) 642-9988 or visit calperformances.org.

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; four swimming facilities; four weight rooms; squash, handball, racquetball, and tennis courts; a martial arts room; and two 400-meter 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 online Schedule of Classes for specific classes each semester.) Semester membership for students is only $10. For further information, consult the program office at 200 Hearst Gymnasium, email pesb@berkeley.edu, or visit pes.berkeley.edu.

The Department of Recreational Sports offers a wide range of recreational and competitive activities:

The FITWELL program is open to students, faculty, staff, and the community. Participants can take a wide variety of noncredit classes, among them Capoeira, dance, massage, yoga, water exercise, tennis, strength training, and more.

Massage Therapy offers 25-, 50-, and 80-minute massage appointments.

CalSTAR (Sports, Training, and Recreation) assists disabled users who are interested in recreational programs. We offer volunteer assistants as well as equipment.

Cal Intramural Sports offer 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 32 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. Members may also use the swimming pools at the Hearst Gymnasium, the Golden Bear Rec Center, and Strawberry Canyon. The Group Exercise Program offers drop-in aerobics and fitness classes including step, low-impact, fitness boxing, and more—and is free to members. Personal Fitness Training provides individual consultation with a highly qualified fitness trainer who best suits your needs, limitations, and aspirations. For more information, visit recsports.berkeley.edu.

Cal Adventures provides participants with new skills, adventure, and memories that last far beyond any one course or trip. Activities include sailing, sea kayaking, windsurfing, stand-up paddle boarding, backpacking, rock climbing, a ropes course, and wilderness medicine. Incoming students are encouraged to participate in O.A.T.S., the Wilderness Orientation Program.

For more information, visit recsports.berkeley.edu/caladventures or contact the Enrollment Center at (510) 642-4000 or scrainfo@berkeley.edu.

Other Resources

Information Technology (IT) on Campus

The Berkeley campus provides high-speed Internet access and a full range of IT services. Network connections are available in computer facilities, classrooms, and residence halls. Wireless connections are also available. Free email service is available to registered students, and dialup access is offered at a modest cost.

Computer facilities—Computer facilities are available throughout the campus for general use. For locations and current schedule, visit the Workstation and Microcomputer Facilities website at facility.berkeley.edu.

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.

IT resources and services—Most student services are online. Below are some of the many IT resources and services available at Berkeley:

Student Systems (sis.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 and the online Schedule of Classes.

CalNet Gateway (bit.ly/i3ycdk) is the place to set up a CalNet ID for accessing campus online services.
CalNet Directory Services (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 “@berkeley.edu” email address in this directory.

CalMail (calmail.berkeley.edu) is the Berkeley email and web mail service for students, faculty, and staff.

AirBears (airbears.berkeley.edu) service enables wireless access to the campus network.

The Scholar’s Workstation @ the Cal Student Store (thescholarsworkstation.com) offers a large variety of computers, peripherals, and software for sale at academic prices to the campus community.

Student Computer Consulting Service (scs.berkeley.edu) is available to students for help with network access, C@B, Home IP, and AirBears.

The Social Science Computing Laboratory (SSCL) is open to graduate students and faculty in the social sciences and affiliates.

Educational Technology Services (ets.berkeley.edu) assists faculty with course websites, multimedia, and classroom technologies.

Berkeley on iTunes U (itunes.berkeley.edu) offers full UC Berkeley courses, high-profile special events, and much more as free downloads through iTunes.

Legal Downloads at UC Berkeley (legaldownloads.berkeley.edu) provides legal music downloading alternatives to students.

IST Service Desk (ist.berkeley.edu/support/servicedesk) answers general inquiries regarding computing, networking, and computer accounts offered by Information Services and Technology.

Campuswide IT Security (security.berkeley.edu) provides information about campus computer, network, and information security.

UC Berkeley iNews (inews.berkeley.edu) is the campus online IT news source that covers developments in information technology at Berkeley.

For complete and current lists of resources and services, visit the Technology @ Berkeley website at technology.berkeley.edu and the Information Services and Technology website at ist.berkeley.edu. The search facility on the Berkeley home page (berkeley.edu) is also a useful resource for finding current computing information.

California Alumni Association

Founded by the original graduates of the University of California in 1872, the Cal Alumni Association (CAA) represents nearly half a million alumni living throughout the world today. With a mission of advancing and promoting the interests of the University, CAA is committed to providing essential programs and services designed to keep alumni of all ages and interests connected to the University and to each other.

Over 95,000 CAA members receive valuable benefits, discounts, and services. Cal alumni look to CAA for career networking and continuing education, social gatherings, and volunteer opportunities. Alumni participate in student outreach programs to attract future Berkeley students, interview prospective scholars, raise funds for CAA programs, and host special events for alumni around the world.

CAA provides Cal students with nearly $2 million in scholarships each year. Since 1934, The Leadership Award has recognized and supported Cal student leaders with merit-based scholarships. Since 1999, The Achievement Award Program has provided high-achieving students with significant financial need the resources they need to attend and excel at Berkeley.

Established in 2008, The Equity Scholarship provides an economic incentive for California’s high-achieving, underrepresented minority students to attend Cal.

CAA also publishes California magazine; operates the Lair of the Golden Bear family summer camp in the Sierra Nevada; leads educational trips through its Cal Discoveries Travel program; co-hosts Homecoming and class reunions; and maintains over 90 alumni groups throughout the world.

The Cal Alumni Association is located on campus in Alumni House. The main information lines are (888) CAL. ALUM and (510) 642-7026. For more information, visit alumni.berkeley.edu.

Visitor Services

The Visitor Center, located at 101 Sproul Hall at the intersection of Bancroft Way and Telegraph Ave., 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 our website at visitors.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 campus ambassadors. To make tour reservations, visit campustours.berkeley.edu/campus_tours.html.

Visitors can also download a free audio-guided walking tour of the campus to listen on their own MP3 player at itunes.berkeley.edu or a UC Berkeley by Phone Map at visitors.berkeley.edu.
Twain’s prolific papers illuminate his wit, life, and work.

Scrapbooks, letters, photos, and manuscripts—the largest collection of original materials by and about Mark Twain—are in Berkeley’s Bancroft Library. There, students and scholars research the cantankerous and beloved American original, while staff make Twain treasures (such as his recently released, bestselling autobiography) available to all.
Student Life

This section offers general information about student life on the Berkeley campus and brief summaries of some of the services and organizations available, arranged in alphabetical order. You may obtain more information from the appropriate office or from Resource, the student handbook, or at resource.berkeley.edu.

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. For more information, visit asuc.org.

Career Center

The Career Center prepares undergraduates, graduate students, and alumni to make informed decisions about their futures by providing comprehensive resources, programs, and counseling on career development, internships, employment, and graduate school. The center offers career counseling, career assessments, a letter of recommendation service, professional and graduate school programs, internship programs, job listings and recruiting, and alumni career services.

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

- Recruiting (employers visit the Berkeley campus to interview graduating students for positions)
- Online job and internship listings for part-time, summer, and full-time employment opportunities.

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. For more information, including access to our calendar of activities, visit career.berkeley.edu or call (510) 642-1716. See page 46 for information on internships.

Center for Student Conduct and Community Standards

The Center for Student Conduct and Community Standards seeks to educate all community members on the behavioral expectations outlined in the Berkeley Campus Code of Student Conduct (Code) and promotes the values of integrity, civility, and responsibility through campus wide outreach. Student Conduct and Community Standards also administers the conduct process outlined in the Code. For more information, visit studentconduct.berkeley.edu or call (510) 643-9069.

Center for Student Leadership

The Center for Student Leadership (CSL), a component within the Office of the Dean of Students, is a great starting point for those looking to get involved on campus. CSL advisers coach students to positively impact their communities through student involvement and educational leadership development opportunities. They recognize more than 1,000 student organizations, including 62 fraternities and sororities, and a variety of organizations that focus on the arts, academics, culture, politics, professions,
publications, religion, sports, service, and social issues. Recognized student organizations have the opportunity to meet with CSL advisers, use campus facilities, and to apply for funding through the ASUC or Graduate Assembly. CSL has an active leadership development component and provides leadership workshops and programs. For more information, visit campuslife.berkeley.edu/csl, stop by 102 Sproul Hall, or call (510) 642-5171.

Child Care
The Early Childhood Education Program (ECEP) provides developmental child care at eight centers for UC Berkeley families. Registered students with children between the ages of three months and seven years are eligible for either full-fee or subsidized child care spaces. Subsidized fees are based on a sliding scale, depending on gross monthly income and family size. For subsidized child care, a second parent, if not a registered Berkeley student, must be employed or attending a degree-granting institution. Spaces are limited. Priority for student spaces is given to currently enrolled children and siblings, and registered students eligible for subsidized care.

Applications are accepted year-round, but the ECEP admissions process for students begins in late May for the fall semester. Early applications are recommended—by mid-May for fall.

For more information or an application, contact the Early Childhood Education Program office at 2339 Haste St., Berkeley, CA 94720-7416; call (510) 642-1827; or visit housing.berkeley.edu/child.

CALPIRG
The California Public Interest Research Group (CALPIRG) is a statewide public interest student non-profit organization. It is student-funded and student-directed, combining grassroots organizing and direct advocacy on environmental and social/consumer issues. Students work with professional staff to run various campaigns and govern themselves with an elected statewide student board. The CALPIRG office is in 303 Eshleman Hall; call (510) 642-7313.

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.

Cal Corps Public Service Center is the place to come to incorporate public service, leadership development, and community and civic engagement into your university experience. Cal Corps offers resources, training, and a variety of programs that focus on issues ranging from education and homelessness to poverty and politics. For information on service leadership opportunities or any of Cal Corps’ programs, stop by the office at 505 Eshleman Hall, call (510) 642-3916, or visit publicservice.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 300 Bay Area nonprofit organizations seeking volunteers. Many of these local nonprofits team up with the Berkeley Project, a campus student group, for a day of service in mid-October and March. Cal Corps staff and peer advisers provide training and roundtables on leadership skill development, social issues, and public service. 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 currently partners with five AmeriCorps programs for Cal students: (1) Destination College, (2) the Bonner Leaders Program, (3) JusticeCorps, (4) Students in Service, and (5) Coaching Corps. Destination College is a program within the Center for Educational Partnerships 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. JusticeCorps recruits and trains university students to serve in self-help legal clinics throughout the Alameda County court system. Students in Service is a partnership between Cal Corps and the Graduate School of Social Welfare. MSW candidates serve in community leadership positions as a part of their practicum, as well as participate in AmeriCorps-wide days of service. Coaching Corps recruits students to serve as volunteer sports coaches for local youth teams. AmeriCorps members in all programs are eligible for scholarships, and some positions offer pay or academic credit.

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

• Increasing 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, the elderly, and the poor.

Fun Things to Do
Berkeley Art Studio
Classes in photography, drawing and painting, ceramics, etc. MLK Jr. Student Union, lower level, (510) 642-6161 artstudio.berkeley.edu

Athletics
Recreational Sports Facility (RSF) 2301 Bancroft Way (510) 642-6400 recsports.berkeley.edu
Cal Star (recreation for disabled individuals), RSF (510) 643-8031

Court Reservations (tennis, squash, racquetball, handball) RSF, Guest Services (510) 642-8345

Intercollegiate Athletics Haas Pavilion calbears.com

Intramural Sports RSF, (510) 643-6822

Sports Clubs RSF, (510) 643-8024

Swimming Pools (RSF) Hours and information: (510) 642-6400

Tickets Athletic Ticket Office 2223 Fulton St. (510) 642-3277 or (800) GO-BEARS

Can’t go to the games? You can always listen to them on the radio:

Football
KGO (810 AM) or KALX (90.7 FM)

Men’s basketball
KNEW (910 AM) or KALX (90.7 FM)

Women’s basketball
KKGN (960 AM) or KALX (90.7 FM)

(continued on next page)
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.
- ACES Fellowships matches undergraduate and graduate students with faculty members to assist in course design, developing relationships with community organizations, and managing logistics for community-based projects.
- Berkeley United in Literacy Development (BUILD) is a student-led literacy and homework help program in Berkeley and Oakland with work study or academic credit available.
- Cal in Local Government places students as interns in the city of Berkeley and related community-based organizations.
- Cal in the Capital (CITC) assists students in securing summer internships in Washington, DC. Participants attend a required DeCal class in the spring semester to hone résumé and professional skills.
- Magnolia Project is a 10-year commitment to New Orleans and the gulf coast, connecting students with service projects, internships, and semester exchanges.
- Oakland Community Builders is a student-led, service-learning course which includes internship placements with Bay Area grassroots community organizations working to alleviate poverty and other injustices.
- Shinnyo Fellowships connects students with a 10-month internship in peace-building and sustainable social change, and supports students to design and implement service projects.

Disabled Students’ Program

The Disabled Students’ Program (DSP) is located at 260 César Chávez Student Center, (510) 642-0518; TTY: (510) 642-6376. If you have a documented and verifiable disability, you may be eligible for academic accommodations and auxiliary services (such as lab assistance, notetakers, sign language interpreters). A residence program for newly admitted students with physical disabilities who use wheelchairs and require independent living services is available, as are various other services. If you have a visual, hearing, mobility, physical disability, or a learning or other non-apparent disability, contact DSP for information about services or visit dsp.berkeley.edu.
Gender Equity Resource Center

The Gender Equity Resource Center (GenEq) is the campus community center for support, advocacy, and education related to women and the lesbian, gay, bisexual, and transgender (LGBT) communities. This includes managing the delivery of services and initiating educational programs that inform the campus community about ways to be more equitable and inclusive toward women and LGBT persons in terms of departmental functions and interpersonal relationships. We also assess and report to the Cal administration on the campus climate for all women and LGBT students. GenEq is also an entry point for students wishing to access resources and/or report incidents of sexual, relationship, and hate violence. The programs and services within GenEq are: (1) Lesbian, Gay, Bisexual, Transgender, and Intersex; (2) Women; (3) Sexual Harassment, Sexual Assault, Relationship Violence; and (4) Bias Related Incidents and Hate Crimes. Students may choose to complete an internship, get help with research or papers, or just come to “hang out” in our comfortable and friendly suite.

Contact staff or find more information at 202 César Chávez Student Center, (510) 642-4786, geneq@berkeley.edu, or geneq.berkeley.edu. The Gender Equity Resource Center is a department within the Division of Equity and Inclusion (see diversity.berkeley.edu).

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 website (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 Bancroft Way. Services generally are available from 8 a.m. to 5 p.m. Monday through Friday. Urgent Care and the Pharmacy are also open Saturdays from 9 a.m. to 5 p.m. Services and hours are reduced during the summer months.

An advice nurse is available by phone at (510) 643-7197 during open hours. After hours this number rolls over to a referral line to community resources.

See sample fees at uhs.berkeley.edu/samplefees or call the UHS Cashier’s Office at (510) 642-8448 with any questions. General information may also be found at uhs.berkeley.edu.

Medical and Insurance Services

All students can use the on-campus services at UHS. 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 and vision 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. *Note*: Even if you waive SHIP, you still are eligible for on-campus health care at UHS.

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

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 relationships 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, assists students with difficulties related to illness, as well as 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, visit uhs.berkeley.edu.

### Health Promotion

Individual health education appointments on a variety of topics, including nutrition, stress, sexual health, and other concerns, are available by calling (510) 642-2000.

Workshops and speakers also are available on topics such as 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 Eye Care Clinic

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 eye care clinic that offers comprehensive eye care to faculty, staff, students, and the general public.

A career counseling program, including aptitude and skills testing, is available to students, as are group and couples counseling. Social services, (510) 642-6074, assists students with difficulties related to illness, as well as 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, visit uhs.berkeley.edu. 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 the University Eye Care Clinic in Minor Hall, call (510) 642-2020; for more information about the vision clinic in University Health Services, call (510) 643-2020 or visit caleyecare.org.

### Housing

Approximately one-third of all students are housed in University housing or in alternative housing, such as co-ops, International House, fraternities, or sororities. Each housing provider has its own application procedure and deadline.

All new undergraduate students will find their University housing information online upon receiving their online notification of admission. Details on housing options, an application to University housing, and deadline information may be found at housing.berkeley.edu/livingatcal. New fall freshmen and transfer students who apply for single-student housing...
by the appropriate deadline are guaranteed University housing. Single undergraduate students admitted for spring semester are very likely to receive a housing offer, but at present there is no guarantee. Graduate students should examine the housing website for their options at housing.berkeley.edu/livingatcal/graduatestudents.html.

**Cal Rentals**

Cal Rentals provides rental listings and housing resources for students. Students with questions about their housing options may contact the Cal Rentals office for assistance. Advisers are available to discuss on- and off-campus housing and help with comparing the choices. To contact Cal Rentals, email homeinfo@berkeley.edu, call (510) 642-3644, or visit the office weekdays at 2610 Channing Way. Information is also available on the Cal Rentals website at calrentals.housing.berkeley.edu.

**University Residence Halls**

University-operated residence halls and single student undergraduate apartments accommodate some 6,000 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 or apartment 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 a tour offered on Cal Day, a special campus open house usually held in April, or contact the Housing Office at (510) 643-0258 for a tour. Most facilities are co-ed, and most offer a dining facility, recreational and social programs, and study rooms. University housing includes “theme programs” which provide living environments focused on a language or culture. Residence halls and apartments are within a few blocks of campus.

