Special Note. As part of Berkeley's conversion to the semester system, a General Catalog for 1982-83 has not been published. Instead, students are to use this Supplement in conjunction with the 1981-82 Catalog (or the 1981-82 Catalog Reprint) and the quarterly Schedules of Classes.

The Supplement contains up-dated information of most importance in the first 48 pages of the 1981-82 Catalog as well as major academic program and course changes. This information is in the same order as the 1981-82 Catalog. Page references to the Catalog will assist you.

Students are reminded that their departments have the most up-to-date information regarding faculty, curricular, and course changes.

The General Catalog for 1983-84 will be available in July 1983.
# Academic Calendar 1982-83

## Fall Quarter 1982

- **Registration by Mail:** May 17*-August 20
- **Labor Day:** September 6
- **Fall Quarter begins:** September 15
- **Late Registration:** September 15-17
- **Pre-enrollment:** September 20
- **Instruction begins:** August 23 (for Law School)
- **Thanksgiving Holiday:** November 25-26
- **Instruction ends:** November 29
- **Final Examinations:** December 4-23 (for Law School)
- **Fall Quarter ends:** December 4
- **Christmas Holiday:** December 23, 24
- **New Year Holiday:** December 30, 31

## Winter Quarter 1983

- **Registration by Mail:** October 24-November 5
- **Winter Quarter begins:** December 6
- **Late Registration:** December 6-7
- **Pre-enrollment:** January 3
- **Instruction begins:** February 21
- **Instruction ends:** March 12
- **Final Examinations:** March 14-19
- **Winter Quarter ends:** March 19
- **Spring Holiday:** March 21

## Spring Quarter 1983

- **Registration by Mail:** January 31-February 18
- **Spring Quarter begins:** March 24
- **Late Registration:** March 24, 25
- **Pre-enrollment:** March 24, 25
- **Instruction begins:** January 10 (for Law School)
- **Memorial Day Holiday:** May 30
- **Instruction ends:** June 4
- **Final Examinations:** June 6-11 (for Law School)
- **Spring Quarter ends:** June 11

## Summer Session 1983

- **Registration:** June 16, 17
- **Instruction begins:** June 13 (10-week session)
- **Independence Holiday:** July 4
- **Instruction ends:** August 12 (8-week) August 19 (10-week)

*Continuing students receive registration forms beginning May 17.*
Contents

3 Information Guide
4 Changes in Undergraduate Education
4 Changes in Fees and Financial Aid
6 Changes in Courses and Curricula
22 General Administrative Officers

Information Guide

University of California, Berkeley
Berkeley, CA 94720
Area Code 415

Admissions, Graduate
1 California Hall, 642-7405

Admissions, Undergraduate
120 Sproul Hall, 642-0200

Advising, Pre-Professional and Pre-Graduate
2440 Bancroft Way, 642-5207

Alumni Association
Alumni House, 642-7026

Associated students (ASUC)
300 Eshleman Hall, 642-1431

Athletics, Intercollegiate
Men: Harmon Gymnasium, 642-0580
Women: 177 Hearst Gymnasium, 642-2098

Botanical Garden
Strawberry Canyon, 642-3343

Career Planning and Placement
Building T-6, 642-1716

Child Care Services
2537 Haste Street, 642-1827

Counseling and Psychological Services
Building T-5, 642-2366

Disabled Students' Program
2515 Channing Way, 642-0518
642-6376 (TDD)

Education Abroad Program
2538 Channing Way, 104 Building D,
642-1356

Educational Opportunity Program (EOP)
Building T-6, 642-7224

Financial Aid
201 Sproul Hall, 642-1455

Foreign Student Admissions,
Undergraduate
120 Sproul Hall, 642-3246

Foreign Student Advising
International House
2299 Piedmont Avenue, 642-2818

Health Services
Cowell Hospital, 642-2000
642-5012—future appointments
642-6890—same day appointments

Housing
2401 Bowditch Street, 642-3642

Interfraternity Council (Fraternities)
224 Sproul Hall, 642-5753

Library Information
Main Library Reference Desk, 64-BOOKS

Pacific Film Archive
2625 Durant Avenue, 642-1124

Panhellenic Office (Sororities)
224 Sproul Hall, 642-7507

Police
1 Sproul Hall, 642-6760
Emergency 9-911 (or 911 from non-campus extensions)

Rape Prevention Education Program
386 Cowell Hospital, 642-7310
Rape Counseling Center
Building T-5, 642-2366

Relations with Schools
407 Eshleman Hall, 642-5135

Sports, Intramural and Recreational
193 Harmon Gymnasium, 642-5342

Strawberry Canyon Recreational Area
Strawberry Canyon, 642-5575

Student Activities and Programs
103 Sproul Hall, 642-5171

Student Information Center
102 Sproul Hall, 642-6412

Student Learning Center
Building T-8, 642-7332

Summer Session
22 Wheeler Hall, 642-5811

Tours, Campus
Visitor Center, Student Union, 642-5215

University Art Museum
2625 Durant Avenue, 642-0808

University Extension
2223 Fulton Street, 642-4111

Visitor Center
Student Union, 642-5215

Women's Center
112 Building T-9, 642-4786
Undergraduate Education

Catalog page 15. Subject Requirement. b. English. Four years of university preparatory English Composition and/or literature, not more than one year will be accepted from the ninth grade.

Catalog page 18. University Requirements. Subject A. Students who have not satisfied the requirement after three quarters will not be eligible to enroll in the University for a fourth quarter.

Catalog page 19. American History Requirement


Please Note: The above list may change during the year. It is the student's responsibility to check with the AH&I Office at the beginning of each quarter to see whether any courses have been dropped from or added to the list.

3. By presenting official evidence of completion of a course, taken at an accredited college or university, which is equivalent in scope and content to those on the approved UC Berkeley American History List. The Admissions Office will approve some but not all such courses. Students not cleared by Admissions (including those transferring from other UC campuses) should present a syllabus, reading list, and grade report from the course to the American History and Institutions Office, 29 Dwinelle Hall. Students are encouraged to submit such course descriptions for approval prior to enrolling in the course.

Fees and Financial Aid

Required Fees

University Registration Fee — $170 per quarter, $255 per term (for students in the School of Law). Paid by all students. Covers normal expected usage of such facilities as laboratories, gymnasiums, counseling and placement services, health services, etc.