**Family Student Housing**

The University operates approximately 1,000 apartments for married students and single-parent families. The apartments are located at the University Village in Albany, approximately four miles northwest 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. For more information and an application, visit housing.berkeley.edu/livingatcal/studentsfamilies.html or stop by Apartment Assignments, 2610 Channing Way; call (510) 642-4109; or email apts@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 and an application, visit housing.berkeley.edu/livingatcal/graduatestudents.html or contact Residence Hall Assignments, 2610 Channing Way; call (510) 642-4108; or email reshall@berkeley.edu.

**Ida Louise Jackson Graduate House**

This complex features shared apartments with single-occupancy bedrooms for graduate students only. 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. For additional information and an application, visit housing.berkeley.edu/livingatcal/graduatestudents.html or contact Residence Hall Assignments, 2610 Channing Way; call (510) 642-4108; or email reshall@berkeley.edu.

**International House**

International House is a unique residential and program community of 575 students and scholars from over 70-plus countries including the U.S. I-House provides a vibrant and engaging living environment to graduate students, visiting scholars, post-docs, and undergraduates in their junior or senior year. I-House offers single- and double-room accommodations with a full meal plan served in our dining room. Unique resident amenities include a 24-hour library, computing center, game room, community kitchen, and ample lounge and community space. Reasonably-priced meals and monthly special cultural meals in our public dining commons reflect the international tastes of our residents. Meal plans are also available to nonresidents. I-House offers a wide array of educational and cross-cultural programs, including lectures, concerts, film series, and festivals to both residents and the Cal community. For more information, visit ihouse.berkeley.edu, email ihouse@berkeley.edu, or call (510) 642-9470. To purchase a meal plan, call (510) 642-9477.

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**CAL Quiz No. 6**

**What was the first piece of permanent sculpture on campus?**  
(Answer on page 532.)
Information Online

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

- UC Berkeley Students (berkeley.edu/students) has information about campus services fundamental to student life, such as health services, housing, student jobs, and student organizations.
- Student Systems (sis.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 and the online Schedule of Classes.
- The Library (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.

International Student Advising

Berkeley International Office offers a wide range of services to UC Berkeley’s international students, international scholars, and their families. Services include orientations, guidance on immigration and 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. The office is open Monday through Friday, 9 a.m. to noon and 1 to 4 p.m., in International House at 2299 Piedmont Ave. Call (510) 642-2818, email internationaloffice@berkeley.edu, or visit internationaloffice.berkeley.edu for more information.

International House Programs

The Program Office of International House organizes thought-provoking lectures and fun, social, and recreational programs—not only for its residents but for members of the campus and local community as well—in order to advance its mission to foster cross-cultural respect, understanding, and friendship for a more peaceful world. Lectures, trips, and tours as well as I-House cultural events, parties, and slide shows enrich the extracurricular life of the campus. Many events are free, although nonresident I-House membership (nominal fee) offers savings on trips and special programs, as well as discounts to I-House’s popular second-floor public dining commons where “language tables” offer foreign language practice. An International Friendship Program links international students to local volunteers and families, so they can enrich one another’s cultural knowledge and share unique traditions like Thanksgiving together. More information on I-House programs—including their robust program schedule as well as details about living and dining at I-House—are available at ihouse.berkeley.edu or by calling (510) 642-9460.

Legal Services

If you are a currently registered Berkeley student concerned about a legal problem or seeking information about your legal rights and obligations, you can make an appointment for a free consultation with an attorney by calling (510) 642-5171. For more information, stop by the office at 102 Sproul Hall or visit campuslife.berkeley.edu/legal.

The Ombuds Office for Students and Postdoctoral Appointees

The Student Ombuds Office provides an informal dispute resolution process in which the ombudsperson advocates for fairness, justice, respect for differences, and reasonable solutions to campus-related student and postdoctoral issues and concerns. All UC Berkeley undergraduates, graduate students, and postdoctoral appointees, as well as all faculty and staff members who work with these groups, can call for assistance. The ombuds will listen to concerns, explore options for next steps, and discuss other resources that might be helpful. The office is strictly confidential (except in cases of imminent risk of serious harm), independent, and informal—and is neither an office of record nor of report for the University. Call (510) 642-5754 for more information or to make an appointment or visit students.berkeley.edu/ombuds.

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 up themselves and their parents and guests for a CalSO (Cal Student Orientation) program by going to calso.berkeley.edu. At CalSO, new students (and their parents) receive information, advice, and the student handbook Resource (resource.berkeley.edu) to ease their transition to life at Berkeley. New Student Services also organizes Welcome Events in the fall and the Calapalooza activity fair and staffs an Information Tent on Upper Sproul Plaza during the first two weeks of the semester. New Student Services is located at 2610 Channing Way, Third Floor, (510) 642-4970. You can also email calso@berkeley.edu or visit nss.berkeley.edu.

Safety

The University maintains a police department on the Berkeley campus for your protection and safety. The department consists of over 60 fully trained, sworn officers, 45 other full-time personnel, and 50 student employees. UCPD 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 visit police.berkeley.edu; for information on emergency preparedness, call (510) 642-9036 or visit oep.berkeley.edu; for lost and found, call (510) 642-6760.

**Bicycle Licensing**
All bicycles on campus must have California bicycle licenses, which UCPD can provide to the campus community. For more information, visit police.berkeley.edu or call (510) 642-6760.

**Night Safety Shuttle/BearWALK Service**
The Night Safety Shuttle and BearWALK Service are available in the evening to provide 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, visit police.berkeley.edu/bearwalk or call (510) 642-WALK (642-9255). For more information about safety on campus, visit safetycounts.berkeley.edu.

**Sexual Assault Prevention, Medical Care, and Counseling**
University Health Services (UHS) 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. UHS also provides short-term individual and group counseling and education sessions for friends, family, housemates, and co-workers of survivors.

**Student Athletes**
The Athletic Study Center, located in 179 César Chávez Student 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, visit asc.berkeley.edu.

**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 based on the philosophy that students working with students promotes academic and personal success.

As the primary academic support service on campus, 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, 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 Chávez Student Center on lower Sproul Plaza, call (510) 642-7332, or visit slc.berkeley.edu.

**Student Life**

**Clubs and Organizations**
Besides regular ASUC-sponsored activities, there are more than 1,000 recognized student organizations on campus serving special interests and needs. Student organizations cover a wide range of interests in academics, arts, culture, politics, professions, publications, religion, sports, service, and social issues. To see a current list of recognized organizations, start your own student organization, or find funding options for student organization activities, visit campuslife.berkeley.edu/org, stop by the Center for Student Leadership at 102 Sproul Hall, or call (510) 642-5171.
Fraternities and Sororities (Greek Life)
As an integral part of the campus community for 140 years, fraternities and sororities offer a values-based developmental experience and foster the personal, ethical growth of members. Grounded in the four pillars of “Leadership, Scholarship, Friendship, and Service,” these organizations provide life-long membership with involvement opportunities well beyond the undergraduate years. Visit greeks.berkeley.edu for more information.

Honor Societies
Honorary academic societies are open to students of outstanding accomplishment. Multidiscipline honor societies at Berkeley include Golden Key International Honour Society, Mortar Board National College Senior Honor Society, National Society of Collegiate Scholars (NSCS), Order of Omega (a Greek leadership honor society), Phi Beta Kappa, and Prytanean Women’s Honor Society. Contact specific academic departments for single-discipline honor societies. For more information, visit eil.berkeley.edu, stop by the Center for Student Leadership at 102 Sproul Hall, or call (510) 642-5171.

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 OCF/Publications Center, located at 10 Eshleman Hall, call (510) 643-2981, or visit asucstudentaffairs.berkeley.edu.

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 website (learning.berkeley.edu/buj) 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, email the publication adviser at buj@learning.berkeley.edu or visit learning.berkeley.edu/buj.

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, email the editors at bsj@ocf.berkeley.edu or visit ocf.berkeley.edu/~bsj.

Office of Student Affairs
The Office of Student Affairs within the ASUC Auxiliary offers fiscal advice and program assistance to more than 400 ASUC-funded student groups.
For information, call (510) 642-4536, stop by 400 Eshleman Hall, or visit asucstudentaffairs.berkeley.edu.

Student Life Advising Services/ Educational Opportunity Program
Student Life Advising Services and the Educational Opportunity Program (SLAS/EOP) is an academic counseling unit that practices a holistic, multicultural, and solution-focused approach in assisting students to balance their personal responsibilities with the academic demands of Berkeley. In a welcoming environment, students receive assistance with transitioning to college, effectively navigating the Berkeley campus, selecting courses, choosing a major, fulfilling requirements, exploring career options, and preparing for life after Cal. SLAS/EOP recognizes the challenges and responsibilities that come with being a low-income, first-generation, or historically underrepresented student. This understanding is central to their academic counseling philosophy and approach. SLAS/EOP assists students in resolving various extenuating circumstances and unexpected crises that can impact their lives—often connecting students with an extensive campus referral network and serving as an advocate.
Academic counselors and peer academic counselors are available for both drop-in and scheduled appointments Monday through Friday, from 9:00 a.m. to 4:30 p.m. You can schedule an appointment in advance by visiting SLAS/EOP at 119 César Chávez Student Center or calling (510) 642-7224. For more information, visit eop.berkeley.edu or join the EOP@Cal Facebook page.

Transfer, Re-entry, and Student Parent Center
The Transfer, Re-entry, and Student Parent Center (TRSP), a unit of the Division of Equity and Inclusion, offers a broad range of academic support services to students who transfer to Berkeley from other institutions, who are returning to their course of studies, or are combining school with parenting. We also provide assistance to military veterans and former foster youth students at Berkeley. These programs serve an overlapping population of about 5,000 students. The center provides services and programs designed to enhance academic achievement and student life experiences.
Major activities include academic courses to help TRSP students make an effective transition to Cal and enhance their academic success; orientations and community-building events; an Outstanding Faculty Speakers lunch series; the Starting Point Mentoring Program of outreach by current students to community colleges; and resource information and referral to the campus at large.
TRSP is located at 100 César Chávez Student Center. For more information, visit trsp.berkeley.edu or call (510) 642-4257.
Exceptional professors, experts in every field, are at the heart of the Berkeley experience. Robert Reich, professor of public policy and former U.S. secretary of labor, is a sought-after commentator in the national media, but Berkeley students learn from him first-hand in his undergraduate course, Public Policy 103, Wealth and Poverty—and in the “salon” he conducts with students after each lecture.
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.

Applying for Admission

Admissions

Most general admissions questions can be answered online via “Ask Oski,” the Office of Undergraduate Admissions virtual adviser, at admissions.berkeley.edu. There you will find information on how to apply, admissions policy, tuition and fees, scholarship opportunities, and more. You can apply to as many UC campuses as you wish, using one application form. (Note: 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 period. 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 transfer applicants at the freshman or sophomore level, nor 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 Tuition, Fees, and Financial Aid, beginning on page 65.

Application Fees and Fee Waivers

The basic application fee of $60* entitles you to apply to one University campus. If you apply to more than one campus, you must pay an additional $60* for each campus you select. These fees are not refundable. You must submit your fees with the application or the application will not be processed.

The University will waive application fees for up to four campuses in order to assist students for whom payment is a barrier to application to the University. Students who qualify for fee waivers and who select more than four campuses must pay $60* for each additional choice. For the fee waiver request, please provide your family income and the number of dependents. The fee waiver program is for U.S. citizens and permanent residents only.**

There are two ways to obtain a fee waiver:

(1) You can apply for a fee waiver when you submit an online application. You will be notified immediately if you qualify.

(2) You may submit the College Board fee waiver. Applications for this waiver are available from your high school counselors.

Competitive Admission at Berkeley

All programs at Berkeley receive more applications than they can accept. For fall 2011, Berkeley admitted 12,525 of 50,945, or about 25 percent of freshman applicants, and approximately 3,920 of 16,002, or about 25 percent of 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 pages 512 and 513 in the Appendix of this catalog for more information on selection criteria for the Berkeley campus. You can also obtain information at admissions.berkeley.edu.

*The international student (nonimmigrant) application fee for fall 2011 admission is $70.

** All application fees and fee waivers are subject to change.
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 after high school graduation. If you only attended college/university summer term immediately after graduating from high school, you are still a freshman applicant.

Freshman Admission Requirements

New Qualifications

Effective for the fall 2012 entering class, UC’s freshman admission requirements have changed. The new requirements are:

• complete at least 11 of the 15 required “a-g” courses before the start of 12th grade; and
• earn a UC GPA of 3.0 (3.4 for nonresidents).

If you want to enter the University of California as a freshman, you need to satisfy the following requirements:

• meet the subject requirement by completing a minimum of 15 college-preparatory courses (“a-g” courses), with at least 11 finished prior to the beginning of your senior year;
• earn a GPA of 3.0 or better (3.4 for nonresidents) in these courses with no grade lower than a C; and
• meet the examination requirement by taking the ACT With Writing or the SAT by December of your senior year. Note: UC no longer requires SAT Subject Tests (except to qualify for consideration of admission by examination alone), but certain programs at Berkeley recommend them. For more details, see Examination Requirement on page 34.

In addition, applicants who are residents of California will be guaranteed admission somewhere in the UC system if space is available, and they:

• rank in the top 9 percent of all high school graduates statewide (according the UC admissions index: universityofcalifornia.edu/admissions/freshman/california-residents/admissions-index/index.html) or
• rank in the top 9 percent of their California high school graduating class (the local context), as determined by UC.

All qualified California students will have their applications reviewed comprehensively by all UC campuses to which they apply and will compete for available seats. Berkeley will assess its applicants’ qualifications using its comprehensive review process.

Nonresident Applicants: Nonresident applicants must meet the same requirements as California-resident students but with a minimum GPA of 3.4. Nonresidents are not guaranteed admission. Berkeley is competitive; far more students apply than can be enrolled. To be a competitive applicant, it is recommended that you go beyond the minimum requirements.

Qualifying in the Local Context

If you rank in the top 9 percent of students in your California high school class—and your high school participates in our Eligibility in the Local Context (ELC) program—you can qualify for admission to UC. If your school participates in the ELC program—which most California high schools do—we will identify the top 9 percent of students on the basis of GPA in UC-approved coursework completed in the 10th and 11th grades. To be considered for ELC, you must have a minimum GPA of 3.0 and complete the following “a-g” courses prior to your senior year:

<table>
<thead>
<tr>
<th>Subject Requirement</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>History/social science</td>
<td>1 year</td>
</tr>
<tr>
<td>English</td>
<td>2 years</td>
</tr>
<tr>
<td>Mathematics</td>
<td>2 years</td>
</tr>
<tr>
<td>Laboratory science</td>
<td>1 year</td>
</tr>
<tr>
<td>Language other than English</td>
<td>1 year</td>
</tr>
<tr>
<td>College-preparatory elective</td>
<td>4 year-long courses or equivalent</td>
</tr>
<tr>
<td></td>
<td>(chosen from the subjects listed</td>
</tr>
<tr>
<td></td>
<td>above or another course approved</td>
</tr>
<tr>
<td></td>
<td>by the University)</td>
</tr>
</tbody>
</table>

After you enter your coursework and grades in your application, we’ll compare your GPA to the historic top GPA for your school. If you meet or exceed that GPA, you’ll be designated ELC.

Subject Requirement

Students must complete 15 year-long high school (“a-g”) courses. At least seven of them need to be taken in their last two years of high school and 11 need to be taken prior to senior year. For California applicants, these courses must be included on their high school’s UC-certified course list; visit doorways.ucop.edu/list for course lists.

Required “a-g” courses:

a. History/Social Science: 2 years required. Two years of history/social science, including one year of world history, cultures, and geography; and one year of U.S. history or one-half year of U.S. history and one-half year of civics or American government.

b. English: 4 years required. Four years of college-preparatory English that include frequent and regular writing, and reading of classic and modern literature. No more than one year of ESL-type courses can be used to meet this requirement.
c. **Mathematics:** 3 years required; 4 years **recommended.** Three years of college-preparatory mathematics that include the topics covered in elementary and advanced algebra and two- and three-dimensional geometry. Approved integrated math courses may be used to fulfill part or all of this requirement, as may math courses taken in the seventh and eighth grades that your high school accepts as equivalent to its own math courses.

d. **Laboratory Science:** 2 years required; 3 years **recommended.** Two years of laboratory science providing fundamental knowledge in at least two of these three foundational subjects: biology, chemistry, and physics. Advanced laboratory science classes that have biology, chemistry, or physics as prerequisites and offer substantial additional material may be used to fulfill this requirement, as may approved engineering courses or the final two years of an approved three-year integrated science program that provides rigorous coverage of at least two of the three foundational subjects.

e. **Language Other than English:** 2 years required; 3 years **recommended.** Two years of the same language other than English. Courses should emphasize speaking and understanding, and include instruction in grammar, vocabulary, reading, composition, and culture. Courses in languages other than English taken in the seventh and eighth 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):** 1 year **required.** A single yearlong approved arts course from a single VPA discipline: dance, drama/theater, music, or visual art.

g. **College-Preparatory Electives:** 1 year **required.** One year (two semesters), in addition to those required in “a-f” above, chosen from the following areas: engineering, technology, 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).

**Eligibility by Examination Alone**

Freshman applicants who don’t meet UC’s minimum requirements may still be considered for admission by earning high scores on the ACT With Writing or the SAT, plus two SAT Subject Tests. To qualify for consideration for admission to UC by examination alone, students must earn a minimum UC Score total—calculated according to instructions listed on the UC website—of 410 (425 for nonresidents). In addition, students must achieve a minimum score of 580 on each component of the SAT or 25 on the ACT composite and ACT With Writing test and 580 on each SAT Subject Test.

Students may not use an SAT Subject Test to meet these requirements if they have completed a transferable college course with a grade of C or better in that subject.

An applicant who currently is attending high school may qualify for admission to UC by examination alone without completing his or her high school program. For more information, visit universityofcalifornia.edu/admissions/freshman/requirements/examination.

**Additional Resources**

For details about the University of California’s application requirements, visit the UC Admissions website at universityofcalifornia.edu/admissions. Other helpful links include:

- **Academic Requirements:** universityofcalifornia.edu/admissions/freshman/requirements.
- **Guaranteed Admission:** universityofcalifornia.edu/admissions/freshman/california-residents.
- **Comprehensive Review:** universityofcalifornia.edu/admissions/freshman/how-applications-reviewed.
Admission as a Transfer Student

Berkeley has a strong commitment to transfer students and has worked to develop programs to assist students with the transfer process. Following the California 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 2010 the campus was able to admit 3,923 of 15,112 transfer applicants, or about 26 percent. 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—students who have or will have completed at least 60 UC-transferable semester units. All applicants should complete all required units, major prerequisites, and general education requirements by the end of the preceding spring semester for fall admission.

You can find more information concerning general admission requirements to the University of California system online at universityofcalifornia.edu/admissions. For specific information on preparing to transfer to Berkeley, see the Appendix in this catalog and the announcements of the individual colleges and schools. You can also obtain information online at admissions.berkeley.edu, where you can “Ask Oski,” Admission’s virtual adviser.

Minimum Admission Requirements for Transfer Students

Requirements for California Residents*

The University considers you a transfer applicant if you enrolled in a regular session at another college or university, except while in high school or summer session immediately following high school. (You can’t disregard your college record and apply as a freshman.)

Junior-Level Transfer—The vast majority of transfer students come to the University at the junior level from California community colleges. To be eligible for admission to UC as a transfer student, you must fulfill the following:

- Complete 60 semester (90 quarter) units of transferable college credit. No more than 14 semester (21 quarter) units may be taken passed/not passed.
- Complete general education requirements, which vary by college/department. For more specific details, download Berkeley’s “Transfer Admission” flyer from the Admissions website at students.berkeley.edu/admissions/general.asp?id=28.
- Complete courses for your major.

We review all information, both academic and non-academic/personal, in the context of each student’s individual circumstances. To be competitive, present an academic profile with strong grades that includes preparation for your intended major/college. Junior transfer admission is limited to students who will have completed a minimum of 60 UC-transferable semester units by the end of spring term prior to fall admission and have a competitive GPA.

Most programs will not offer admission to students with excess units, i.e., more than 80 UC-transferable semester units before enrollment. Note: If all coursework was completed at a two-year college, this excess unit policy does not apply.

Obtain information on all requirements on ASSIST at assist.org. ASSIST lists Berkeley requirements and the California community college courses approved as satisfying those requirements. If you are applying from a school other than a California community college, select “UC Berkeley” and then any community college from the pull-down menu on ASSIST. You will then have access to Berkeley requirements; take comparable courses at your school.

Requirements for Nonresidents

The minimum eligibility requirements for nonresident transfer applicants are the same as those for residents except that nonresidents must have a GPA of 2.8 or higher in all transferable college coursework.

Transfers from Other UC Campuses

If you are/were registered on any campus of the University in a regular session (not summer only), 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: Transfer applicants from another UC campus 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, tuition and fees, expenses, housing, and travel at admissions.berkeley.edu.

*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 and fee purposes is different than that for admission purposes. If you have questions about your residency status, see the Appendix in this catalog or visit the Office of the Registrar’s website at registrar.berkeley.edu.
Berkeley Faculty

Full-time: 1,582*
Part-time: 500*
Departments: 130 academic and 80+ interdisciplinary research units
Student-to-faculty ratio: 15.1 to 1†
Undergraduate classes with fewer than 30 students: 74%†
Nobel laureates: 8
National Academy of Sciences: 135
National Academy of Engineering: 91
Guggenheim fellows: 360
MacArthur fellows: 32
Pulitzer Prize winners: 4
Alfred P. Sloan faculty fellowships: 115
American Academy of Arts and Science fellows: 221

*As of 2010; see berkeley.edu/about for current information.
† As of fall 2009

Readmission

If you matriculated then formally withdrew 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 June 1 for fall admission and November 1 for spring admission. Applications must be accompanied by a $60 readmission fee. If you attended other colleges or universities while you were away from Berkeley, you must send official transcripts to Berkeley immediately. Additional information is available at admissions.berkeley.edu. (Click on the “Current Applicants” tab, or search Ask Oski, our virtual adviser.)

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 GPA of at least 3.3), but need additional undergraduate coursework for a specific and clearly defined purpose. Currently 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. Currently, only the College of Chemistry 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 GPA 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 coursework but not a degree in a new field, you should apply for limited status (see Limited Status, at left) instead.

In practice, Berkeley admits very few students to the limited status or second bachelor’s programs each year. 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 more information, call (510) 642-4111.
Registration and Enrollment in Classes

Tele-BEARS

Tele-BEARS is an online enrollment system that allows you to enroll in classes at Berkeley. You use Tele-BEARS to add, drop, or make other changes to your class schedule.

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 up to 16 units. You may then add and drop courses during the adjustment period, which starts one week before instruction. During Adjustment Period, you may enroll in courses up to your college or school maximum.

Access to Tele-BEARS is regulated by pre-assigned appointments that are spread throughout each phase period. 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 online via Bear Facts. (See Bear Facts, at right, for how to access Bear Facts.) The Office of the Registrar will send you a notification by email when the appointments are available.* If you require academic advising, you will also 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 online 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 at (510) 642-4970 for information. Once you have selected your classes, you are ready to use Tele-BEARS to enroll.

Pay Tuition and Registration Fees—A monthly billing statement indicating all University tuition and registration fees due will be generated for you and posted online by the Student Billing Services office. You may pay your tuition and fees in full or in five installments on the Deferred Payment Plan. Tuition and fee payments (either in full or the first installment) are due on August 15 for the fall semester and January 15 for the spring semester. For more information, visit the Student Billing Services website at studentbilling.berkeley.edu.

The Deferred Payment Plan—You may pay your tuition and 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 installment; subsequent statements for the remaining payments will be generated for you automatically. For full information about the Deferred Payment Plan, visit the Student Billing Services website at studentbilling.berkeley.edu.

Criteria for Being an Officially Registered Student—To be officially registered at Berkeley, you must meet three criteria:

1. You must be enrolled in at least one course.
2. Your tuition and registration fees must have been paid, either in full or, if on the Deferred Payment Plan, at least the first installment.
3. You must have no blocks against your registration.

Note: You must be officially registered to use campus services (e.g., the library, RSF).

Bear Facts

Bear Facts provides critical information regarding your registration, grades, financial aid, billing, class schedule, and more. You can access Bear Facts at bearfacts.berkeley.edu.

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

**New undergraduate students receive Phase I appointments and their Adviser Code (AC) from New Student Services (nss.berkeley.edu). You are strongly encouraged to attend a CalSO orientation, where you will get this information and enroll in classes.
Planning for and Declaring a Major

Your major is your opportunity to study a discipline or interdisciplinary area in depth, so be sure to choose a major you are passionate about. Berkeley offers an astonishing range of major programs. You can use this catalog as a starting point to learn about the options available to you. Advisers in your college and in the departments you are considering will also be an invaluable resource to you as you weigh and explore your options.

In some colleges, students are admitted directly into a major program. If you have been admitted as an undeclared student, view your first year as a time of exploration. Do not choose your major prematurely: many of the fields taught at Berkeley will be unfamiliar to you, so there is no way anyone would reasonably expect you to choose one as soon as you arrive. Try courses in a variety of fields that tempt you, and be on the lookout for the discipline that asks and answers the kinds of questions you find most vital and compelling.

Keep an eye on the lower division prerequisites for all of the majors of possible interest, so you can build them in to your class schedule for the first two years where possible. Be on the lookout for courses that are prerequisite to more than one major of possible interest to you. But also remain open to the possibility that a course you are taking just for breadth credit may lead you unexpectedly to a major that you find rewarding and compelling.

Some majors are capped: they cannot accommodate all interested students. If you are drawn to a capped major, it is particularly important to consult with the major adviser early on to maximize your chances of being chosen, and to have a non-capped major in mind as a second option.

Regulations and procedures for declaring the major, or changing your major, vary by college. In general, you will be expected to choose a major by the end of your sophomore year.

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.

*Generally speaking, students in the College of Engineering must apply to change majors by no later than the second semester of their sophomore year.

Undergraduate Majors and Degrees

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 and Asian Diaspora Studies, B.A.
Astrophysics, B.A.
Business Administration, B.S.
Celtic Studies, B.A.
Chemical Biology, B.S.
Chemical Engineering, B.S.
Chemistry, B.A. or B.S.
Chicano Studies, B.A.
Chinese Language, B.A.
Classical Civilizations, B.A.
Classical Languages, B.A.
Cognitive Science, B.A.
Comparative Literature, B.A.
Computer Science, B.A. or B.S.
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.

*Undergraduate specializations: Geology, Geophysics, Environmental Earth Science, Atmospheric Science, Marine Science
Economics, B.A.
Engineering, B.S.


English, B.A.
Environmental Economics and Policy, B.S.
Environmental Sciences, B.S.
Ethnic Studies, B.A.
Film, B.A.
Forestry and Natural Resources, B.S.
French, B.A.
Gender and Women’s Studies, 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.

CAL Quiz

No. 10

On what occasion did an Army chaplain offer a prayer that included the plea, “Oh, God, bless all the schools and colleges, and especially the University of California”? (Answer on page 532.)
Latin, B.A.
Latin American Studies, B.A.
Legal Studies, B.A.
Linguistics, B.A.
Mathematics, B.A.
Mathematics, Applied, B.A.
Media Studies, B.A.
Microbial Biology, B.S.
Middle Eastern Studies, B.A.
Molecular and Cell Biology, B.A.
Molecular Environmental Biology, B.S.
Molecular Toxicology, B.S.
Music, B.A.
Native American Studies, B.A.
Near Eastern Studies, B.A.
Nutritional Science, B.S.
Operations Research and Management Science, B.A.
Peace and Conflict Studies, B.A.
Philosophy, B.A.
Physics, B.A.
Political Economy, B.A.
Political Science, B.A.
Psychology, B.A.
Public Health, B.A.
Religious Studies, B.A.
Rhetoric, B.A.
Scandinavian, B.A. (Danish, Norwegian, Swedish)
Slavic Languages and Literatures, B.A.
Social Welfare, B.A.
Society and Environment, B.S.
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.4

**Minors**

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

African American Studies
Anthropology
Applied Language Studies (UGIS)
Art History
Art Practice
Asian Studies
Astrophysics
Celtic Studies
Classics
Creative Writing (UGIS)
Dance and Performance Studies
Demography
Disability Studies (UGIS)
Dutch Studies
Earth and Planetary Science
East Asian Languages and Cultures
English
Ethnic Studies
French
Gender and Women’s Studies
Geography
German
Global Poverty and Practice
Interdisciplinary Human Rights (UGIS)
Italian Studies
Jewish Studies
Lesbian, Gay, Bisexual, and Transgender Studies
Linguistics
Mathematics
Medieval Studies
Middle Eastern Studies
Music
Near Eastern Studies
Peace and Conflict Studies
Philosophy
Physics
Political Economy
Public Policy
Rhetoric
Scandinavian
Slavic Languages and Literatures
South and Southeast Asian Studies
South Asian Archaeology
Spanish and Portuguese
Statistics
Theater and Performance Studies

We came to college as adults prepared to assert independence. College fosters growth and instills skills necessary to survive in the world. Coddling will not do. Initiative should be rewarded.

1st-year roommates

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1 The Haas School of Business requires completion of 60 semester units for admission into its program.
2 A chemistry major may be taken either in the College of Chemistry (B.S.) or in the College of Letters and Science (B.A.).
3 Computer 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.).
4 Applicants interested in vision science should apply for optometry and contact an adviser after admission.

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**CAL Quiz No. 11**

Who proposed building a ski lift on campus, and, given the absence of snow, for what purpose?

(Answer on page 532.)
The College of Natural Resources offers these minors:
- Conservation and Natural Resource Studies
- Environmental Economics and Policy
- Forestry
- Molecular Toxicology
- Nutritional Science

Minors are also offered in the College of Engineering, the College of Environmental Design, the School of Education, and the Goldman School of Public Policy. For more detailed information and lists of the minors available, see the individual colleges and schools in the Courses and Curricula section of this catalog.

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: Entry-Level Writing and American History and Institutions.

Entry-Level Writing Requirement

The University assumes that you are proficient in English and in writing about academic topics. Fulfillment of the University of California Entry-Level Writing requirement is a prerequisite to enrollment in all reading and composition courses. If you have not passed the Analytical Writing Placement Examination (AWPE) or otherwise fulfilled the requirement by the time you enter the University, you should enroll in College Writing R1A during your first semester. College Writing R1A is a 6-unit course that satisfies the Entry-Level Writing requirement and the first half of the Reading and Composition requirement.

In addition to a passing score on the AWPE, the Office of Undergraduate Admissions accepts the following means of fulfilling the Entry-Level Writing requirement before you enter the University:
- A minimum score of 680 on the SAT Reasoning Test, Writing Section;
- A minimum score of 680 on the SAT II: Subject Test in Writing;
- A minimum score of 30 on the ACT combined English/Writing Test;
- 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 minimum score of 6 on the International Baccalaureate Standard Level English and Exam; and
- 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 (AH&I)

The AH&I 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.

Satisfying the AH&I Requirements Before Enrolling at Berkeley

Both the American History and American Institutions requirements may be satisfied in one of the following ways:
- **High School Coursework**—By fulfilling the portion of the “a” subject requirement for freshman 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 letter grades of C or better.
- **Advanced Placement or SAT Exam**—By passing the high school Advanced Placement American History exam with a score of 3 or better; or the SAT Subject Test (formerly Achievement Test) in U.S. history with a score of 550 or better (500 or better if taken before April 1995). *Note: Only the American Institutions requirement may be satisfied by passing the high school Advanced Placement U.S. Government exam with a score of 3 or better.*
- **International Baccalaureate Exam**—By passing the International Baccalaureate Higher Level (IBHL) History of the Americas exam with a score of 5, 6, or 7.
- **Other College or University Coursework**—By passing with a grade of C or better or P, 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. Students may also visit assist.org to find California community college courses that have been approved to satisfy the AH&I requirements. Inquiries about specific courses at institutions other than a California community college should be directed to the Office of Undergraduate Admissions, 110 Sproul Hall.
- **For students transferring from another UC campus**—By passing any course or courses that satisfy the AH&I requirements of that campus.

(continued on next page)
Satisfying the AH&I Requirements After Enrolling at Berkeley

Note: After enrolling at Berkeley, students who have not already satisfied the AH&I requirements must complete two courses: one course to satisfy the American History requirement and one course to satisfy the American Institutions requirement.

• UC Berkeley Coursework—By passing with a grade of C- or P, at Berkeley, after July 1, 2005, History 7A, 7B, 130B, 131A, 131B, or 138 for the History requirement; and Political Science 1, 1AC, or 108A for the Institutions requirement. (Note: These courses are not necessarily offered every semester or year. Check with the department to find out when a course will be offered.) From fall 1988 through summer 2005, only History 7A or 7B satisfied the History requirement, and only Political Science 1 satisfied the Institutions requirement. Political Science 100 satisfied the Institutions requirement from spring 1985 to spring 1995. (Students who took other courses before fall semester 1988 may check with the Registrar’s office for possible AH&I credit.)

• Other College or University—By passing with a grade of C or better or P, a course or courses at another collegiate institution, approved by the Admissions office.

• Combination of UC Berkeley and Other College or University—By mixing these alternatives (i.e., taking an approved course at Berkeley for one requirement and an approved course at another college for the other requirement).

• New Students—You can check the status of your AH&I requirements by logging into Bear Facts (bearfacts.berkeley.edu) midway through your first semester at Berkeley.

International Students:
The AH&I requirements will be waived if you have at least 90.5 semester units (senior status) and hold both a current, non-immigrant visa (F is the most common) and an I-94 departure record. You must present your visa and I-94 record to the Office of the Registrar, 120 Sproul Hall, during the semester in which you will graduate.

Frequently Asked Questions: Visit the Registrar’s website at registrar.berkeley.edu/current_students/registration_enrollment/ahi.html.

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.

1959: Pete Newell coaches the Golden Bears men’s basketball team to the national championship. They’re runnerup 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.

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.

(continued on next page)
Berkeley Campus American Cultures Breadth Requirement

The American Cultures requirement is a Berkeley campus requirement, the one course that all undergraduate students at Cal need to take and pass 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. The requirement was instituted in 1991 to introduce students to the diverse cultures of the United States through a comparative framework. Courses are offered in more than forty departments in many different disciplines at both the lower and upper division level.

The American Cultures requirement and courses constitute a new approach that responds directly to the problem encountered in numerous disciplines of how better to present the diversity of American experience to the diversity of American students whom we now educate.