Educational Fee — Paid by all undergraduates at $208 per quarter, by students in the School of Law at $342 per term, and by all other graduate students at $220 per quarter. Used to support a portion of the cost of the educational program. The Educational Fee may be reduced to $50 for undergraduates who have received prior approval from the Dean of their College or School to enroll in a program of less than 9 units. Eligibility must be established no later than the end of the third week of classes.

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

Nonresident Tuition — $1050 per quarter, $1575 per term, School of Law. At the time of registration, every entering student is classified as a resident or nonresident for tuition purposes. Only U.S. citizens and holders of immigrant visas can become qualified for resident classification. Under California law a student is classified as a resident for tuition purposes if the student has had residence in the state for more than one year immediately prior to the day instruction begins at the last of the campuses to open for a quarter. Residence is the combination of physical presence within the state plus intent to reside in California permanently. Nonresidents must pay a nonresident tuition fee each quarter. For detailed information regarding the establishment of California residence, see Appendix, or write to the Attorney in Residence Matters, 590 University Hall, University of California, Berkeley, CA 94720.

Foreign Student Health Insurance — has been included in foreign student fees — $39.00 per quarter, $58.50 per term, School of Law. Required of all students on nonimmigrant visas. Payment of the fee for three consecutive quarters (two terms in the School of Law) covers the student for the full academic year, including summer.

Additional Fees and Expenses

Late Registration — $50. Students who register during the late registration period (see Calendar for dates) are liable for this fee.

Late Study List Filing — $10. Students who file their Study Lists late (see Calendar for dates) are liable for this fee.

Reinstatement — $10.

Athletic Privilege Cards — $20, Student Football Season Ticket, $15, Basketball/All Sports Card. Both Options Permit free admission or reduced rates to most University athletic events.

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

Table of Fees

At the time of registration, by mail or in person, the following fees are paid by each student:

<table>
<thead>
<tr>
<th>Student Category</th>
<th>Fall, Winter, or Spring 1982-83</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident Undergraduate</td>
<td>$390</td>
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<td>Nonresident Undergraduate</td>
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<td>Foreign Undergraduate</td>
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<tr>
<td>Resident Graduate</td>
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<td>Nonresident Graduate</td>
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<table>
<thead>
<tr>
<th>School of Law</th>
<th>Fall or Spring 1982-83</th>
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</thead>
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<tr>
<td>Resident Graduate</td>
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</tr>
<tr>
<td>Nonresident Graduate</td>
<td>$2191</td>
</tr>
<tr>
<td>Foreign Graduate</td>
<td>$2264</td>
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</table>
Financial Aid

The Financial Aid Office is located at 201 Sproul Hall. By visiting or writing that office you may obtain information about the various types of student aid offered. Undergraduate students may apply to the Financial Aid Office for undergraduate scholarships (including Regents' Scholarships) and Supplemental Educational Opportunity Grants (SEOG). Both undergraduate and graduate students may apply for University Grants-in-Aid, Educational Fee Grants, National Direct Student Loans, University Loans, Guaranteed Student Loans, Educational Fee Deferral Loans, Work-Study Program, and other aid programs.

All financial aid except honorary scholarships and prizes are granted on the basis of financial need. Financial need is the difference between the parents' expected contribution plus the student's own resources and the allowable education expenses. Prizes are awarded on the basis of competition or outstanding ability in some area of creative or scholarly achievement. Undergraduate scholarship awards are made on the basis of scholarship and financial need, except Regents' and Alumni Honorary Scholarships which are awarded in recognition of outstanding achievement and promise. Complete information concerning all of these programs except prizes is contained in the Financial Aid Handbook 1983-84 which may be obtained from the Office of Financial Aid. A separate booklet describing the various prizes offered is also supplied on request by the Committee on Prizes, 205 Sproul Hall.

Financial Aid application information for entering undergraduate students is in the Admission Packet. Financial Aid Application forms for entering graduate students are in the Graduate Admission Application. Application forms for continuing undergraduate and graduate students are available at 201 Sproul Hall. The deadline for submitting these forms will be announced during the Fall Quarter.

Information and application materials concerning graduate fellowships and graduate scholarships may be obtained separately from the Graduate Division, 1 California Hall. The application is normally due by December 1.

University of California, Berkeley 1982-83 Student Budgets

<table>
<thead>
<tr>
<th></th>
<th>Commuter</th>
<th>Dorm</th>
<th>Off-Campus</th>
<th>Married*</th>
<th>Single Parent*</th>
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</thead>
<tbody>
<tr>
<td>Housing &amp; Utilities</td>
<td>0</td>
<td>2755</td>
<td>2061</td>
<td>3471</td>
<td>3471</td>
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<tr>
<td>Food</td>
<td>1100</td>
<td>496</td>
<td>1524</td>
<td>2910</td>
<td>2700</td>
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<tr>
<td>Books &amp; Supplies</td>
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<td>345</td>
<td>345</td>
<td>345</td>
<td>345</td>
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<tr>
<td>Personal</td>
<td>858</td>
<td>858</td>
<td>858</td>
<td>1647</td>
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<tr>
<td>Transportation</td>
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<td>234</td>
<td>459</td>
<td>459</td>
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<tr>
<td>Fees* (Rounded)</td>
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<td></td>
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<tr>
<td>Undergraduate</td>
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<td>Law</td>
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<td>1262</td>
<td>1262</td>
<td>1262</td>
</tr>
<tr>
<td>Budget Totals (Rounded)</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Undergraduate</td>
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<td>$6628</td>
<td>$6193</td>
<td>$10,003</td>
<td>$9796</td>
</tr>
<tr>
<td>Graduate</td>
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<td>$6628</td>
<td>$6193</td>
<td>$10,003</td>
<td>$9796</td>
</tr>
<tr>
<td>Law</td>
<td>$3950</td>
<td>$6462</td>
<td>$6343</td>
<td>$10,244</td>
<td>$10,086</td>
</tr>
</tbody>
</table>

*Add $1650 for each additional dependent to the budget total. Add $211 extra food allowance for each dependent over 12 years old.
* Dorm Housing and Utility figure includes regular meals. Dorm figure for Law Students is $3350.
* Food figure covers vacation and break costs for dorm residents.
* Add Non-resident tuition $3150.
* Law budget total includes an extra $151 book allowance.
* Will adjust to actual costs for students living in Family Student Housing.