Faculty members 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 American 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.

These courses focus upon how the diversity of America’s constituent cultural traditions have shaped and continue to shape American identity and experience. This is not an ethnic studies requirement, nor a Third World cultures requirement, nor an adjusted Western civilization requirement, nor courses on racism.

Visit the online Schedule of Classes (schedule.berkeley.edu) or the American Cultures website (americancultures.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 Entry-Level Writing 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
- Anthropology
- Asian American and Asian Diaspora Studies
- Celtic Studies
- Chicano Studies
- College Writing
- Comparative Literature
- English
- Environmental Design
- Film and Media
- French
- Gender and Women’s Studies
- German
- History
- Italian
- Legal Studies
- Letters and Science
- Linguistics
- Native American Studies
- Near Eastern Studies
- Rhetoric
- Scandinavian
- Slavic Languages and Literature
- South and Southeast Asian Studies
- Spanish and Portuguese
- Theater

You can also satisfy this requirement by taking courses offered during Summer Sessions. For more information, visit summer.berkeley.edu.

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 GPA 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.

Senior 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 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 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. Also, see 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 when you access 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. If for any reason you do not meet the requirements for graduation after declaring your candidacy, you must file a new declaration in the filing period for the subsequent term 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 “Candidate for Bachelor’s Degree” form. The form is also available at registrar.berkeley.edu under “current students/forms.” It can be mailed to Office of the Registrar, 124 Sproul Hall, University of California, Berkeley; Berkeley, CA 94720-5404. The filing deadline is the same as that stated above.

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

2000: Cal athletes capture four gold medals, eight silver, and one bronze at the 2000 Summer Olympics in Sydney.
2001: Natalie Coughlin wins the first of three straight Swimmer of the Year awards.
2002: Softball wins the first NCAA championship for any women’s sport at Cal.
2004: Men’s golf and rugby win national championships—golf’s first title in the program’s history and rugby’s 13th title in 14 years.
Cal’s contingent of current and former student-athletes who competed at the 2004 Summer Games in Athens captured a total of 15 medals—four gold, seven silver, and four bronze. Swimmer Natalie Coughlin tied the American record for most medals won by a U.S. female in one Olympics with five medals (two gold, two silver, one bronze).
2008: A school record of 17 medals was won at the 2008 Summer Games in Beijing—five gold, nine silver, and three bronze.
2009: The Seattle Storm selected Ashley Walker in the first round of the WNBA draft. She became the first Cal player ever drafted by a WNBA franchise—and guided her team to its first ever Sweet-16 birth in the NCAA Tournament.
2010: The Golden Bears placed ninth for the Directors’ Cup, a national award for best overall collegiate athletics. Cal is one of only three schools in the country to finish in the top 10 each of the past five years.
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

General Rules and Academic Policies

See also the Academic Policies section, beginning on page 73.

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 may not take courses on a passed/not passed basis.

Academic Dismissal

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

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.

Minimum Progress

For undergraduates, normal progress toward a degree requires 30 units of successfully completed coursework each year. If you fail to achieve minimum academic progress, you may continue to be enrolled only with the approval of the dean of your college or school. To achieve minimum academic progress, you must have successfully completed a number of units no fewer than 15 times the number of semesters, less one, in which you have been enrolled on the Berkeley campus. Summer session is not counted as a semester. A course load of 15 units per semester is considered normal. Minimum course load requirements, however, vary by college or school; see the specific college or school announcement for details.

If you enroll in a course load of fewer units than the minimum, you will need to have your schedule approved by the dean of your college or school.

Progress Toward a Degree

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

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

Academic Opportunities

Cross-Registration Programs with Other Schools

Berkeley has cross-registration programs with California State University, East Bay; Mills College; San Francisco State University; Sonoma State University; Holy Names University; John F. Kennedy University; Dominican University; St. Mary’s College; and University of New Orleans. With the approval of your adviser and the dean of your school or college, you may register and pay applicable tuition and 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, other UC campuses, 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 will be subject to a fee of $26 per unit. (Note: Fees are subject to change.)

For more information, call the Office of the Registrar at (510) 642-5990 or email orreg@berkeley.edu.

Studying Abroad

The UC Education Abroad Program (UCEAP) offers a broad spectrum of opportunities for students to gain first-hand experience living in other cultures while progressing toward their bachelor’s degrees. UCEAP 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. Many programs do not require foreign language proficiency. Financial aid recipients qualify for financial assistance while abroad on UCEAP, and scholarships are available for UCEAP students with financial need.

For further information, contact Berkeley Programs for Study Abroad at 160 Stephens Hall, (510) 642-1356, studyabroad.berkeley.edu, or eap.ucop.edu.

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. Berkeley Programs for Study Abroad—160 Stephens Hall, (510) 642-1356, studyabroad.berkeley.edu—has
information on how to participate in non-UC study abroad programs, including a small library of non-UC program materials. Credit for coursework completed is dependent on a review of your final transcript by the Office of Undergraduate Admissions. Before enrolling in any program, consult with the international admission specialists at 110 Sproul Hall, or (510) 642-3246, concerning the transferability of the coursework from 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 25-30 juniors and seniors from all majors during the fall and spring of each year. The academic program allows students to combine coursework at the UC Berkeley 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 at 231 Evans Hall, (510) 642-9102, ucdc@berkeley.edu, or ucdc.berkeley.edu.

Studying abroad is about incredible people, exciting places, growing up, and seeing more. For a year, I had an entire continent as a classroom away from Cal. For me, this experience was an amazing package deal.

EAP participant in Leeds, England (English major)

A student takes copious field notes during her stay in India.
Research and Internships

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

Office of Undergraduate Research (OUR)

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 variety of undergraduate research opportunities at Berkeley, visit the Undergraduate Research website at research.berkeley.edu or email research@learning.berkeley.edu.

Undergraduate Research Apprentice Program (URAP)

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. Over 1,400 students participate in this program each year, working with faculty from nearly every department and college. Visit the URAP website for a current list of faculty projects at research.berkeley.edu/urap.

When students are ready to embark on research of their own design, the Summer Undergraduate Research Fellowship and the Haas Scholars Program offer fellowships that allow students to pursue sophisticated research. For information about these and other programs, visit research.berkeley.edu.

The Office of Undergraduate Research is located in 5 Durant Hall. Call (510) 643-5376.

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 97, 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 (career.berkeley.edu); Work-Study Program, 212 Sproul Hall (workstudy.berkeley.edu); Cal Corps Public Service Center, 505 Eshleman Hall (publicservice.berkeley.edu). Individual internship programs are available through campus-based offices. Look for internships on CalJobs at career.berkeley.edu/callisto/caljobs.stm or consult individual offices and departments.

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.

Freshman and Sophomore Seminars

The Freshman and Sophomore Seminars arose from the conviction that early intellectual contact with faculty members would greatly enhance the undergraduate experience at Berkeley. Professors from nearly every campus department join together each semester 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 courses numbered 84 bear 1 or 2 units of credit; they are limited to 15 sophomores. The courses numbered 39A-39Z are limited to 25 freshmen and sophomores.

Seminars, which emphasize interaction and discussion, provide a counterpoint 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.

Descriptions of all the seminars scheduled for the upcoming semester can be found in time for Tele-BEARS registration on the program’s website, fss.berkeley.edu, which also contains other useful information and features for undergraduates. For additional information regarding the Freshman and Sophomore Seminars, contact the program office at 231 Evans Hall or (510) 642-8378.

DeCal: Student-Initiated Courses

The Program for Democratic Education at Cal (DeCal), a student-run organization, promotes leadership and encourages students to initiate classes that will help maximize their educational experience at Berkeley. While departments have ultimate responsibility for approving and overseeing student-initiated classes, DeCal promotes opportunities for students 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 encouraging progressive, socially responsible courses.

As well as mainstream subjects, DeCal 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 DeCal office at 320 Eshleman Hall, (510) 642-9127, decalprogram@gmail.com, or decal.org.
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 coursework 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, passed/not passed 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: To the Capstone and Beyond is a 2-unit passed/not passed course that supports upper division students who are preparing to or are currently composing a culminating senior thesis, research project, and/or other creative endeavor. The course supplements existing departmental and campus resources that are available to students at various stages of their research processes.

Other Voices is a 2-unit passed/not passed course that supports the efforts of all students who are considering or entering literary studies. The course introduces students to diverse, innovative, and emerging literary cultures.

History 98: Ethnic Perspectives is a 2-unit passed/not passed student-run course and lecture series that provides students the opportunity to survey disciplines within the social sciences through overlooked perspectives.

For more information about these courses and the SLC, visit the reception desk at the César Chávez Student Center on lower Sproul Plaza, call (510) 642-7332, or visit slc.berkeley.edu.
**Student Athletes**
The Athletic Study Center, located in 179 César Chávez 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, visit asc.berkeley.edu.

**Academic Excellence**

**Semester Honors**
To be eligible for semester honors, you must have completed a minimum of 12 units undertaken for letter grades at Berkeley and must have achieved the minimum GPA required by your school or college. Schools and colleges may establish additional criteria that you must also meet.

**Honors at Graduation**
To be eligible for honors in general scholarship at graduation, you must have completed a minimum of 50 semester units at the University of California, of which a minimum of 43 units must be undertaken for a letter grade; completed a minimum of 30 units at Berkeley; and achieved a GPA that ranks you in your school or college in the top 3 percent for highest honors, the next 7 percent for high honors, and the next 10 percent for honors. These criteria are minimal; consult your college or school office.

**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. For more information, contact Undergraduate Scholarships, Prizes, and Honors at (510) 642-3498 or visit students.berkeley.edu/finaid/undergraduates/types_scholarships.htm.

**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 at 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, contact Scholarship Connection at 5 Durant Hall, (510) 643-6929, scholarships@learning.berkeley.edu, or scholarships.berkeley.edu.

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**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!

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**CAL Quiz**

**No. 13**
What was the largest crowd ever to see an event in Memorial Stadium?
(Answer on page 532.)
Attacking problems from all sides, all disciplines

Whether it’s developing clean energy, safer buildings, astounding computers, or the potential to abate disease, students and faculty in Berkeley labs are changing our world. As an example, stem-cell research—and its potential for new treatments for Alzheimer’s, Parkinson’s, and other intractable diseases—is one of many bioscience pursuits in the interdisciplinary, collaborative environment of Stanley Hall.
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 coursework, independent study, and research. Graduate education embraces study for all degrees and certificates beyond the bachelor’s degree—principally the master’s and doctor’s degrees. Graduate degrees fall into two broad categories:

Professional—Degrees awarded by each professional college and school, and some academic departments, 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.

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.

A list of graduate degrees appears later in this section. For more detailed information on graduate degree regulations and procedures, refer to the Guide to Graduate Policy at grad.berkeley.edu/policies/ggp/ggp.pdf.

The Nature of Graduate Education

Graduate study is the pursuit of knowledge through advanced coursework 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 critically examine elected problems within the subject field; (3) as independent study or reading courses; or (4) as research projects conducted under faculty supervision.

Graduate Advisers

Graduate advisers are tenured faculty appointed by the dean of the Graduate Division for each department, school, or group 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; and (3) maintain records of all students enrolled under their jurisdiction. In addition, the head graduate adviser: (1) endorses applications for candidacy for higher degrees and for qualifying examinations; (2) approves 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 frequently appointed in the earlier stages of your training. The individual or research advisers may be the same individuals as the major’s official graduate advisers. You should keep in close touch with your individual adviser and should confer with your official graduate adviser about your program of study.
Applying for Admission

A complete list of graduate academic departments, the degrees offered, and the deadlines for application can be found at grad.berkeley.edu/programs/list.shtml.

You must file a completed application to be considered for admission, in addition to any supplemental documents specific to the program for which you are applying. The online application can be found at grad.berkeley.edu/admissions. Paper applications are also acceptable and can be downloaded from the Graduate Admissions website, cited above, or from the department to which you are applying. Applicants to the master’s programs in the Haas School of Business or programs at the School of Law should not use this application but should contact those schools directly.

You must submit an application fee when you apply. The application fee is not refundable. You may pay the fee by credit card if you apply online. If you submit a check or money order, it must be drawn on a U.S. bank and made payable to “UC Regents.” U.S. citizens or current permanent residents who can demonstrate financial need are eligible to apply for a waiver of the application fee. Contact the Graduate Admissions office at gradadm@berkeley.edu for further information.

Limited Enrollment

Each graduate program at Berkeley has a maximum enrollment, which limits the number of applicants who may be accepted. 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.

Admission Requirements

The minimum graduate admission requirements are: (1) a bachelor’s degree or recognized equivalent from an accredited institution; (2) enough undergraduate work to do graduate work in your chosen field; and (3) a satisfactory scholastic average, usually a minimum GPA of 3.0 (B).

Many departments or groups have additional requirements, including the GRE, TOEFL score minimums, higher GPA minimums, and number of copies of official academic records that must be submitted. Department contact information can be found at grad.berkeley.edu/programs/list.shtml.

Satisfying minimum standards, however, does not guarantee your admission, since the number of qualified applicants far exceeds the number of places available. As a result, many well-qualified applicants cannot be accommodated.

Graduate Record Examination (GRE)

Most departments, schools, and groups require applicants to take a standardized test such as the General Test of the GRE, a Subject Test of the GRE, the GMAT, MCAT, OAT, or LSAT. Check with the department to which you are applying for specific test requirements and deadlines. For more information, or to register for the GRE, consult their website at gre.org or call 1-866-473-4373.

International Applicants

International applicants must fulfill all previously stated admission requirements and have an excellent command of the English language 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 are required to submit official evidence of English language proficiency.

There are two standardized tests you may take, the Test of English Language as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). TOEFL is currently administered in two formats: paper and pencil and Internet based (iBT). Minimum score and other requirements for these tests are listed on the Admissions section of the Graduate Division website. Individual academic departments may choose to require a higher score than the minimum requirement set. Further information on TOEFL can be found online at toefl.org or by calling 1-877-863-3546 or 1-609-771-7100. IELTS information can be found online at ielts.org.

Graduate students who plan to teach but do not speak English as a native language and do not hold a bachelor’s degree from an institution in the United States must demonstrate oral English proficiency to be eligible for appointment as a graduate student instructor (GSI). In those countries where the iBT TOEFL has been introduced, English language proficiency is determined by the speaking section score of the iBT TOEFL. In those countries where the iBT TOEFL is not available, students can demonstrate their proficiency by taking and passing the Test of Spoken English (TSE) before enrolling in Berkeley or the SPEAK test offered on the Berkeley campus. Information on passing scores, testing options, and language courses can be found on the GSI Teaching and Resource Center’s website at gsi.berkeley.edu/tpp.
Special Circumstances

Readmission
If you have previously registered and withdrawn and want to re-enroll or have completed any graduate degree program at Berkeley, you must file an “Application for Readmission,” obtainable from the Registrar’s website. A nontransferable, nonrefundable readmission fee must accompany the “Application for Readmission” when first submitted, or the application will not be reviewed. A “Statement of Legal Residence” ( downloadable from the Registrar’s website) must also be submitted. Note: Approval of readmission is not guaranteed. The Graduate Division and your department, school, or group will review your application and academic record and notify you whether your readmission has been approved.

Duplication of Higher Degrees
Normally, duplication of degrees is not permitted. Students may enroll for a second academic or professional degree if the second degree is in a distinctly different field.

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 and fee 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 for admission 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.
Registration and Enrollment in Classes

Tele-BEARS

Tele-BEARS is an online enrollment system that allows you to enroll in classes at Berkeley. You use Tele-BEARS to add, drop, or make other changes to your class schedule.

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 (up to 16 units for Journalism students, and up to 20.5 units for all other graduate students). 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. 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 online via Bear Facts. (See Bear Facts, at right, for how to access Bear Facts.) The Office of the Registrar will notify you by email when the appointments are available.* If you require academic advising, you will also 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. For more information, see the Office of the Registrar’s website at registrar.berkeley.edu/current_students/registration_enrollment/tbinfo.html.

Enroll in Classes—With the online Schedule of Classes and the General Catalog, you can determine a class schedule. Once you have selected your classes and have obtained your Adviser Code (AC) from your major adviser (if required), you can use Tele-BEARS to enroll. For more information, see the Registrar’s website at registrar.berkeley.edu.

Pay Tuition and Registration Fees—A monthly billing statement indicating all University tuition and fees due will be generated for you and posted online by the Student Billing Services office. You may pay your tuition and fees in full or in five installments on the Deferred Payment Plan. Tuition and fee payments (either in full or the first installment) are due on August 15 for the fall semester and January 15 for the spring semester. For more information, see the Student Billing Services website at studentbilling.berkeley.edu.

The Deferred Payment Plan—You may pay your tuition and 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 generated for you automatically. For full information on the Deferred Payment Plan, see the Student Billing Services website at studentbilling.berkeley.edu.

Criteria for Being an Officially Registered Student—To be officially registered at Berkeley, you must meet three criteria:

1. You must be enrolled in at least one course.
2. Your tuition and registration fees must have been paid, either in full or, if on the Deferred Payment Plan, at least the first installment.
3. You must have no blocks against your registration.

Note: You must be officially registered to use campus services (e.g., the library, RSF).

Bear Facts

Bear Facts provides information regarding your registration, grades, financial aid, billing, class schedule, and more. You can access Bear Facts at bearfacts.berkeley.edu.