Salary and Employment Information/Representative Colleges*

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Average Monthly Salary of Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree Level:</td>
<td>Bachelor's</td>
</tr>
<tr>
<td>Accounting</td>
<td>$1333-1680</td>
</tr>
<tr>
<td>Bus Admin. (General)</td>
<td>1041-1815</td>
</tr>
<tr>
<td>Biological Sciences</td>
<td>900-1750</td>
</tr>
<tr>
<td>Computer Science</td>
<td>1584-2062</td>
</tr>
<tr>
<td>Engineering</td>
<td>1816-2433</td>
</tr>
<tr>
<td>Humanities</td>
<td>833-1658</td>
</tr>
<tr>
<td>Physical and Earth Sciences</td>
<td>1266-2350</td>
</tr>
<tr>
<td>Economics</td>
<td>1000-1709</td>
</tr>
<tr>
<td>Other Social Sciences</td>
<td>950-1500</td>
</tr>
</tbody>
</table>

* Source: A January 1982 national survey of representative groups of colleges conducted by the College Placement Council representing the 80 percent range of offers throughout the country. It should be noted that a wide variation in starting salaries exists within each discipline based on job location, type of employer, personal qualifications of the individual, and employment conditions at the time of job entry. Recipients of UC Berkeley degrees are often more in demand than degree earners from representative colleges across the nation.

Cal Grants A (California State Scholarships) are awarded by the State and are open to undergraduates who can demonstrate exceptional financial need. The awards range from $1100 to $1905 per academic year.
School of Business
Page 49 (Third column)


New Courses

228A. Income Taxation. (4) Three hours of lecture and 1 1/2 hours of discussion per week. Prerequisites: 202A or equivalent. Study of the fundamentals of income taxation relating to individuals and business entities. Introduction to tax research, tax planning, and tax policy. (F)

228B. Advanced Topics in Income Taxation. (4) Three hours of lecture per week. Prerequisite: 228A. Study of corporation tax problems, partnership tax problems, subchapter C corporations, estates and gift taxation, income taxation of trusts and estates, tax research, tax planning, and administrative procedures. (W)

School of Education

New Courses

134A. Foundations in Reading in Grades K-12. (3) Formerly 134A-134B. Three hours of lecture plus field work assignments in the public schools. Prerequisites: admission to Development Seminar II or equivalent. Orientation to reading instruction in school setting, basic reading skills, instructional materials and approaches, diagnostic prescriptive teaching, differentiated assignments, treatment of readers to progress in reading English: ethnic, socio-economic, and dialectical. Supervised teaching may begin prior to the opening day of each of the quarters in order to fit the calendar of the public schools.

191B. Interpersonal Communication Skills. (3) One 1 1/2-hour lecture/discussion and one 1 1/2-hour laboratory per week. Introduction to interpersonal communication theory, research, and skills. Emphasis on basic perceptual, verbal, and behavioral skills that are conducive to effective and professional relationships. To be offered 1983-84 only. (F, W, S)

214E-214F. Seminar on the Re-education of the Severely Socio-Emotionally Disturbed Child and Adolescent. (3-5) One 3-hour seminar per week. Prerequisite: consent of instructor. Courses will integrate students' field assignment experience with emotionally disturbed children with related cognitive and affective concepts. Seminars will focus on knowledge and skills required by professional personnel in Re-Education programs. (W, S)

214G. Social Development. (4) One 3-hour session per week. Prerequisite: consent of instructor. An examination of theory and research on social development from childhood to early adulthood. Review of different theoretical orientations to social cognition, morality, psychosexual development, and role of social-environmental factors. (W, S)

261A. Higher Education: History of the American College and University. (4) One 3-hour lecture per week. Social and intellectual history of American higher education. European antecedents, institutional change, student and faculty cultures over time, and shifting functions of higher education in American society. (W, S)

261B. Higher Education: Contemporary Development, Issues, and Changes. (4) One 3-hour session per week. A comprehensive review of major areas of higher education: administrative issues, changing issues, problems, innovations, and developments in colleges and universities. (F)

291L. School Law. (3) One 3-hour lecture per week. Prerequisites: 231 or consent of instructor. Survey of education law affecting teachers and school employees; basic principles of judicial interpretation and application of selected sections of the California Education Code. To be offered 1983-84 and 1984-85 only. (W)

291P. Theories of Teaching Writing. (4) One 3-hour seminar per week. Prerequisite: consent of instructor. Historical and contemporary approaches to teaching writing from formal and informal education. Literature and research studies of creative writing, descriptive writing, and narrative writing, teaching the writing process. To be offered 1982-83 only. (W, S)

291V. Women in Higher Education. (4) One 3-hour seminar per week. Prerequisite: consent of instructor. Historical and contemporary approaches to the teaching of writing from formal and informal education. Literature and research studies of creative writing, descriptive writing, and narrative writing, teaching the writing process. To be offered 1982-83 only. (W, S)

Change in Description

228A. Income Taxation. (4) Three hours of lecture per week. Prerequisites: 222A or 222B or equivalent. Study of the fundamentals of income taxation relating to individuals and business entities. Introduction to tax research, tax planning, and tax policy. (F)

228B. Advanced Topics in Income Taxation. (4) Three hours of lecture per week. Prerequisite: 222A. Study of corporation tax problems, partnership tax problems, subchapter C corporations, estates and gift taxation, income taxation of trusts and estates, tax research, tax planning, and administrative procedures. (W)

College of Chemistry

Chemical Engineering

New Courses

257. Polymer Rheology and Melt Processing. (3) Three 1-hour lectures per week. Prerequisites: graduate standing or consent of instructor, 150 or an equivalent course in fluid flow. Rheological properties of polymers, continuum mechanics and constitutive equations, kinematics and dynamics of fluid model flow, analysis of polymer processes, including extrusion, calendaring, fiber spinning, injection molding, wire coating and extrusion. (W, S)

258. Polymerization Reaction Engineering. (3) Three 1-hour lectures per week. Prerequisites: 158, 230, 247, or consent of instructor. Analysis of polymerization mechanisms and kinetics. Design of polymerization reactors, including dynamics, optimization and control. (W)

261A. Higher Education: History of the American College and University. (4) One 3-hour lecture per week. Prerequisites: 222A or 222B or equivalent. Study of the fundamentals of income taxation relating to individuals and business entities. Introduction to tax research, tax planning, and tax policy. (F)

261B. Higher Education: Contemporary Development, Issues, and Changes. (4) One 3-hour session per week. A comprehensive review of major areas of higher education: administrative issues, changing issues, problems, innovations, and developments in colleges and universities. (F)

Change in Description

228A. Income Taxation. (4) Three hours of lecture per week. Prerequisites: 222A or 222B or equivalent. Study of the fundamentals of income taxation relating to individuals and business entities. Introduction to tax research, tax planning, and tax policy. (F)

228B. Advanced Topics in Income Taxation. (4) Three hours of lecture per week. Prerequisite: 222A. Study of corporation tax problems, partnership tax problems, subchapter C corporations, estates and gift taxation, income taxation of trusts and estates, tax research, tax planning, and administrative procedures. (W)

College of Engineering

Petroleum Engineering (New Major)

The Petroleum Engineering program is designed to prepare students for careers in the petroleum producing industry and related fields. Petroleum Engineering deals with the wide array of problems associated with the location, drilling and completion of oil and gas wells, production of oil and gas from subsurface reservoirs to obtain the greatest recovery of oil and gas, development and application of enhanced oil recovery techniques, and surface handling of the produced fluids. Many petroleum engineers are also becoming involved in related energy areas such as extraction of natural gas from tar sands and oil shales, and geothermal energy production. The exploration, development, and production of oil and gas, and other fossil fuels, in an environmentally acceptable manner become more and more complex as we continue to consume these exhaustible resources. The best estimates indicate that from two-thirds to three-fourths of all the oil ever discovered in the United States is still in the subsurface reservoirs awaiting the development of new recovery technology. The Petroleum Engineering program reflects the energy industry's need for versatile, innovative engineers by providing a strong basic engineering curriculum while maintaining a diversity in elective course offerings. Students will be able to channel their own interests by choosing one of the following three program emphases:

1. Mechanical Engineering emphasis (students following this emphasis will also satisfy requirements for the B.S. in Mechanical Engineering)—includes extra courses in dynamics, controls, and electronic systems.
2. Chemical Engineering emphasis (students following this emphasis will also satisfy requirements for the B.S. in Chemical Engineering)—includes extra courses in physical chemistry, chemical kinetics, and mass transfer courses.
3. Mineral Geologic emphasis (students following this emphasis will also satisfy requirements for the B.S. in Geology, rock mechanics, and mining principles.)

Curriculum for the Bachelor's Degree

A total of 183 units is required. Including

Lower Division: Required: Mathematics 1A-1B-1C, 50A-50B-50C; Chemistry 1A-1B; Physics 5A-5B-5C-5D; Computer Science 1; Engineering 25, 26, 36, 45, and 46; Geology 10 and 22 units of electives as approved by the advisor.

Upper Division: Required: Mechanical Engineering 102A-102B, 104A, 105A-105B, 106A-106B, 107A-107B, 148, 149, and 150; Chemical Engineering 140A; Civil Engineering 130A; Electrical Engineering and Computer Sciences 109; Engineering 120, Geology 109; and Mineral engineering 115, plus 23 units of electives as approved by the advisor. For more details, consult the Announcement of the College of Engineering.

The graduates program in Petroleum Engineering is offered as a field of study in Mechanical Engineering.

Naval Architecture and Offshore Engineering (New Major)

Curriculum for the Bachelor's Degree

A total of 180 units is required.
Change in Description

Electrical Engineering and Computer Sciences

New Course

IDS 286. Neurobiology of Vision. (3) See Interdepartmental Studies for the complete description of this course.

Computer Science

New Courses

113. Solid-state Power Electronics. (3) Three hours of lecture per week. Prerequisites: 104B, 105. Characteristics of power semiconductor devices including thyristors, ac-dc, dc-dc, ac-ac, and ac-ac converter circuits. Control methods and stability considerations. Applications to power conversion and control for industry, transportation, and utility systems (W).

229A. Advanced Finite Element Methods. (3) Three 1-hour lectures per week. Prerequisites: 223A and 224A (may be taken concurrently). Computationally efficient programs for the analysis of nonlinear structures. Computational techniques for solving large, sparse, and stiff problems include incremental analysis of frame and finite element systems. (Sp).


292D. Software Project Management. (3) Three 1-hour lectures per week or three 1-hour lectures per week. Prerequisite: CS 153 or consent of instructor. Study of software management and methods. Task and workload evaluation. Choice and enforcement of methods, knowledge acquisition. (W).

292F. Software Project Management. (3) Three 1-hour lectures per week or three 1-hour lectures per week. Prerequisite: CS 153 or consent of instructor. Study of software management and methods. Task and workload evaluation. Choice and enforcement of methods, knowledge acquisition. (W).

292G. Video Graphics Languages and Techniques. (3) Three hours of lecture per week. Prerequisites: CS 256 or consent of instructor. Real time generation and modification of video images. Languages and systems for special effects, animation, and for control of recording and editing. Digital control of analog video processors. Recent advances in hardware and software systems. (W).

292H. Computer Aided Geometric Design. (3) Two 1 1/2-hour lectures per week. Prerequisite: numerical analysis course or consent of instructor. Mathematical techniques for curve and surface representation including: Hermite interpolation, interpolation curves and surfaces, Bezier curves and surfaces, B-splines, Beta-splines, Coons patches, tensor product forms, lofted patches, blending functions, Boolean sum schemes. (Sp).

292X. VLSI Systems Integration. (4) Three hours of lecture and 1 1/2-hour discussion per week. Prerequisites: 245, 246 is desired. Instruction in how to take a collection of scale VLSI circuit designs and combine them into a single, coherent, very large scale integration (VLSI) system. Topics in digital testing techniques of testable of systems, traditional digital design topics. (W).

Change in Description

3. Introduction to Programming. (4) Three hours of lecture and 1 hour of discussion per week. Prerequisites: high school algebra. No more than 4 units of credit may be earned for any combination of CSI, IS, 3, 3S, 103S, and 106. Algorithms and computer programs; techniques for organized problem solving. Extensive practice with the Pascal programming language. Computer solution of problems drawn from various fields, with emphasis on non-numerical applications. (W, Sp).

105. Topics in Computer Science. (1) Change: may now be repeated three times for credit.

105S. Self-paced Introduction to Programming. (1-4) Three to 12 hours of discussion per week. Prerequisite: high school algebra. No more than 4 units of credit may be earned for any combination of CSI, IS, 3, 3S, 103S, and 106. Algorithms and computer programs; techniques for organized problem solving. Extensive practice with a high-level programming language in applications geared toward student's specific interests. Offered in self-paced format. Units assigned depend on the amount of work completed. May be repeated for credit up to a total of 4 units. (Split grading will be assigned for units not completed.) (F, W, Sp).