Statement of Intention to Register (SIR)

The admission notification to new (including reactivating) graduate students contains a SIR that must be completed. The completed SIR will reserve the registration slot allocated to you. If you do not want to accept the offer of admission, you should complete 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 SIR accepting admission.

*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 graduate students are usually made available in early August for the fall semester and in early January for the spring semester.
Failure to Register

If you do not complete the online “Statement of Intention to Register” or return it but do not register for the semester in which you were admitted, you must reapply 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. 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 an adviser at the Berkeley International Office for further information.

In summary, you must register in any semester in which you are enrolled in formal courses of instruction, taking a comprehensive or qualifying exam, filing a thesis or dissertation, or are making any use of nonpublic University facilities, including access to the faculty.

If your studies or research requires absence from California for the semester, you must file a petition requesting in absentia registration with Graduate Degrees, 318 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 meet with your graduate adviser to approve your class schedule and obtain an Adviser Code (if required).

Cancellation of Registration

Students who have registered and decide before classes begin not to attend Berkeley may cancel their registration. For further information, contact the Office of the Registrar or visit its website at registrar.berkeley.edu.

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. International students on F-1 or J-1 visas should also enroll in 12 units, but there may be exceptional circumstances where they may enroll in fewer units and be considered full-time. For more information, contact the Berkeley International Office at internationaloffice.berkeley.edu. (For information on courses in the 600 series, see page 74.)

Graduate student instructors and graduate student researchers must normally carry a minimum of 12 units, unless advanced to doctoral candidacy.

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. Students planning to withdraw should consult with their department, since readmission following withdrawal is not guaranteed and may be denied. International students with nonimmigrant visas must consult the Berkeley International Office, International House, 2299 Piedmont Avenue, (510) 642-2818, to determine whether they can withdraw without jeopardizing their visa status. For further information, see the Academic Policies section, beginning on page 73.
Graduate Degrees and Certificates

Academic degrees are the M.A., M.S., M.F.A., and Ph.D. All other degrees and certificates are professional. The J.D. (Juris Doctor) is the basic law degree. It is a graduate degree, and if interested you should apply directly to the School of Law.

Graduate degrees and certificates are listed below.¹

African American Studies, M.A., Ph.D.
Agricultural and Resource Economics, M.S., Ph.D.
Ancient History and Mediterranean Archaeology, M.A., Ph.D.
Anthropology, Ph.D.
Applied Mathematics, Ph.D.
Applied Science and Technology, M.S., Ph.D.
Architecture, M.S., M.Arch., Ph.D.
Art, M.F.A.
Asian Studies, M.A., Ph.D. M.A. program emphases:
  - East Asian, Southeast Asian, South Asian
  - Astrophysics, M.A., Ph.D.
  - Bioengineering, M.S., Ph.D.* (joint degree program with UC San Francisco)
  - Biophysics, M.A., Ph.D.*
  - Biostatistics, M.A., Ph.D.*
  - Buddhist Studies, Ph.D.*
  - Business Administration, M.B.A., M.F.E., Ph.D.
  - Chemical Engineering, M.S., Ph.D.
  - Chemistry, Ph.D.
  - Chinese Language (see East Asian Languages and Cultures)
  - City and Regional Planning, M.C.P., Ph.D.
  - Classical Archaeology, M.A., Ph.D.
  - Classics, M.A., Ph.D. M.A. program emphases:
    - Greek, Latin
    - Comparative Biochemistry, Ph.D.*
    - Comparative Literature, M.A., Ph.D.
    - Computer Science, M.S., Ph.D., M. Eng.
    - Demography, M.A., Ph.D.
    - Design (Visual), M.A.
    - Earth and Planetary Science, M.A., Ph.D.
  - East Asian Languages and Cultures, M.A., Ph.D. program emphases: Chinese Language, Japanese Language
  - Economics, Ph.D.
  - Education, Teaching Credential, M.A., Ph.D., Ed.D.
  - Endocrinology, M.A., Ph.D.
  - Energy and Resources, M.A., M.S., Ph.D.*
  - Engineering and Engineering Science, M.S., Ph.D.
  - English, M.A., Ph.D.
  - Environmental Health Sciences, M.S., Ph.D.*
  - Environmental Science, Policy, and Management, M.S., Ph.D.*
  - Epidemiology, M.S., Ph.D.*
  - Ethnic Studies, M.A., Ph.D.*
  - Folklore, M.A.
  - Forestry, M.F.
  - French, M.A., Ph.D.
  - Geography, Ph.D.
  - Geology (see Earth and Planetary Science)
  - Geophysics (see Earth and Planetary Science)
  - German, M.A., Ph.D.
  - Greek (see Classics)
  - Health and Medical Sciences, M.S. (UCB-UCSF Joint Medical Program)*
  - Health Services and Policy Analysis, Ph.D.*
  - Hispanic Languages and Literatures, M.A., Ph.D.
  - History, M.A., Ph.D.*
  - History of Art, M.A., Ph.D.
  - Infectious Diseases and Immunity, Ph.D.*
  - Information Management and Systems, M.I.M.S., Ph.D.
  - Integrative Biology, M.A., Ph.D.*
  - Italian Studies, M.A., Ph.D.
  - Japanese Language (see East Asian Languages and Cultures)
  - Jewish Studies, Ph.D.* (joint degree program with Graduate Theological Union)
  - Journalism, M.J.
  - Jurisprudence and Social Policy, M.A., Ph.D.*
  - Landscape Architecture, M.A., Ph.D.
  - Landscape Architecture and Environmental Planning, Ph.D.
  - Latin (see Classics)
  - Latin American Studies, M.A.
  - Law, J.D., LL.M., J.S.D.
  - Linguistics, M.A., Ph.D.
  - Logic and the Methodology of Science, Ph.D.*
  - Mathematics, M.A., Ph.D.
  - Medical Anthropology, Ph.D. (joint degree program with UC San Francisco)
  - Microbiology, Ph.D.*
  - Molecular and Biochemical Nutrition, M.A., Ph.D.*
  - Molecular and Cell Biology, Ph.D.
  - Molecular Toxicology, M.S., Ph.D.*
  - Music, M.A., Ph.D.*
  - Near Eastern Religions, Ph.D.* (joint degree program with the Graduate Theological Union)
  - Near Eastern Studies, M.A., Ph.D.*
  - Neuroscience, Ph.D.*
  - Optometry, O.D. (Residency Program, Cert.)
  - Performance Studies, M.A., Ph.D.*
  - Philosophy, M.A., Ph.D.
  - Physics, M.A., Ph.D.*
  - Plant Biology, Ph.D.
  - Political Science, Ph.D.
  - Psychology, Ph.D.*

¹For the most up-to-date list, refer to the Graduate Division Admissions website at grad.berkeley.edu/programs/list.shtml.

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

†Indicates established interdisciplinary group or field.

¹For the most up-to-date list, refer to the Graduate Division Admissions website at grad.berkeley.edu/programs/list.shtml.

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

†Indicates established interdisciplinary group or field.
Public Health, M.P.H., Dr.P.H.
Public Policy, M.P.P., Ph.D.
Range Management, M.S.†
Rhetoric, M.A.,* Ph.D.
Romance Languages and Literatures, Ph.D. Emphases:
French, Italian, Spanish†
Scandinavian Languages and Literatures, M.A.,* Ph.D.
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.†

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 Inez Bailey at the Optometric Residency Program, 230 Minor Hall, School of Optometry, University of California, Berkeley; Berkeley, CA 94720-2020; or inezb@berkeley.edu.

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. New concurrent degree proposals may be pending approval. For all concurrent degrees, refer to the Graduate Division website.
Architecture, M.Arch.—City and Regional Planning, M.C.P.
Architecture, M.Arch.—Civil and Environmental Engineering, M.S.
Asian Studies, M.A.—Law, J.D.
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.
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.—Journalism, M.J.
Public Health, M.P.H.—School of Medicine, UC San Francisco (M.D.)
Public Policy, M.P.P.—Engineering, M.S. (Civil and Environmental Engineering, Electrical Engineering and Computer Sciences, Industrial Engineering and Operations Research, Materials Science and Engineering, Mechanical Engineering, Nuclear Engineering)
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.
Social Welfare, M.S.W.—Public Health, M.P.H.

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 an approved focus representing 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. It is not in itself a degree program. For a list of current designated emphases, see page 62.

Teaching Credentials
Courses leading to the multiple subject or single subject teaching credentials are offered on the Berkeley campus. For details, visit the Graduate School of Education website at gse.berkeley.edu.

* Students may not apply for the M.A./M.S. degree only, although it may be awarded to students pursuing work toward the Ph.D. degree after fulfillment of the appropriate M.A./M.S. requirements.
† Indicates established interdisciplinary group or field.
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, contact the individual 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.

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. 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 4 semester units or 6 quarter units. Requests to the graduate dean may be made at the time of advancement to candidacy.

A maximum of 4 semester or 6 quarter units completed in graduate status at an institution outside the University of California system 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 overall scholastic record (at least a 3.3 GPA) 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.

Concurrent Enrollment— UC Berkeley Extension

Courses taken concurrently through UC Berkeley 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.

Academic Master’s Degree Plans

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, major, or group. (Units may adopt either or both plans and will, in the latter case, designate which plan you are to follow.)

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.

Note: Your major may require additional units beyond the minimums described above for Plans I and II. Further requirements are specified by the major department.

Advancement to Candidacy

When you complete the requirements for your degree, you will not 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 Graduate Division will also not accept a thesis that involves human or animal subjects without official evidence of an approved protocol number from the appropriate committee.

Use of human subjects or animal subjects: If the research for a master’s thesis involves the use of human subjects, the student is required to have an approved protocol from the Committee for Protection of Human Subjects (see cphs.berkeley.edu) before beginning any research. Students using human subjects also must complete the “Course in the Protection of Human Subjects” (referred to as the CITI course), which is available online at Citiprogram.org, and print out the certificate of completion. The certificate of completion must be submitted with the advancement form.

*However, “XB” courses taken at Extension (from fall 2005 on) are transferable to Berkeley transcripts but do not count toward residence requirements.
Students whose research projects involve the proposed use of live vertebrate animals must contact the Animal Care and Use Committee (ACUC) at 642-8855 before the initiation of research and, if so advised by the ACUC: (a) the faculty member who is supervising the research must obtain ACUC approval prior to any proposed use of live vertebrate animals, and (b) the student must ask the ACUC to inform the Graduate Division of the adviser's approved Master Animal Use Protocol number within six months of the advancement to candidacy date.

The Master's Thesis

If you are following Plan I, described above, you must submit a thesis, according to the strict format described in “Instructions for Preparing and Filing Your Thesis or Dissertation” at grad.berkeley.edu/policies/pdf/thesis_guide.pdf.

The thesis explicates results obtained in an original investigation of a problem. The problem in question is discreet in 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. The Graduate Division advises that 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.

If a thesis is not completed within three years, 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 head 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. For filing deadlines, refer to the Graduate Division website at grad.berkeley.edu/policies/degree_filing-deadlines.shtml.

The Doctoral Degree

Berkeley offers both academic and professional degrees. Professional degree programs are outlined by 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 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.

Your major department will offer the majority of your coursework but often recommends 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 for your major.

Foreign Language Requirement

Your program may have a foreign language requirement which 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. 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. This oral exam is required. You must be registered in the semester in which you take the examination. To be eligible to apply to take the qualifying exam, 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 at least a B average in all coursework you undertook in graduate status, and you must have fulfilled any language requirement(s).

Note: Departments, schools, and groups may have performance standards that are higher than the minimum B average required by the Graduate Division. They may also require passage of preliminary examinations before a student is eligible to apply for the qualifying examination.

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 Doctoral Completion Fellowship Program, applications for advancement to candidacy must be submitted by the deadline for this program: the last workday of the fall semester for a fall advancement and June 30 for a spring advancement. The completed form, to be filed with Graduate Services: Degrees, 318 Sproul Hall, is available from the Graduate Division website. It must bear the endorsement of the head graduate adviser and dissertation chair. Payment of a fee is required when you file the application, and you must have completed all doctoral degree requirements except the dissertation before you may be advanced to candidacy.

Reduced Nonresident Supplemental Tuition
For graduate students who have been advanced to candidacy for the doctorate, annual nonresident supplemental tuition is reduced by 100 percent, subject to the understanding that: (1) graduate doctoral students may receive the reduced nonresident supplemental tuition rate for a maximum calendar period of three years; and (2) all such students who continue to be enrolled or who re-enroll after the three-year period will be charged the full nonresident supplemental tuition rate that is in effect at that time.

Normative Time-Doctoral Students
Normative time is the elapsed time (calculated to the nearest semester) that students would need to complete all requirements for the doctorate, assuming they are engaged in full-time study and making satisfactory progress toward their degrees. Normative times for doctoral programs have been recommended by department faculty and approved by the Graduate Council. Normative time has two components:

1) time from the beginning of the student’s graduate work to advancement to doctoral candidacy; and
2) time in candidacy until the dissertation is filed. Most departments at Berkeley have total normative times of five to six years (10 to 12 semesters).

Calculation of Normative Time in Candidacy
The Graduate Division computes a student’s time in candidacy from the semester following the one in which the student has formally been advanced to candidacy, not simply the semester following the qualifying exam. Delays in applying for advancement to candidacy limit the student’s actual time as a candidate and may jeopardize his or her full eligibility for the Doctoral Completion Fellowship, if in a qualified major.

The Doctoral Completion Fellowship (DCF)
DCF provides an incentive for students in participating programs to advance to candidacy within normative time to advancement and to graduate by the expiration of their major’s normative time in candidacy. For eligibility information, fellowship amounts, and a list of departments and graduate groups that participate in the program and fellowship amounts, see grad.berkeley.edu/policies/DCF.shtml.

The Candidate in Philosophy (C.Phil.) Degree
The C.Phil. degree, 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 C.Phil. degree is available from Graduate Services: Degrees, 318 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 but must schedule a meeting with committee members to discuss the progress made or needed upon return. 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, 318 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 coursework 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 “Instructions for Preparing and Filing Your Thesis or Dissertation” at grad.berkeley.edu/policies/pdf/dissertation_guide.pdf.
You are to work under one of two plans, as adopted by the department, school, or group:

Plan A—On behalf of the Graduate Council, the Graduate Division 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—On behalf of the Graduate Council, the Graduate Division 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, you will file your manuscript with the Graduate Division (318 Sproul Hall) according to “Instructions for Preparing and Filing Your Thesis or Dissertation” by the deadline specified for the semester by which you wish to receive your degree. At the same time, you must also file an abstract of the dissertation signed by the committee chair.

See The Master’s Thesis, on page 58, 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
- All other programs not listed above

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 coursework at the host campus. The courses will be posted in the memorandum column of your transcript. If you want to transfer units, see Transfer of Credit from Other Institutions on page 57. No more than 4 semester or 6 quarter 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 of California, you may go to another campus of the University as an Intercampus Exchange Graduate Student with the approval of your head graduate adviser, the chair of the department in which you want to study, the Graduate Division on the home campus, and the Graduate Division on the host campus.

You may obtain an application for the Intercampus Exchange Program for Graduate Students from the Graduate Division (318 Sproul Hall) or 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. (Note: All other UC campuses except UC Merced 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 tuition and fees on your home campus but have library, health services, and other student privileges on your host campus. Note: 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 be transferred 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 tuition and 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 Services: Degrees, 318 Sproul Hall.

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 Services: Degrees, 318 Sproul Hall.

Cross-Registration Agreements with CSU and Other Institutions

Berkeley has cross-registration agreements with the Graduate Theological Union; Mills College; Holy Names University; John F. Kennedy University; Dominican University; and St. Mary’s College. In addition to these established exchanges, any UC Berkeley student can attend a class each semester at any one of the campuses of the California State University.

With the approval of the Graduate Division and your department, you may register and pay applicable tuition and fees at Berkeley and be exempt from tuition and fees at the host campus, except for an administrative fee, depending on the institution. Note: You may enroll for only one host-campus course per semester. Cross-registration applications are available from Graduate Services: Degrees, 318 Sproul Hall.

Studying Abroad

Graduate students may participate in the UC Education Abroad Program (UCEAP). UCEAP offers a diverse range of programs, most of which are available to graduate students, in 34 countries. Many of the programs do not require foreign language proficiency. Approval from your department and from the Graduate Division is required. For further information, contact Berkeley Programs for Study Abroad at 160 Stephens Hall, (510) 642-1356, or studyabroad.berkeley.edu.

Interdisciplinary Graduate Groups

Berkeley has established graduate programs in a number of fields that cut across conventional departmental lines and comprise distinct cores of knowledge. These programs are administered by groups of faculty from several related departments and, in certain instances, from other 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 often gives you access to a range of facilities not ordinarily open to students enrolled in departmental programs, although groups have no facilities of their own, with the exception of two “augmented” graduate groups (Energy and Resources Group and the Nanoscience Group).