Industrial Engineering and Operations Research

New Course

121. Advanced Engineering Economy. (4) Three 1-hour lectures and 1 1/2-hour discussion per week. Prerequisites: ECON 120, and IS 3S is desired. Study of engineering economy. Solution of problems drawn from various fields, with emphasis on non-numerical applications, sensitivity of projects selection to data changes and fluctuations of market conditions, decision analysis under risk and uncertainty, efficient portfolios, capital asset pricing, project selection in the public and private firm. (Sp).

Change in Description

130. Modeling and Simulation of Dynamic Systems. (4) Three hours of lecture and 1 hour of discussion per week. Prerequisites: Math 50A, 50B, and Statistics 134A (may be taken concurrently). Computationally efficient techniques for the simulation of linear and nonlinear systems. Practice in modeling and analysis of systems of moderate complexity; simulation of nonlinear and stochastic systems. (F, Sp).

162. Linear Programming. (5) Two 1-hour lectures and one 2-hour problem session per week. Prerequisite: Math 108B. An introduction to linear programming with emphasis on formulation, the simplex method, duality theory, post-optimization problems, network models, and applications to industrial systems. (F, W, Sp).

166. Network Flow Models and Critical Path Scheduling. (4) Two 1-hour lectures and 1 hour of discussion per week. Prerequisites: Math 50A. Network optimization models, with emphasis on formulation and industrial applications. Topics covered: flows on networks; maximal and optimal flows; transportation and dynamic flow networks; shortest and longest routes; formulations, time only and cost-time critical path scheduling; computer solutions, economic interpretations. (W).
Materials Science and Mineral Engineering

New Courses

258. Semiconductor Materials. (4) Four hours of lecture per week. Prerequisite: Consent of instructor. Semiconductor physics, crystal chemistry, dopants, impurities, and electrical properties. Recommended for students in physics, electrical engineering, and materials science. (F)


261. High Temperature Corrosion. (4) Three 1-hour lectures and 1 hour of discussion per week. Prerequisite: Consent of instructor. Thermodynamics and kinetics of metal and alloy oxidation and sulfidation. Defects and transport through oxide layers. Surface restoration and repair in growing oxides and scale failure processes. (W)


263. Semiconductor Characterization. (3) Three hours of lecture per week. Prerequisite: 250 or consent of instructor. Modern electrical, optical, and particle beam techniques for the characterization of semiconductor bulk single crystals and their crystalline and amorphous layers. Examples of Hall effect, deep level transient spectroscopy, IR-spectroscopy, secondary ion mass spectroscopy, Rutherford backscattering spectroscopy, and others. (W)

Mineral Engineering

New Course

215. Hazards in Mine Environment. (3) Three hours of lecture per week. Prerequisite: upper division or graduate standing. Course complements Mine Environmental Engineering 215. Emphasis given to physiological effects of mine gases, dust, heat, and humidity. Deals with underground fires, explosions, spontaneous combustion in addition to problems of radiation, noise and illumination. (W)

Engineering Geoscience

New Courses

290A. Inverse Theory in Applied Geophysics. (4) Three 1-hour lectures and 1 hour of discussion per week. The course covers the fundamentals of linear and non-linear inverse theory in exploration geophysics. (F)

290B. Geophysical Borehole Logging. (3) Two hours of lecture and 1 hour of discussion per week. Prerequisite: Consent of instructor. Introduction to borehole geophysical logging, with emphasis on the physical properties of rocks and borehole measurement methods. Electrical, radioactive, acoustic and thermal methods will be discussed in terms of propagation of fields and particles in rock, sources and detectors, response equation relating physical property to measured quantity, borehole corrections and probe calibrations. (W)

293C. Practical Writing for Architects. (2) Two 1-hour lectures per week. Prerequisite: English 1A-1B, or equivalent. Intensive practice in writing required by design professionals. Emphasis on writing as a process of learning, re-writing, and developing an ability to present generalizations to standard forms of electronic writing and to writing for particular audiences. (F)

297F. Traditional Architecture of Africa. (2) Two 1-hour lectures per week. Study of rural buildings of more than 30 major ethnic groups, with an insight into a number of interesting architectural types. Emphasis on developing an ability to present generalizations to standard forms of electronic writing and to writing for particular audiences. (F)

298. Geophysical Borehole Logging. (3) Two hours of lecture and 1 hour of discussion per week. Prerequisite: Consent of instructor. Introduction to borehole geophysical logging, with emphasis on the physical properties of rocks and borehole measurement methods. Electrical, radioactive, acoustic and thermal methods will be discussed in terms of propagation of fields and particles in rock, sources and detectors, response equation relating physical property to measured quantity, borehole corrections and probe calibrations.
291F. Urban Technology and Planning of Earthquake Hazards Reduction. (4) Two 1½-hour seminar meetings per week including site visits and field study. Prerequisite: graduate standing or consent of instructor. Planning and design of urban environments in terms of seismic activity. Earthquake hazards reduction at the urban scale. Urban systems analysis and "life line" components. Relationships of legislation and policy to urban planning and design in mitigation of seismic risk. To be offered 1982-83 only.

Change in Description

239. Special Topics in Design Theories, Methods, and Practice. (4) Two 1½-hour seminars per week. Prerequisite: 204B or consent of instructor. Can be repeated once on the condition that the course forms a sequence. Current and advanced topics in design theories, methods, and practice, primarily for advanced graduate students. (F, W, Sp)

City and Regional Planning

New Courses

115. Urbanization in Developing Countries. (4) Four hours of lecture per week. Analysis of urban, sub-urbanization, international relations, international labor patterns; urban-rural migration; local governments; decentralization and centralization in urban and national and international policies; housing; energy; transportation; international agencies: the World Bank. Comparative analysis of planning experiences of developing countries. (Sp)

191A. Urban Economics and City Planning. (5) Five hours of lecture and discussion per week. Prerequisite: Econ 100A or equivalent, or consent of instructor. Upper division standing. Introduction to applications of urban economics to city planning issues of land use, urban development, housing, transportation, and municipal services. Comparative examination and analysis of policies and techniques for providing housing and planning and design, for students whose primary interest is urban problems. (Sp)

290B. History of Urban Planning. (3) Formerly 2018. Two hours of lecture and discussion per week. A review of the practice of urban planning and its relation to the history and evolution of cities. (F)

291. Introduction to the City Planning Process and Profession. (5) Five hours of meetings per week. Review of the development of the profession and the practice of urban planning, including introduction to the various specialties within the profession: planning process, needs assessment, diagnosis and goal formulation, analysis, design and selection of alternatives, formulation recommendations and implementation. (F)

234. Methods of Regional Planning Analysis. (4) Four hours of lecture and discussion per week. Prerequisites: 204A, 209B, and 232. Covers regional accounting, economic models, household techniques, input output analysis, linear programming, regional economic models, and qualitative sectoral studies. (W)

260. Introduction to Urban Social Theory and Plan- ning per person. Overview of the contemporary urban trans- portation planning process; historical development of the field and its current political and administrative framework; techniques for evaluating demand and cost features of multi-modal transportation services, system performance, alternatives, and environmental impacts of social, economic, and environmental implications of policy decisions; review of current policy dilemmas; controlling the automo- bility of urban environments, promoting ride-sharing, impacts of subsidy programs, energy issues, needs of elderly and handicapped, system management and operational strategies, effects of changing life-styles on travel patterns. Applications will be strengthened through discussion of relevant policy issues and analysis of cases. (W)

291C. Urban and Regional Physical Infrastructure. (4) Two hours of lecture and 2 hours of seminar per week. Survey of basic knowledge and technology of physical infrastructure systems including: transportation, water supply, sewerage, stormwater, solid waste management, community energy facilities, and urban public facilities. Linkage between land use and infrastructure planning; environmental and economic impacts of infrastructure development; decentralized vs. centralized systems; case studies of physical infrastructure planning in local and regional agencies. To be offered in 1982-83 only. (W)

IDS 231. Environmental Simulation and Public Communication. (4) See Interdepartmental Studies for the complete description of this course.

Change in Description

205. Methods of Planning Analysis. (4) Four hours of lecture and discussion per week. Prerequisite: 204A or equivalent, or consent of instructor. Upper division standing. Introduction to applications of urban economics to city planning issues of land use, urban development, housing, transportation, and municipal services. Comparative examination and analysis of policies and techniques for providing housing and planning and design, for students whose primary interest is urban problems. (Sp)

209A. Introduction to Housing Analysis. (4) Four hours of lecture and discussion per week. Prerequisite: Economics 100A or equivalent, or Statistics 131 or equivalent. Theory of housing markets and empirical methods for measuring market conditions and performance. The course is divided into four parts: housing supply and demand, housing supply and production, and market performance; and includes basic theory, empirical studies, and applications to policy issues. (Sp)

215. Transportation-land Use Planning. (4) Four hours of lecture and discussion per week. Prerequisite: 204A, 212 or consent of instructor. Upper division standing. Introduction to applications of urban economics to city planning issues of land use, characteristics of travel demand, system performance and cost evaluation, spatial location theory, and models, evaluating multi-modal services, short- and long-range transportation planning techniques, and case study investigations. (Sp)

244. Planning and Analysis for Urban Development. (5) Five hours of lecture, tutorial, and discussion per week. Prerequisite: 214 or equivalent. Case studies in urban planning. For research work conducted preparatory to completion of the thesis or professional project, and other approved research work. See departmental information sheet for other limitations. Must be taken on a satisfactory/unsatisfactory basis. (F, W, Sp)

280. Comparative Analysis of Urban Policies. (4) Four hours of meetings per week. Prerequisite: graduate standing. Survey, description, analysis, and evaluation of urban policies in a variety of social and spatial contexts, including, for each topic, the United States, Western Europe, and developing countries, with some reference to state-planned societies. Main topics covered: national and local public policies concerning regional development, housing, transportation, urban renewal, public participation, social services, and decentralized urban management. (Sp)

252. Advanced Seminar on Land Use and General Plan-ning Topics. (4) Four hours of meetings per week. Prerequisites: 205, 214 and at least one studio. Topics vary from year to year. Seminar explores some current land use and environmental issues confronting California communities. Efforts to develop remedies are made. Student papers are required. (W or Sp)

266. Policy Analysis and Program Evaluation for Public Sector Management. (5) Five hours of meetings per week. Prerequisites: 247 or 262 or substantive equivalent
College of Letters and Science

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The Division was created in 1982 and consists of a Divisional Dean, a faculty and student advising component, and a program of freshman seminars. The Divisional Dean has, as major responsibility, the charge of developing curricular innovations and advising undergraduate students, particularly freshmen.

Freshman Seminar Program. The Division of Freshman and Sophomore Studies has reviewed and strengthened a program of freshman seminars. These seminars are offered in various departments in the College and are essentially instructional, offering undergraduates intellectual, social, and moral benefits. For example, in Winter Quarter 1983, a seminar in world literature, will be offered. This course, open only to freshmen, will consist of exploration, in seminar format, of a topic in world literature, with round-table discussions and individual assignments. This freshman seminar, and others like it in the humanities, the social sciences, and the natural sciences, will get freshmen the opportunity to work with faculty members in a seminar setting where they can discuss important ideas in a particular field.

Advising. A system of faculty and student peer advising has been developed and is designed to involve freshmen students in academic life and bring them into contact with faculty, staff, and fellow students as early as possible in their first year of attendance in the College. To achieve this goal, a number of faculty and undergraduate students have joined together to meet with freshmen in small groups and singly to discuss the students' academic direction and goals. The freshman seminar, and others like it in the humanities, the social sciences, and the natural sciences, will give freshmen the opportunity to work with faculty members in a seminar setting, where they can discuss important ideas in a particular field.

Faculty advisers are available, primarily to discuss with undergraduates aspects of the field or program which faculty members know best. To explore with the students how that discipline or field is conceived and pursued in this University, and to introduce freshmen (and sophomores, as the program expands) to the central values of the University and to the constitutive elements of Western culture. Student peer advisers, who are generally upperclassmen, guide freshmen in the workings of this large institution and help them to adjust to campus life. The faculty and student peer advisers have joined together to meet with freshmen in small groups and singly to discuss the students' academic direction and goals and to give the entering undergraduates a sense of how a liberal arts education is compatible with our economically-demanding and technologically-driven society.

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computer science

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Unfortunately, because of the large and increasing enrollments and the limited resources available, it has proven necessary to further the number of computer science majors. Berkeley students should make application at the Computer Science Office, 426 Evans Hall. Further information including deadlines for applications, is available from that office. Applications will be considered only from students who have completed the lower division requirements, including the College’s reading and composition requirement, and who have not accumulated more than 125 quarter units of credit. A GPA of at least 3.0 on the lower division must not only be necessary, but not sufficient, for admission to the major. An admission quota has been established.