Douglas Engelbart, ’52, Ph.D. ’55
Inventor of the computer mouse and pioneer of human-computer interaction

Norman Mineta, ’53
Member, U.S. House of Representatives, 1975–95; U.S. Secretary of Transportation, 2001–2006

Joan Didion, ’56
Author of A Book of Common Prayer, Play It as It Lays, and other books

Thelton Henderson, ’56, J.D. ’62
U.S. District judge

Edwin Meese III, J.D. ’58
U.S. Attorney General, 1985–88

Joe Kapp, ’59
All-America football player; member, Cal and National Football League halls of fame; Cal football coach, 1982–86

Edmund G. “Jerry” Brown, ’61

Rose E. Bird, J.D. ’65
Chief Justice, California Supreme Court, 1977–87

Sara Davidson, ’62
Author of Loose Change and other books

Ron Dellums, M.S.W. ’62

Maxine Hong Kingston, ’62, C.Ed. ’65
Author, The Woman Warrior and other books; Chancellor’s Distinguished Professor at Berkeley, 1990; senior lecturer emerita at Berkeley, 1991-
Following is a current list of graduate groups on the Berkeley campus:

- **Ancient History and Mediterranean Archaeology**
  - ahma.berkeley.edu
- **Applied Science and Technology**
  - ast.coe.berkeley.edu
- **Asian Studies**
  - ias.berkeley.edu/gas
- **Bioengineering (with UCSF)**
  - bioeng.berkeley.edu/gradhome.php
- **Biophysics**
  - biophysics.berkeley.edu
- **Biostatistics**
  - stat.berkeley.edu/biostat
- **Buddhist Studies**
  - buddhiststudies.berkeley.edu
- **Comparative Biochemistry**
  - compbiochem.berkeley.edu
- **Endocrinology**
  - eno.berkeley.edu
- **Energy and Resources**
  - erg.berkeley.edu
- **Environmental Health Sciences**
  - ehs.sph.berkeley.edu
- **Epidemiology**
  - epi.berkeley.edu
- **Ethnic Studies**
  - ethnicstudies.berkeley.edu/graduate
- **Folklore**
  - folklore.berkeley.edu/folk.htm
- **Health and Medical Sciences**
  - jmp.berkeley.edu/about/index.htm
- **Health Services and Policy Analysis**
  - hspa.berkeley.edu
- **Infectious Diseases and Immunity**
  - microbe.berkeley.edu/idgroup/index.html
- **International and Area Studies**
  - ias.berkeley.edu
- **Jewish Studies (with GTU)**
  - jewishstudies.berkeley.edu/phd.html
- **Jurisprudence and Social Policy**
  - law.berkeley.edu/160.htm
- **Latin American Studies**
  - iastp.berkeley.edu/programs.asp
- **Logic and the Methodology of Science**
  - logic.berkeley.edu
- **Medieval Studies**
  - medieval.berkeley.edu
- **Microbiology**
  - pmb.berkeley.edu/~ggm/microbe
- **Molecular and Biochemical Nutrition**
  - nst.berkeley.edu/mnb.html
- **Molecular Toxicology**
  - nst.berkeley.edu/moltox.html
- **Near Eastern Religions (with GTU)**
  - nes.berkeley.edu/graduate_study.html
- **Neuroscience**
  - neuroscience.berkeley.edu/grad/home
- **Performance Studies**
  - tdp.berkeley.edu/programs-courses/graduate-program
- **Range Management**
  - espn.berkeley.edu/gradprograms/grad_programs_msr.php
- **Romance Languages and Literatures**
  - french.berkeley.edu/grad/guide/grad_guide.php#rll (French)
  - spanish-portuguese.berkeley.edu/grad/grad_pages/phdrll.html (Spanish)
- **Science and Mathematics Education**
  - gse.berkeley.edu/program/sesame/sesame.html
- **Sociology and Demography**
  - demog.berkeley.edu/students/socdemog.shtml
- **Urban Design**
  - mud.ced.berkeley.edu
- **Vision Science**
  - vision.berkeley.edu/vsp

**Designated Emphasis Groups**

- **Communication, Computation, and Statistics**
  - eecs.berkeley.edu/CCS
- **Computational and Genomic Biology**
  - qb3.berkeley.edu/cbb
- **Computational Science and Engineering**
  - cse.berkeley.edu/program-details
- **Critical Theory**
  - townsendlab.berkeley.edu/critical-theory
- **Energy Science and Technology**
  - me.berkeley.edu/deest
- **Film Studies**
  - filmstudies.berkeley.edu/des_emphasis.html
- **Folklore**
  - folklore.berkeley.edu/programs/de.php
- **Global Metropolitan Studies**
  - metrostudies.berkeley.edu/emphasis.html
- **Nanoscale Science and Engineering**
  - nano.berkeley.edu/educational/DEGradGroup.html
- **New Media**
  - bcnn.berkeley.edu/academics/degrees
- **Women, Gender, and Sexuality**
  - womensstudies.berkeley.edu/dewgs.html
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 Council permits the informal establishment of ad hoc programs leading to the Ph.D. degree. Note: 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 the field approved. For more information, see the Graduate Division website at grad.berkeley.edu/policies/ad_hoc.shtml.

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 Tuition, Fees, and Financial Aid section, beginning on page 65.

Internships

A number of internships are available to graduate as well as undergraduate students. For information, see Research and Internships on page 46.
Further Information on Rules and Academic Policies

For more exhaustive coverage, see the Graduate Division website for current students (grad.berkeley.edu/current/index.shtml) and the Guide to Graduate Policy (grad.berkeley.edu/policies/ggp/ggp.pdf). An overview is available in the Academic Policies section, beginning on page 73. However, since policies can change, the Graduate Division website should be relied upon rather than this catalog.

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 the head graduate adviser of your major. 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 website at grad.berkeley.edu/policies/pdf/gradappeal.pdf or from Graduate Services: Degrees, 318 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.

Visiting Scholar and Postdoc Affairs Program (VSPA)

Berkeley is host to more than 2,400 visitors from other universities, colleges, research laboratories, and government agencies who conduct research using University facilities. For information about the VSPA program, see the Appendix in this catalog or its website at vspa.berkeley.edu.
TUITION, FEES, AND FINANCIAL AID

Performance students light up the stage

Concert halls, studios, and theaters, all across the Berkeley campus burst with the energy of students in the performing arts. Exploring material and modes from every era and every corner of the globe, students are musicians, actors, designers, directors, choreographers, dancers, and performance artists of all stripes. They pursue these arts as fields of study, avenues of self-expression, and opportunities to engage with an appreciative public.
Financial Aid

2009-10*

Undergraduates receiving financial aid: 64%**
Percent of financial aid that is need-based: 49%
Average amount awarded: $17,114**

*Need-based data is directly from the UC Berkeley Financial Aid and Scholarships Office. The remainder is from the 2009-2010 Office of the President Financial Aid Inventories.
**Academic year only

Tuition, 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 Loans. While the needs and resources of each student differ, the University can provide a general list of tuition and fees and expenses normally encountered. Note: Fees are subject to change without notice.

Part of your tuition and 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 page 79 for schedules of prorated tuition and fees.)

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 Tuition and Fees

The tuition and fees in this section are those in effect for the fall 2011 semester. Visit the office of the Registrar’s website at registrar.berkeley.edu for current information. All tuition and fees are subject to change.

Note: In November 2010, the Regents approved changing the name of the Educational Fee to “Tuition”; the name of Fee for Selected Professional School Students to “Professional Degree Supplemental Tuition”; and the name of Nonresident Tuition to “Nonresident Supplemental Tuition,” effective July 1, 2011.

Student Services Fee—$486 per semester. This fee (formerly referred to as the University Registration Fee) is paid by all students and shall be used to support services and programs that directly benefit students and that are complementary to, but not a part of, the core instructional program. These services and programs include, but are not limited to, operating and capital expenses for services related to the physical and psychological health and well-being of students; social, recreational, and cultural activities and programs; services related to campus life and campus community; technology expenses directly related to the services; and career support. These services and programs create a supportive and enriched learning environment for University of California students.

Tuition (formerly Educational Fee)—Tuition is paid by all students at $5,076 per semester. Tuition 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, tuition 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 tuition 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 $253.25 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 the Lower Sproul Project, 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 $68 per semester.

UC Berkeley Extension Fee—Students enrolled in the UC Berkeley Extension Fall Program for Freshmen are assessed fees through UC Berkeley Extension. For information, call (510) 643-0379.

Professional Degree Supplemental Tuition (formerly Professional School Fees)—Graduate students in the professional schools (Optometry, Business, Law, Public Health, Public Policy, Social Welfare, Information Management, and various programs in the Colleges of Environmental Design and Engineering) and the Health and Medical Sciences Joint Medical Program pay additional professional degree supplemental tuition. These amounts are available from the individual schools and programs.

University Health Insurance Fee—Undergraduates, $813 per semester; graduate students, $1,075 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’s Student Health Insurance Plan (SHIP), 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 tuition and 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 pay the fee if you can show proof of coverage comparable to the University’s plan. For more information, call (510) 642-5700 or visit uhs.berkeley.edu/ship.

CAL Quiz

No. 15

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

(Answer on page 532.)
The figures listed below were those in effect for the academic year 2011-12. Tuition and fees as well as estimates of expenses for subsequent years were not determined when this catalog went to press; for current information, call (510) 642-6442 or visit the Financial Aid and Scholarships Office website at financialaid.berkeley.edu. Note: Tuition and fees are subject to change.

### Undergraduate Residence Halls

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room and Board (includes food, housing, and utilities)</td>
<td>$14,990</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>1,202</td>
</tr>
<tr>
<td>Personal Expenses</td>
<td>1,388</td>
</tr>
<tr>
<td>Transportation</td>
<td>594</td>
</tr>
<tr>
<td><strong>Total Living Expenses</strong></td>
<td><strong>18,174</strong></td>
</tr>
<tr>
<td>Tuition and Fees (for two semesters)</td>
<td>11,766</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>1,626</td>
</tr>
<tr>
<td><strong>Total Budget (for California resident)</strong></td>
<td><strong>$31,566</strong></td>
</tr>
<tr>
<td>Nonresident Supplemental Tuition and Fees</td>
<td>22,878</td>
</tr>
<tr>
<td><strong>Total Nonresident Budget</strong></td>
<td><strong>$54,444</strong></td>
</tr>
</tbody>
</table>

### Undergraduate Off Campus

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room and Board (includes housing and utilities)</td>
<td>$7,324</td>
</tr>
<tr>
<td>Food</td>
<td>2,572</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>1,202</td>
</tr>
<tr>
<td>Personal Expenses</td>
<td>1,698</td>
</tr>
<tr>
<td>Transportation</td>
<td>906</td>
</tr>
<tr>
<td><strong>Total Living Expenses</strong></td>
<td><strong>13,702</strong></td>
</tr>
<tr>
<td>Tuition and Fees (for two semesters)</td>
<td>11,766</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>1,626</td>
</tr>
<tr>
<td><strong>Total Budget (for California resident)</strong></td>
<td><strong>$27,094</strong></td>
</tr>
<tr>
<td>Nonresident Supplemental Tuition and Fees</td>
<td>22,878</td>
</tr>
<tr>
<td><strong>Total Nonresident Budget</strong></td>
<td><strong>$49,972</strong></td>
</tr>
</tbody>
</table>

### Undergraduate Commuter (lives with relatives)

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room and Board (includes food, housing, and utilities)</td>
<td>$4,142</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>1,202</td>
</tr>
<tr>
<td>Personal Expenses</td>
<td>1,914</td>
</tr>
<tr>
<td>Transportation</td>
<td>1,776</td>
</tr>
<tr>
<td><strong>Total Living Expenses</strong></td>
<td><strong>9,034</strong></td>
</tr>
<tr>
<td>Tuition and Fees (for two semesters)</td>
<td>11,766</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>1,626</td>
</tr>
<tr>
<td><strong>Total Budget (for California resident)</strong></td>
<td><strong>$22,426</strong></td>
</tr>
</tbody>
</table>

### Graduate Students (standard budget)

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room and Board (includes food, housing, and utilities)</td>
<td>$17,524</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>568</td>
</tr>
<tr>
<td>Personal Expenses</td>
<td>1,764</td>
</tr>
<tr>
<td>Transportation</td>
<td>2,772</td>
</tr>
<tr>
<td><strong>Total Living Expenses</strong></td>
<td><strong>$22,628</strong></td>
</tr>
<tr>
<td>Tuition and Fees (for two semesters)</td>
<td>11,768</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>2,150</td>
</tr>
<tr>
<td><strong>Total Budget (for California resident)</strong></td>
<td><strong>$36,546</strong></td>
</tr>
<tr>
<td>Nonresident Supplemental Tuition and Fees</td>
<td>15,102</td>
</tr>
<tr>
<td><strong>Total Nonresident Budget</strong></td>
<td><strong>$51,648</strong></td>
</tr>
</tbody>
</table>

CAL Quiz No. 16

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

(Answer on page 533.)
Nonresident Supplemental Tuition—Undergraduates, $11,439 per semester; graduate academic students, $7,347 per semester; graduate professional students, $6,122.50 per semester. At the time of registration, you are classified as a resident or nonresident for tuition and fee 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 and fee 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 nonresident supplemental tuition each semester. For detailed information regarding the establishment of California residence, see the Appendix in this catalog or write to the Legal Analyst, Residence Matters, 1111 Franklin St., 8th Floor, Oakland, CA 94607-5200.

Additional Fees and Expenses

Late Registration Fee—A $150 late registration fee will be charged to all students who fail to become officially registered by the end of the third week of instruction each semester. To be officially “registered,” a student must: (1) be enrolled in at least one course, (2) pay at least 20% of assessed tuition and registration fees, and (3) have no active registration blocks.

Late Fee Payment—Payments must be received, not postmarked, by the deadline indicated on the Campus Accounts Receivable System (CARS) statement. All other delinquent accounts over $50 will be assessed penalties as follows:

• $20 on accounts one month past due; and
• $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 tuition and registration fees. A processing charge of $20 is assessed for all other returned checks.

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.

Cal Intercollegiate Athletics—Student season tickets are available for purchase at CalBears.com for football and men’s basketball, while supplies last. Admission to other regular season home events is free to all currently registered full-time Cal students with student ID. Note: There are no student discounts for post-season events. For additional information, visit CalBears.com or call 800 GO BEARS or (510) 642-3277.
**Tuition and Fee Schedule**

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

<table>
<thead>
<tr>
<th>Undergraduates</th>
<th>Tuition and Fees per Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residents</td>
<td>$6,696.25</td>
</tr>
<tr>
<td>Nonresidents</td>
<td>$18,135.25</td>
</tr>
<tr>
<td>Graduate Academic Students</td>
<td>Tuition and Fees per Semester</td>
</tr>
<tr>
<td>Residents</td>
<td>$6,958.25</td>
</tr>
<tr>
<td>Nonresidents</td>
<td>$14,305.25</td>
</tr>
</tbody>
</table>

Additional Tuition and Fees for Law, M.B.A., Optometry, Public Policy, Public Health, Social Welfare, Information Management, and various programs in the Colleges of Environmental Design and Engineering, and UCB-UCSF Joint Medical Program Students—Students in the Schools of Law, Optometry, Public Policy, Public Health, Social Welfare, Information Management, and various programs in the Colleges of Environmental Design and Engineering; the M.B.A. programs in the Haas School of Business; and the UCB-UCSF Joint Medical Program are subject to different tuition and fee schedules. For information, call the individual schools or programs or visit registrar.berkeley.edu.

**Financial Aid**

The Financial Aid and Scholarships Office is located on the second floor of Sproul Hall. Refer to the directory on page 68 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 and Scholarships Office website at students.berkeley.edu/finaid/undergraduates/types.htm. The deadline for filing is March 2.

Students may apply for a variety of financial aid funds, including grants, scholarships, work-study, and loans. Students renew their financial aid applications online at fafsa.ed.gov. Students receiving financial aid must complete the financial aid application process by the deadline.

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, visit students.berkeley.edu/finaid/undergraduates/types.htm.

Much of the funding for graduate students comes from sources other than the Financial Aid and Scholarships 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 and Curricula 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 tuition and fee waiver program are also available.

If you are a veteran newly admitted to Berkeley, submit a certified copy of your “Certificate 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 call the Veterans Services unit, Office of the Registrar, at (510) 642-5990 or email orreg@berkeley.edu.

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*These are the tuition and fees that were in effect for the fall 2011 semester. Visit registrar.berkeley.edu for current information. All tuition and fees are subject to change. 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
Tuition, Fees, and Financial Aid

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 and Scholarships Office. Others are merit-based and are administered through the Graduate Services: 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 grad.berkeley.edu/admissions/grad_app.shtml.

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 should complete the “Free Application for Federal Student Aid” (FAFSA) at students.berkeley.edu/finaid for determination of financial need.

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 a financial 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. For a list of funding opportunities throughout the year, visit the Graduate Fellowships website at grad.berkeley.edu/financial_deadlines.shtml.

The fellowship application deadlines for new students range from early December to late January, depending on the department; see the “Graduate 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 $8,500 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.

CAL Quiz
No. 18
Was there really a Victorian glass conservatory/greenhouse on the main campus? Where, when, and why?
(Answer on page 533.)
Graduate Diversity Program (GDP)

GDP provides a foundation of active support for underrepresented students through a number of important services:

• outreach visits throughout the country;
• academic advising/mentoring throughout the student’s academic career;
• undergraduate research opportunities;
• advice on applying to graduate school;
• monthly seminars on professional development;
• career advice/planning; and
• networking opportunities on campus.

Underrepresented students will find social and academic support in the numerous student organizations on campus, such as those listed on the Graduate Minority Students’ Project website at ga.berkeley.edu/projects/gmsp. In addition, the University maintains discipline-based student diversity programs in engineering, the humanities, public health, and the biological, physical, and social sciences (visit diversity.berkeley.edu/graduate/gdp/diversity_professionals).

For information regarding opportunities and support on behalf of diversity, contact the Graduate Diversity Program at University of California, Berkeley, 327 Sproul Hall #5900, Berkeley, CA 94720-5900; (510) 643-6010; grad.diversity@berkeley.edu; or diversity.berkeley.edu/graduate/gdp.

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 12 units of 100- to 200-level courses per semester until they are advanced to doctoral candidacy. 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 graduate student academic appointments are eligible for tuition and 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.

Graduate student instructors (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. ASEs should familiarize themselves with the contract (see atyoursevice.ucop.edu/employees/policies_employee_labor_relations/collective_bargaining_units/academicstudentemployee_bx/contract_articles/ase_agreement_2007-2009.pdf). Information on anticipated appointments for the next academic year can be found on the Labor Relations website at hrweb.berkeley.edu/hrlabor.htm.

Teaching Appointments—Many departments make GSI positions available to qualified graduate students. 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 and do not hold a bachelor’s degree from an institution in the United States must pass a test of spoken English before they can be appointed as graduate student instructors. If you have taken the TOEFL iBT, your speaking section score will be used to determine your proficiency. If you have not taken the TOEFL iBT and need to demonstrate oral English proficiency, the Speaking Proficiency English Assessment Kit (SPEAK) will be administered at Berkeley.

For further information on the Language Proficiency Program (testing and courses), visit the GSI Teaching and Resource Center website at gsi.berkeley.edu. For information on the TOEFL, visit toefl.org.

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. 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 Tuition and Fee Remissions—Stipend figures for all positions mentioned above are subject to U.S. income tax 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 tuition and registration fees. For teaching appointments, payment is usually in five equal installments per semester.

Some appointments carry a benefit called a fee remission, which offsets either a portion or all of your assessed tuition and fees. Check with your department to determine your specific eligibility, but you’ll find all the basic requirements in the “Fee Remission Bulletin” at grad.berkeley.edu/policies/pdf/fee_remission_bulletin.pdf.

More information about being a graduate student instructor, graduate student researcher, reader, or tutor is available from the Graduate Services: Appointments Office at grad.berkeley.edu/policies/appointments_office.shtml.

CAL Quiz
No. 20
Where is “sophomore lawn”?
(Answer on page 533.)
Exercising options, to compete or just have fun

Beautiful Bay Area outdoor spots and busy campus sports facilities attract Berkeley students, as participants and spectators alike. Students cheer on more than 750 student-athletes in 29 intercollegiate sports—from football and basketball to crew and lacrosse—but many hundreds more make the time to hit the water, turf, court, mat, or bike path themselves, just for fun.
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.

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 passed), 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 grade 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 subject to Academic Senate regulations. 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=0. 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 (GPA)

Your GPA is computed on courses undertaken in the University of California. Effective fall 2005, XB courses undertaken in UC Berkeley Extension count toward your GPA. Grades A, B, C, D, and F are used in determining your GPA; 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 on page 77.

Computation of GPAs

<table>
<thead>
<tr>
<th>Grade</th>
<th>Units</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>B+</td>
<td>3</td>
<td>9.9</td>
</tr>
<tr>
<td>C-</td>
<td>3</td>
<td>5.1</td>
</tr>
<tr>
<td>P</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>I</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Totals</td>
<td>9</td>
<td>27</td>
</tr>
</tbody>
</table>

Average 3.000

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 GPA. Graduate students must maintain a minimum GPA of 3.0 in all upper division and graduate coursework undertaken in graduate standing in the University of California or its exchange programs. Note: Departments, schools, and groups may have a higher performance standard than the minimum B average (3.00 GPA) 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 under special circumstances by your graduate adviser. In addition, you must successfully complete all coursework 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, then you will be given an I grade if the instructor has no other basis for assigning a grade. Further changes will be made according to Academic Senate regulations.

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 GPA 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 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 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 or the Office of the Registrar.

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 should finish the course requirements as soon as possible. To remove an I grade from your record, you must file the appropriate petition with the Office of the Registrar, 120 Sproul Hall.

Although I grades are not counted in computing the GPA, it is important to remove them quickly. 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 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 only 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 GPA.
The interior of the Hearst Memorial Mining Building, constructed in 1907, is one of the campus’s most striking architectural features.

**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 IP grade is not included in the GPA. 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, clerical, 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 a grade, you should first try to speak with your instructor and/or the student ombuds. If that does not resolve your grievance, you may formally appeal. The following are grounds for appeal: (1) the application of non-academic criteria, such as the consideration of race, politics, religion, sex, or other criteria not directly reflective of performance related to course requirements; (2) sexual harassment; or (3) improper academic procedures that unfairly affect your grade. Formal procedures may not be activated unless you, the instructor in charge, an ombuds (or any mutually accepted third party), and the department chair have failed to resolve the dispute informally. The formal procedure, once initiated, is to be completed at the unit level within 20-working days and at the Senate level within 40-working days if both parties are in residence and the University is in regular session. The formal process must be initiated within one calendar year from the last day of the semester in which the final grade for the course was posted.

**Formal Appeal of Grades in Courses and Examinations**

Each department or other instructional unit shall establish a standing grievance committee chair. For each case, the 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 of the unit. If no student association

**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 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. You should 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.

**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.
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 at least at the level of the disputed course or examination and have been in residence for at least one year.) The ad hoc grievance committee will review all the required materials (from the student and instructor) and make a recommendation regarding a resolution to the grievance. The ad hoc grievance committee’s recommendation to the Committee on Courses of Instruction (COCI), including any minority views, must be given in writing.

If COCI finds in the student’s 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).

For a complete copy of current grade grievance procedures, visit academic-senate.berkeley.edu/committees/coci. For a complete copy of Berkeley Division Regulation A207, which governs grade appeals, visit academic-senate.berkeley.edu/committees/re/regulations-university-california-berkeley-division-academic-senate-contents.

### 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 or at registrar.berkeley.edu. 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.**

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 be reported to the Office of the Registrar 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.

### Graduated 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, graduate seminar, and research courses are excluded. You must be registered for at least 4 units of upper division and/or graduate coursework at the time you take the examination and you must be in good academic standing (3.0 GPA 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 Bear Facts during the ninth week of the semester. Final examinations are required in all undergraduate non-laboratory courses, with the exception of courses that the online 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. The examination may last no longer than three hours and must be administered at the time announced in the online Schedule of Classes. Any deviation from this announced time requires approval from the Committee on Courses of Instruction or the department chair. This requirement guarantees you ample prior notice of the examination time and eliminates conflict with other examinations.

It is the responsibility of instructors and/or departments to return to students their final examinations or copies of them, or to retain students’ final examinations or copies of them, for 13 months after the dates of such examinations. For more information on your responsibilities regarding final exams as a student, visit registrar.berkeley.edu/prospective_students/finals.html.

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 37). You can also change your address at your department or college/school dean’s office. If you change your name, stop by the Office of the Registrar, 120 Sproul Hall, and complete a “Petition for Change of Name” form and provide appropriate documentation.

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 may be 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, or at campuspol.chance.berkeley.edu/policies/studentrecDisclosure.pdf.

Classroom Note-Taking and Recording Policy

The University encourages students to take notes in class and other instructional settings as part of their education. Note-taking is a means of recording information and helps students absorb and integrate what they learn. Note-taking or other recording of an instructor’s presentation can also facilitate further discussion of the material with students and the instructor. However, class notes and recordings are based on the intellectual effort of the instructor, who has an interest in protecting this effort and ensuring the accuracy of any public representation of his or her work. Prior approval of the instructor is required for the recording of course notes and the sharing of course notes and other class materials beyond the students enrolled in the course. Only a course note-taking service authorized by the campus may make course notes available commercially. The relevant policies can be found at campuspol.chance.berkeley.edu/policies/coursenotes.pdf.

Other Academic Policies

Grade Reports and Transcripts

After grades are recorded for a semester, they are available on Bear Facts. Transcripts for registered students may be ordered online 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 website at registrar.berkeley.edu for further information.

Cal 1 Cards

Your Cal 1 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 admissions letter for the semester. In order to get your Cal 1 Card, you will need to present a current government-issued identification card (i.e., driver’s license or passport) and know your student ID number. The first card is free; replacement cards are $25 (nonrefundable). For more information, stop by the Cal 1 Card office, 180 César Chávez Student Center, lower Sproul Plaza; call (510) 643-6839; or visit callcard.berkeley.edu.

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 via 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. 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 Berkeley International Office, International House, 2299 Piedmont Avenue, since your visa status may be jeopardized. If you have a student loan, you are required to have a form signed by Student Billing Services, 192 University Hall. You may also complete the Exit Loan Counseling requirement online; see the Student Billing Services website at studentbilling.berkeley.edu/exitDirect.htm.

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 current Reauthorization of the Federal Higher Education Act. The amount of financial aid to be returned is based upon the number of days in the semester the student was 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 not related to tuition and registration fee adjustments. Tuition and registration fees are adjusted by University policy (see at right), and this policy has not changed. Berkeley has adopted the federal rules for all 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 before the disbursement of aid, you may still be eligible for a disbursement. The records of all withdrawing financial aid students with undisbursed aid will be reviewed, and you will be notified of the option to receive disbursement of this aid, if applicable. Note: If you withdraw, it is imperative that you update your address(es) on Bear Facts 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 tuition and fees will not be adjusted, but most likely you will have to return one-half of any aid received.

For more information, visit students.berkeley.edu/finaid (search “withdrawal”) or contact the Office of Financial Aid, second floor, Sproul Hall, (510) 642-6442 (undergraduates) or (510) 642-0485 (graduate students, professional schools).

Schedule of Prorated Tuition and 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 Tuition and Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-7</td>
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</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>

*Dates and prorated tuition and fees are subject to change. For the most current refund schedule, see the Office of the Registrar website at registrar.berkeley.edu/current_students/registration_enrollment/canwd.html.

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 533.)
Schedule of Prorated Tuition and 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 Tuition and Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>0%</td>
</tr>
<tr>
<td>2-11</td>
<td>10%</td>
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<td>12-27</td>
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<tr>
<td>28-53</td>
<td>75%</td>
</tr>
<tr>
<td>54 or more</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Dates and prorated tuition and fees are subject to change. For the most current refund schedule, see the Office of the Registrar website at registrar.berkeley.edu/current_students/registration_enrollment/cawd.html.

Tuition and Registration Fee Adjustments

The amount of tuition and 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 above. Note: The health insurance and Class Pass fees are nonrefundable and, therefore, remain assessed at 100 percent for all withdrawals, regardless of the effective date.

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 Services: Degrees, 318 Sproul Hall (for graduate students). The filing dates are June 1 for the fall semester and November 1 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 know at the beginning of a semester that you will have fulfilled graduation requirements by the end of the semester, enter the appropriate code when you access the Tele-BEARS registration system. You may also declare your candidacy in person in the Office of the Registrar, 120 Sproul Hall. You have through the fifth week of classes in which to declare.

Nonregistered Students—If you are not registered at the time you are ready to declare your candidacy, you may come in person to 120 Sproul Hall to fill out the “Bachelor Degree Candidate” form. (The form is also available online at registrar.berkeley.edu under “current students/forms.”) It can be mailed to Office of the Registrar, University of California, Berkeley, 124 Sproul Hall, Berkeley, CA 94720-5404.

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 Entry-Level Writing, 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—To verify that your name is on the degree list for the current term, check Bear Facts. If you think there is an error, send email to the Office of the Registrar at orreg@berkeley.edu.

Certificate of Completion—A “Certificate of Completion” is official proof that you have been granted the degree for which you were working. All undergraduates, except engineering students, may request a certificate form from 120 Sproul Hall. The form is also available at registrar.berkeley.edu under “current students/forms.” It can be mailed to Office of the Registrar, University of California, Berkeley, 124 Sproul Hall, Berkeley, CA 94720-5404. Engineering students must contact their college. The certificate will be mailed to you eight to 10 weeks after the end of the semester. You must fill out a separate application for each request.

Graduate Students

To receive a graduate degree, students must successfully complete all coursework required, pass the requisite examinations, advance to candidacy, and fulfill other requirements specified for the degree. For detailed procedures and requirements, students should consult their department, school, or graduate group, and become familiar with the Graduate Division website at grad.berkeley.edu. A general overview is provided in the Graduate Education section, 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 departments. 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.

Students may purchase caps and gowns through the Cal Student Store and may make arrangements for photographs to be taken or videotapes made. See your department office for additional information or visit seniors.berkeley.edu.

Diplomas

Diplomas are not given out at Commencement but are available approximately four months afterward.

Diplomas will be mailed automatically without a fee. Degree candidates should update their diploma mailing addresses on Bear Facts prior to the end of the term in which the degree is to be awarded. If a diploma address is not supplied, the diploma will be mailed to the student’s permanent home address.

Note: These fees are subject to change, and diplomas are held for only five years.

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 at Campus Life and Leadership, 102 Sproul Hall; The Center for Student Conduct and Community Standards, 2536 Channing, Bldg. E; and online at studentconduct.berkeley.edu. You should pay particular attention to the Berkeley Campus Regulations Implementing University Policies and the Berkeley Campus Code of Student Conduct.

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 monitors and supports full compliance with the official University of California Policy on Sexual Harassment, which states: “The University of California is committed to creating and maintaining a community where all persons who participate in University programs and activities can work and learn together in an atmosphere free of all forms of harassment, exploitation, or intimidation. Every member of the University community should be aware that the University is strongly opposed to sexual harassment, and that such behavior is prohibited both by law and by University policy. The University will respond promptly and effectively to reports of sexual harassment, and will take appropriate action to prevent, to correct, and if necessary, to discipline behavior that violates this policy.”

The campus has complaint procedures designed to facilitate prompt and equitable resolution of sexual harassment and other sex discrimination complaints.
If you believe that you have been a target of sexual harassment, have questions about the sexual harassment policy or about the complaint resolution procedures, or have questions about the interrelationship between the sexual harassment complaint procedures and other campus policies and procedures, you may address your inquiries to the Campus Climate and Compliance/Title IX Office, (510) 643-7985. The full text of the University Policy and further information is available at ccac.berkeley.edu/policies.shtml.

**Sexual Harassment/Assault Peer Education Program**
The Sexual Harassment/Assault Peer Education Program, coordinated by the campus Gender Equity Resource Center, provides educational workshops for student groups, resource referral, and support for individuals who may have experienced harassment or an assault. Short-term crisis intervention counseling is also available. For further information, call the Sexual Assault/Harassment Resource specialist at (510) 643-5727. University Health Services Social Services also offers counseling support, as well as services for recent survivors; call (510) 642-6074.

**Student Grievance Procedure**
The Berkeley campus Student Grievance Procedure 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 Formal Appeal of Grades in Courses and Examinations on page 76 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 or online at students.berkeley.edu/uga/grievance.htm.

**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 with the academic unit (the department, school, or graduate group) 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. The academic unit and the student 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 may also consult with the Ombuds for Students at (510) 642-5754 for assistance with informal resolution.

Students who are not satisfied with the outcome of attempts to resolve the grievance in their home units may submit an appeal to the Graduate Division, after carefully following the guidelines of the Graduate Appeal Procedure. The Graduate Appeal Procedure and the “Graduate Appeal Procedure” form are available from Graduate Services: Degrees and the Graduate Division website at grad.berkeley.edu/policies/pdf/gradappeal.pdf.
Learning blossoms in research collections

Books and the Internet are indispensable for young scholars, but there is nothing like Berkeley’s research museums and collections for studying the real thing, up close. It might be the delicate herbarium flora, archaeological artifacts, extensive specimens of birds and insects, rare films, or other treasures—in any field of study a first-hand encounter can be a first-rate learning experience.
Colleges and Schools

**Haas School of Business**

Office: S545 Student Services Building #1900, haas.berkeley.edu

Dean: Richard K. Lyons, Ph.D.

Associate Dean for Academic Affairs: Andrew Rose, Ph.D.

Senior Assistant Dean for Instruction: Jay Stowsky, Ph.D.

Directors:
David Gent, M.B.A. (Evening & Weekend M.B.A. Program)
(Interim) Carol Lo (Berkeley-Columbia Executive M.B.A. Program)
Erika Walker, B.A. (Undergraduate Program)
Julia Min Hwang, M.A. (M.B.A. Program)
Linda Kreitzman, Ph.D. (Master’s in Financial Engineering Program)
Sunil Dutta, Ph.D. (Ph.D. Program)

For full coverage of the school's degree programs, curricula, and requirements, see page 150.

**College of Chemistry**

Office of the Dean: 420 Latimer Hall #1460, chemistry.berkeley.edu

Undergraduate Advising Office: 4th Floor, Latimer Hall #1460, (510) 642-7919

Graduate information:
Contact individual departments

Dean: Richard A. Mathies, Ph.D.

Executive Associate Dean: David E. Wemmer, Ph.D.

Associate Dean of Undergraduate Affairs: Marcin Majda, Ph.D.

Assistant Dean of Engineering and Facilities: Alexander Shstromberg

Assistant Dean of College Relations: Mindy Rex

Assistant Dean of Administration and Finance: Suzanne Pierce

**Organizational Units**

**Chemical and Biomolecular Engineering**
Department Office: 201 Gilman Hall #1462, (510) 642-2291
Chair: Douglas S. Clark, Ph.D.