The Division's overenrollment problems have also necessitated a curtailment of admission of transfer students into the major. Transfer to Berkeley, even with the expressed intention of majoring in computer science, does not guarantee admission to the major. Freshman and Sophomore transfer students are subject to the same admission procedures as regular Berkeley students. Junior transfers must receive approval of their provisional acceptance to the major before arriving at Berkeley, and must then satisfy complete lower division requirements before they are formally admitted. Applications from students who transferred to Berkeley as juniors, without provisional acceptance, will not be accepted into the major.

Development Studies

New Course

110. History of Development and Underdevelopment. (5) Two 2-hour lectures per week. Traces out in systematic fashion how the world economic system became structured in more and less developed countries, starting in the early sixteenth century. Integrates aspects of world development in a consistent framework and traces the impact of these developments on less advanced countries. Provides background to understand and assess theoretical interpretations of development and underdevelopment.

Dramatic Art

New Courses

12A-12B. Beginning Study of Voice and Speech. (3-3) Three 1-hour sessions per week. Prerequisite: consent of instructor. A comparative study of the dynamics of stage performances that employ materials of myth and ritual. To be offered 1983 only. (W, Sp)

Economics

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Prerequisites for Admission to the Major. In applying to the economics major students must have satisfied the University of California at Berkeley, the major curriculum and who have not accumulated more than 125 quarter units of credit. A GPA of at least 3.0 on the lower division must not only be necessary, but not sufficient, for admission to the major. An admission quota has been established. For all other students, with more than 83 units of transfer credit the prerequisites for admission, particular

the need to accumulate information about academic performance at Berkeley, essentially prohibit admission to the economics major.

New Courses

255A-255B. Urban Economics. (4-4) Three hours of lecture per week. Prerequisites: 201A or consent of instructor. Conversion to 255A is prerequisite to 255B. Admission to 255B will be limited to students having completed 253A or 253B, or the equivalent. Application of economics methodology to study of activity and residence in cities. 253B is equivalent to 253A. This course is designed to provide an understanding of development and underdevelopment of the U.S. and static and dynamic location theory. 252B covers sectoral problems including housing, transportation, government, production, systems, and economic policy. (F)

256. Seminar in Urban Economics. (4) Two hours of seminar per week. Prerequisite: consent of instructor. May be repeated for credit. (F)

English

New Course

209. Graduate Seminar in Poetry and Writing. (5) Two 2-hour seminars per week. Prerequisites: experience in Ph.D. program in English and consent of instructor, normally based on submission of previous writing. (Sp)

French

Page 154 (column one)

The Major

Option A (Literature): One course from French 102, followed by one course from French 103A-103B or 103F or the equivalent.

Option B (Civilization): One course from French 102, followed by one course from French 103D-103E or the equivalent. Courses 140 and 145 do not count for the French major.

Graduate Study

M.A. Program. French 270 (Literary Criticism) is required of all first-year candidates for the Master’s degree. One course from French 201A-201B (Historical grammar) must be completed during the first two years of graduate study.

New Courses

102. Writing Skills in French. (4) Three hours per week. Prerequisite: French 40 or better of 45.Transfer students must pass placement exam or take 46 before enrolling in 102. The principles and practice of exposition, writing, development of correct and effective expression in French. This course is prerequisite to 183. (F, W, Sp)

H195A-H195B. Honors Course. (2-4; 2-4) Prerequisites: overall GPA of 3.3 and GPA in French major of 3.3. Open to seniors who have completed major and credit with the underwriting in a topic relating to French literature or culture under the supervision of a faculty member, usually two consecutive quarters of the senior year. Credit and grade awarded on completion of the sequence.
196. Special Topics in Geology. (Formerly 196) Group study of a geologic topic not included in the regular department curriculum. (W)

German

New Courses

45. Freshman Seminar. (4) Three hours of seminar per week. Prerequisite: consent of instructor. Limited enrollment. All readings are in English. Variable topics. 1982/83 topics: 45A. Marx, Nietzsche, and Freud. 1983/84 topics: 45B. Contemporary German Literature and Society. Focus on post-war literary and sociocultural developments. (Sp)

131. Drama and Dramaturgy. Three hours of lecture per week. Examines the interaction of German drama, theater, and criticism since the late 18th century. The comparative analysis of various stage presentations will include small stagings in the class. (W)

138. The "Kunstmetzchen" and Fantastic Literature. (4) Three hours of lecture per week. Various fairy stories by 19th century authors (such as Goethe, Tieck, E.T.A. Hoffmann, Hofmannsthal, among others) will be studied. (W)

146. German Authors of the Twentieth Century. (Formerly 145, 147, 148, and 149) Three hours of lectures per week. May be repeated for credit when topic changes. Previous topics have included Kafka, T. Mann, Heess, and Brecht. 1982/83 topics: 145A. T. Mann. Kafka, Hesse. (F) 146B. Studies in Franz Kafka. (W) 146C. T. Mann. (Sp)

152. Feminist Approaches to German Literature. (4) 1982/83 topic: Shrews, Hags, Hoydens—Women as social deviants in 16th century German literature. (W)

257A-257B. German Novel of the Twentieth Century. (4) Three hours of lecture per week. 257A. Early Twentieth Century Novel. (F) 257B. Mid-Century Novel and Contemporary Works. (W)


Italian

New Course

90. Princes, Servants, Citizens (in English). (4) Three 1-hour meetings per week. Prerequisite: consent of instructor. A lower division seminar. Significant texts will be analyzed in the context of European political theories in their evolution from feudalism to parliamentary democracies (from Machiavelli’s The Prince to Lampedusa’s The Leopard). Limited to 15 students.

Latin American Studies

New Course

209. Field Methods. (5) Three hours of seminar per week. Prerequisite: consent of instructor. Field methods and techniques, emphasizing Latin America as area of research. Proposal writing, research design, ethical considerations, interviewing, participant observation, quantitative methods, analysis and write-up of field data. Supervised field exercises. (F)

Legal Studies

Page 162 (first column)

Lower Division requirements: fulfillment of these requirements is prerequisite for admission into the major. Upper Division requirements: no more than three law-related courses offered by other departments may be used to fulfill the 50 units of upper division coursework. New law-related courses fulfilling upper division requirements.