**Chemistry**
Department Office: 419 Latimer Hall #1460, (510) 642-5882
Chair: Daniel M. Neumark, Ph.D.

For full coverage of the college's degree programs, curricula, and requirements, see page 173 and the individual departments.

**Graduate School of Education**

Office: 1501 Tolman Hall, (510) 642-5345, gse_info@berkeley.edu, gse.berkeley.edu

Dean: Judith Warren Little, Ph.D.

For full coverage of the school's programs, curricula, and requirements, see page 226.
College of Engineering

Office of the Dean: 320 McLaughlin Hall #1700, (510) 642-5771
Engineering Student Services: 230 Bechtel Engineering Center #1702, (510) 642-7594
Graduate Student Affairs Office: Contact specific department or program
Dean: S. Shankar Sastry, Ph.D.
Executive Associate Dean: Masayoshi Tomizuka, Ph.D.
Associate Dean of International Relations: George Leitmann, Ph.D.
Associate Dean of Research: Tsu-Jae King Liu, Ph.D.
Associate Dean of Capital Projects: Carlo Séquin, Ph.D.

Organizational Units

Bioengineering
Department Office: 306 Stanley Hall, (510) 642-5833, bioeng.berkeley.edu
Chair: Matthew V. Tirrell, Ph.D.

Civil and Environmental Engineering
Department Office: 760 Davis Hall #1710, (510) 642-3261, ce.berkeley.edu
Chair: Lisa Alvarez-Cohen, Ph.D.

Electrical Engineering and Computer Sciences
Department Office: 253 Cory Hall #1770, (510) 642-3214, eecs.berkeley.edu
Chair: Costas Spanos, Ph.D.
Associate Chair: David Culler, Ph.D.
Computer Science Division Office: 387 Soda Hall, (510) 642-1042, cs.berkeley.edu

Engineering Science
Department Office: 230 Bechtel Engineering Center #1702, (510) 642-8790
Chair: Tarek Zohdi, Ph.D.

Industrial Engineering and Operations Research
Department Office: 4141 Etcheverry Hall #1777, (510) 642-5484, ior.berkeley.edu
Chair: Rhonda Righter, Ph.D.

Materials Science and Engineering
Department Office: 210 Hearst Memorial Mining Building #1760, (510) 642-3801, mse.berkeley.edu
Chair: Robert O. Ritchie, Sc.D.

Mechanical Engineering
Department Office: 6141 Etcheverry Hall, (510) 642-1338, me.berkeley.edu
Chair: David Dornfeld, Ph.D.

Nuclear Engineering
Department Office: 4155 Etcheverry Hall, (510) 642-4077, www.nuc.berkeley.edu
Chair: Per Peterson, Ph.D.
For full coverage of the college’s degree programs, curricula, and requirements, see page 251.

College of Environmental Design

Undergraduate Office: 250 Wurster Hall, (510) 642-4943, ced.berkeley.edu
Dean: Jennifer Wolch, Ph.D.
Associate Dean for Undergraduate Studies: C. Greig Crysler, Ph.D.

Organizational Units

Architecture
Department Office: 232 Wurster Hall #1800, (510) 642-4942, arch.ced.berkeley.edu
Chair: Tom J. Buresh, M.Arch.

City and Regional Planning
Department Office: 228 Wurster Hall #1850, (510) 642-3256, dcrp.ced.berkeley.edu
Chair: To be announced

Landscape Architecture and Environmental Planning
Department Office: 202 Wurster Hall #2000, (510) 642-4022, laep.ced.berkeley.edu
Chair: G. Mathias Kondolf, M.S., Ph.D.
For full coverage of the college’s degree programs, curricula, and requirements, see page 260.

School of Information

Office: 102 South Hall, (510) 642-1464, ischool.berkeley.edu
Dean: AnnaLee Saxenian, Ph.D.
For full coverage of the school’s degree programs, curricula, and requirements, see page 312.

Graduate School of Journalism

Office: 121 North Gate Hall, (510) 642-3383, applysoj@journalism.berkeley.edu journalism.berkeley.edu
Dean: Neil Henry, M.S.
For information about the school’s degree program, course offerings, and requirements, see page 331 or visit the school’s website.
School of Law

Office of Admissions: 2850 Telegraph Ave., Suite 500 (off campus), (510) 642-2274, law.berkeley.edu

Dean:
Christopher F. Edley Jr., J.D., M.P.P.

Associate Deans:
Lauren B. Edelman, J.D., Ph.D. (Jurisprudence and Social Policy Program)
Andrew Guzman, J.D., Ph.D. (International and Executive Education)
Gillian Lester, LL.B., J.S.D. (J.D. Program)
Kathleen Vandenberg Heuvel, J.D., M.L.I.S. (Capital Projects)

Assistant Deans:
Marilyn I. Byrne
Terrence J. Galligan, J.D.
Annik T. Hirshen, J.D.
Robert Sproul
Edward Tom
Dennis K. Tominaga, Ed.D.
Susan R. Whitman, J.D.

For full coverage of the school’s degree programs, curricula, and requirements, see page 340.

College of Letters and Science

Deans’ Office: Durant Hall, ls.berkeley.edu

Executive Dean:
Mark A. Richards, Ph.D.

Divisional Deans:
Anthony Cascardi, Ph.D. (Arts and Humanities) (Interim)
G. Steven Martin, Ph.D. (Biological Sciences)
Mark A. Richards, Ph.D. (Mathematical and Physical Sciences)
Carla Hesse, Ph.D. (Social Sciences)
Tyler Stovall, Ph.D. (Undergraduate Division)

Associate Dean of the Undergraduate Division:
Genaro M. Padilla, Ph.D.

Organizational Units

African American Studies
American Studies
American History and Mediterranean Archaeology
Anthropology
Art, History of
Art, Practice of
Asian American and Asian Diaspora Studies
Asian Studies
Astronomy
Biostatistics
Buddhist Studies
Celtic Studies

Chemistry
Chicano Studies
Classics
Cognitive Science
College Writing
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 and Media
Folklore
French
Gender and Women’s Studies
Geography
German
History
Integrative Biology
Interdisciplinary Studies
Italian Studies
Latin American Studies
Legal Studies
Linguistics
Logic and the Methodology of Science
Mathematics
Media Studies
Medieval Studies
Middle Eastern Studies
Molecular and Cell Biology
Music
Native American Studies
Near Eastern Studies
Peace and Conflict Studies
Philosophy
Physical Education
Physical Science
Physics
Political Economy
Political Science
Population Studies
Psychology
Religious Studies

CAL Quiz
No. 28
What is the historical significance of the “Big C” on the hill above the Berkeley campus?
(Answer on page 533.)
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
  Theater and Performance Studies
  Dance and Performance Studies
Undergraduate and Interdisciplinary Studies
For full coverage of the college's degree programs, curricula, and requirements, see page 344.

College of Natural Resources

Office of the Dean: 101 Giannini Hall,
(510) 642-7171, nature.berkeley.edu

Office of Instruction and Student Affairs:
260 Mulford Hall, (510) 642-0542

Dean:
J. Keith Gilless, Ph.D.

Executive Associate Dean:
Bob Buchanan, Ph.D.

Associate Dean of Instruction and
Student Affairs:
Stephen Welter, Ph.D.

Associate Dean of Academic Affairs:
Lewis Feldman, Ph.D.

Assistant Dean of Instruction and
Student Affairs:
Kimberly Johnson

Organizational Units

Agricultural and Resource Economics
Department Office: 207 Giannini Hall,
(510) 642-3345, are.berkeley.edu
Chair: Brian Wright, Ph.D.

Environmental Science, Policy,
and Management
Department Office: 137 Mulford Hall,
(510) 643-7430, espm.berkeley.edu
Undergraduate Student Affairs: 260 Mulford Hall,
(510) 642-4249, (510) 642-6730
Graduate Affairs Office: 131 Mulford Hall,
(510) 642-6410
Chair: Ronald Amundson, Ph.D.
Vice Chair for Instruction: Neil Tsutsui, Ph.D.

Environmental Sciences
Department Office: 260 Mulford Hall,
(510) 642-0542, environmentalsciences.berkeley.edu

Nutritional Science and Toxicology
Department Office: 119 Morgan Hall,
(510) 642-6490, nst.berkeley.edu
Undergraduate Student Affairs: 260 Mulford Hall
Chair: Joseph L. Napoli, Ph.D.

Plant and Microbial Biology
Department Office: 111 Koshland Hall,
(510) 642-9999, plantbio.berkeley.edu
Undergraduate Student Affairs: 260 Mulford Hall,
(510) 642-5167
Chair: Brian J. Staskawicz, Ph.D.
Division Chair, Plant Biology:
Brian J. Staskawicz, Ph.D.
Division Chair, Microbial Biology:
Thomas Bruns, Ph.D.

Graduate Programs

Agricultural and Resource Economics
Office: 207 Giannini Hall, (510) 642-3345
Head Adviser: Peter Berck, Ph.D.

Comparative Biochemistry
Office: 117 Morgan Hall, (510) 643-2863
Chair: Jack Kirsch, Ph.D.

Environmental Science, Policy,
and Management
Office: 133 Mulford Hall, (510) 642-6410
Head Adviser: Claire Kremen, Ph.D.

Microbiology
Office: 111C Koshland Hall, (510) 642-5167
Chair: John Taylor, Ph.D.

Molecular and Biochemical Nutrition
Office: 117 Morgan Hall, (510) 643-2863
Chair: 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: Brian Staskawicz, Ph.D.

Range Management (M.S.)
Office: 133 Mulford Hall, (510) 642-6410
Chair: James Bartolome, Ph.D.

For full coverage of the college's degree programs,
curricula, and requirements, see page 393.
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 Optometry

Office of the Dean: 351 Minor Hall #2020, (510) 642-3414
Office of Admissions: 397 Minor Hall #2020, (510) 642-9537, optometry.berkeley.edu
Dean: Dennis M. Levi, O.D., Ph.D.
Associate Dean for Academic Affairs: Gunilla Haegerström-Portnoy, O.D., Ph.D., F.A.A.O.
Associate Dean for Clinical Instruction: John C. Corzine, O.D., F.A.A.O.
Associate Dean for Clinical Affairs: Edward J. Revelli, O.D., F.A.A.O.
Associate Dean for Student Affairs and Head Graduate Adviser: Richard C. Van Sluyters, O.D., Ph.D.
Assistant Dean for External Relations and Development: Lawrence S. Thal, O.D., M.B.A.
Director of Residency Programs: Christina S. Wilmer, O.D., F.A.A.O.
Residency Supervisor: A. Mika Moy, O.D., F.A.A.O.

Organizational Unit

Graduate Group in Vision Science
Office of Admissions: 524 Minor Hall #2020, (510) 642-9804, vision.berkeley.edu
Chair: Austin Roorda, Ph.D.

For full coverage of the school’s degree programs, curricula, and requirements, see page 409.

School of Public Health

Office of the Dean and Student Services and Admissions: 417 University Hall, (510) 642-6531, sph.berkeley.edu
Dean: Stephen M. Shortell, Ph.D., M.P.H.
Associate Dean for Academic Affairs: Gertruide Buehring, Ph.D.
Associate Dean for Research: Arthur Reingold, Ph.D.
Associate Dean for Student Affairs: George Sensabaugh, D.Crim.
Associate Dean for Public Health Practice: Jeff Oxendine, M.B.A., M.P.H.

For full coverage of the school’s degree programs, curricula, and requirements, see page 444.

Goldman School of Public Policy

Office: 2607 Hearst Avenue, (510) 642-4670, gspp.berkeley.edu
Dean: Henry E. Brady, Ph.D.
Assistant Dean for Academic Affairs: Martha Chavez, M.S.

For full coverage of the school’s degree programs, curricula, and requirements, see page 457.

School of Social Welfare

Office: 120 Haviland Hall, (510) 642-4341, socialwelfare.berkeley.edu
Dean: Lorraine Midanik, Ph.D.
Associate Dean: Kurt Organista, Ph.D.
Director of Field Work: Greg Merrill, L.C.S.W.
Coordinator of Academic Programs: Robert Teague, M.S.S.W.
Assistant Dean for Administration: Barbara Broque
Admissions Coordinator: Melanie Green

For full coverage of the school’s degree programs, curricula, and requirements, see page 476.

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 media studies;
(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 on pages 61-62 of this catalog.) 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, media studies, and religious studies. Interdisciplinary minor programs are available in applied language studies, creative writing, disability studies, interdisciplinary human rights, and religious studies.

UGIS also sponsors interdisciplinary courses of general interest, such as the courses on Western civilization and ethics. The Letters and Science Discovery Courses, taught by outstanding teachers and explicitly designed to add breadth to the curriculum, are also often interdisciplinary.

Students should consult the Undergraduate Division—231 Evans, (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.

International and Area Studies

Berkeley’s international teaching program and centers for research and outreach are part of our rich interdisciplinary and multicultural environment. International issues are the focus of six undergraduate and three graduate interdisciplinary majors offered by the International and Area Studies (IAS) group majors. Through the undergraduate group majors in Asian studies, development studies, Latin American studies, Middle Eastern studies, peace and conflict studies, and political economy, you can focus your education on a variety of geographical or issue-oriented areas and topics. Through a unique partnership with the Blum Center for Developing Economics, IAS offers a global poverty and practice (GPP) minor. This minor trains students in the study and analysis of global poverty. The signature element of the curriculum is the practice requirement that includes both a field experience and the opportunity to critically reflect upon it. Graduate programs in Asian studies, international and area studies, and Latin American studies provide opportunities for advanced interdisciplinary scholarship. You can also enjoy the advantages of close relationships with many of the centers of research affiliated with IAS. These centers sponsor concerts, lectures, special events, conferences, and seminars, and assist in bringing internationally renowned scholars and faculty to teach courses in IAS, as well as departments in the humanities, sciences, and social sciences. In addition, the IAS major programs collaborate with the various centers in promoting student internships and research opportunities. For more information about International and Area Studies, contact the IAS office at 101 Stephens Hall, (510) 642-4466, iastp@berkeley.edu, iastp.berkeley.edu, or one of the research centers listed to the right and on page 90.

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 90-91 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.
Environmental Studies at Berkeley

The majors in the chart below are suggested for students interested in environmental programs and coursework. 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>
</tr>
</thead>
<tbody>
<tr>
<td>Interdepartmental Graduate Groups</td>
<td>Interdepartmental Group</td>
<td>College of Chemistry</td>
<td>UG</td>
<td>G</td>
</tr>
<tr>
<td>College of Chemistry</td>
<td>Chemical Engineering: Environmental Technology Concentration</td>
<td>Chemical and Biomolecular Engineering</td>
<td>College of Chemistry</td>
<td>UG</td>
</tr>
<tr>
<td>College of Engineering</td>
<td>Civil &amp; Environmental Engineering Emphasis</td>
<td>Civil &amp; Environmental Engineering</td>
<td>College of Engineering</td>
<td>UG</td>
</tr>
<tr>
<td></td>
<td>Civil &amp; Env. Engineering: Environmental Engineering Program</td>
<td>Civil &amp; Environmental Engineering</td>
<td>College of Engineering</td>
<td>G</td>
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## Environmental Studies at Berkeley (continued from previous page)

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At Berkeley, you begin to understand a lot about different cultures. Last year, as a first-year student, I’d stay up until 3 or 4 in the morning just talking to people. It’s interesting when you hear and learn about other people. That’s what I feel the college experience is, meeting new people and getting to know about their lives.

2nd-year student
More learning from the ground up

Wildlife, wildfire, soil, timber, rural communities—managing our woodlands looks anything but simple from Berkeley’s venerable forestry classroom in the Sierra. For more than 90 summers, students have had unforgettable experiences learning forest ecology and management at this camp, an example of how real-world fieldwork can be a key component of a Berkeley education.
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 describe 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 (normally 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 online Schedule of Classes or consult with departmental advisers.

You should carefully note prerequisites for courses.

Courses with double numbers (for example, English 1A-1B) are two-semester sequences that usually begin in the fall semester. 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. An abbreviation in parentheses following the course description indicates the semester in which the course is normally offered: (F) fall, (SP) spring. Semester offerings are subject to change. Summer session courses are listed separately, except for a few courses that are part of a department’s degree requirements. Visit the Berkeley Summer Sessions website at summer.berkeley.edu for course information.

Prefixes to Course Numbers
• Course numbers preceded by the letter C indicate that the course is cross-listed with a course in another department—e.g., Italian Studies C103 (a hypothetical example) is identical to a course offered in the Department of French as French C112. The courses with which a C course is cross-listed are identified at the end of the course description.

• 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 R satisfy the Reading and Composition requirement.

• Course numbers preceded by the letter W are offered fully or predominantly online.

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.

100–199

Upper division courses. You must ordinarily have completed at least one lower division course in the given subject or two years of college work to enroll in these courses.
98, 99, 197, 198, 199

Special Studies courses. (See limitations listed below. For additional information on 98 and 198 courses, visit vpapf.chance.berkeley.edu/specialstudies/index.html.) 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 GPA 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 submitted 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 may authorize exceptions to these limitations.

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 may authorize exceptions to these limitations.

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 submitted 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 GPA or better). Only a grade of passed/not passed will be assigned. The dean of your college or school may authorize exceptions to these 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. 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 GPA or better). Only a grade of passed/not passed will be assigned. The dean of your college or school may authorize exceptions to these 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.

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.