Social and Political Environment of Business (Business Administration 170)

Business, Government, and Law in the American Political Economy (Business Administration 171)

Business in its Historical Environment (Business Administration 172)

Legal Environment of Business (Business Administration 173)

Public Advocacy (Field Studies 196-1967)

Criminal Justice (Field Studies 196-1969)

Legal Aspects of the News Media (Journalism 163)

Regulation and Compliance (Public Policy 163)

Introduction to Rhetoric of Legal Discourse (Rhetoric 181)

Rhetoric of Legal Proof (Rhetoric 162)
New Courses

103. Theories of Law and Society. (4) Three 1-hour lectures, 1 hour of discussion section per week. Major social and historical interpretations of legal origins, functions, and change. Emphasis on 19th and 20th century jurisprudence and social thought, e.g., Bentham, Maine, Marx, Durkheim, Weber, Malinowski, Pound, Llewellyn, Fuller, Glueckman. The course will make use of a book of readings prepared by the instructor. It will include relevant excerpts from the work of the above-named and other classical theorists in this area. (F)

104. Privacy, Morality and the Law. (4) Three hours of lecture and 1 hour of discussion per week. Examines alternative moral responses of private individuals and the social implications of these accounts in various contexts, including (1) undercover police work, (2) undercover journalistic work, (3) intimacy as a basis for testamentary privileges, and (4) family law and social policy concerning families. (F)

106. Legal Reasoning and the Concept of Argument. (4) Two 2-hour discussion sections per week. Explores ways in which traditional forms of legal reasoning rely on and modify similar patterns of thought and methodologies from other disciplines. It emphasizes the functional and institutional differences shaping the distinctive characteristics of legal reasoning. (F)

131. Law and the Urban Environment: Historical Perspectives. (20) Description, transcription, and analysis of selected texts in a variety of social science disciplines. The lecture course will focus on the changing relationship between the city as a social, economic, political, and cultural force and the law as a means to control delinquency; links between juvenile and other community efforts in this field. (F)

143. The Law and Energy and the Environment. (4) Two 1-hour lectures per week. Major social and historical interpretations of legal origins, functions, and change. Emphasis on 19th and 20th century jurisprudence and social thought, e.g., Bentham, Maine, Marx, Durkheim, Weber, Malinowski, Pound, Llewellyn, Fuller, Glueckman. The course will make use of a book of readings prepared by the instructor. It will include relevant excerpts from the work of the above-named and other classical theorists in this area. (F)

147. Regulation and the Public Sector. (4) Three hours of lecture and 1 hour of discussion per week. History of law and governance in American cities from the colonial period to the present, concentrating on the diverse strategies to the problems of controlling urban environment needs created by economic, population, and geographic change. (F)

148. International Human Rights. (4) Three hours of lecture and 1 hour of discussion per week. Examines the evolution of human rights movements since World War II, human rights in international law, national law, and human rights observance. The course will consider the legal and philosophical principles that have guided human rights movements. (F)

150. War, Punishment, and Moral Responsibility. (4) Two 1-hour lectures per week. Modes of legal, moral, and philosophical reasoning employed in punishment. Analysis and tests of legal, philosophical, sociological, psychological, and behavioral science. Examination of traditional institutions of punishment and analysis of the definition and punishment of war-crimes. (F)

166. Youth Crime, Law, and Social Policy. (4) Three hours of lecture and 1 hour of discussion per week. Analysis of the development of laws and institutions to prevent and control delinquency, links between juvenile and other control measures. Contract disputes, schools, welfare, and mental health systems; the future of police, court, corrections, and community efforts in this field. (F)

169. The Legal Profession. (4) Two 1-hour lectures per week. The structure and variety of the American legal profession; the professional and legal culture of the bar; the major trends in the structure of the profession; the major functions of the bar. (F)

174. The Law in Soviet Society. (4) Three hours of lecture and 1 hour of discussion per week. This course surveys the fundamental characteristics of the Soviet legal system. Topics include: The major laws of Soviet law, and Communist doctrine, the Russian character of Soviet law, criminal law, torts, contracts, family law, relation between Soviet and American legal institutions. (F)

182. Law, Politics, and Society. (4) Two 1-hour lectures per week. Examines theory and practice of legal institutions in performing major functions of law: allocating authority, defining relationships, resolving conflict, adapting to social change, and fostering social solidarity. Aspects of nature and limits of law, and consensual perspectives on social control and social change. (F)

195. Honors in Legal Studies. (4) Prerequisite: senior standing with an overall GPA of 3.00 and a GPA of 3.3 in the major. Study of an advanced topic under the supervision of a faculty member leading to the preparation of an honors thesis. (F)

Change in Description

160. Punishment, Culture, and Society. (4) Three hours of lecture per week. Criminal punishment in the United States. (1) Forms, justifications, and relation to larger cultural and social structures. Colonial period to present. (2) Review of major legal issues associated with contemporary forms. (3) Speculation about the future. (F)

170. Society and the Criminal Sanction. (4) Two 1.5-hour lectures and 1 hour of discussion per week. Introduction to substantive criminal law and to criminal justice administration. The nature of crime, and the main features and problems of the process by which suspects are apprehended, tried, sentenced, punished. Past and current trends and policy issues. (F, W)

179. Field Study in Legal Studies. (1-5) Supervised experience related to specific aspects of Legal Studies in off-campus, law-related organizations. Regular individual meetings with faculty sponsor and written reports required. (F, W)

Linguistics

New Courses

111. Writing Systems. (3) Two 1-hour lectures per week. Sources of new writing systems in terms of their historical origins and psychological properties. (F)

151. The English Vocabulary. (3) Three 1-hour lectures per week. Sources and resources of the English lexicon. Structures, meanings, formalizational principles, and pronouns related to words. Colonial period to present. (F)

156. The Politics of Language. (3) Three 1-hour lectures per week. Widespread influence of political activities on the language of national law, nature and grounds of human rights, critical evaluation of human rights movements. (F)

171. Development of the Chinese Language. (5) Three 1-hour lectures per week. Prerequisite: 20 or consent of instructor. The Chinese language from a historical viewpoint, with reference to its early development and present status. Special attention will be devoted to its more remarkable features, such as tones and the writing system. Knowledge of Chinese useful but not required. (F)

Change in Existing Course

153. Introduction to Sociolinguistics. (5) Two 2-hour lectures per week. Prerequisite: 20 or consent of instructor. An introduction to the principles and methods of sociolinguistics. Topics to be covered include: linguistic pragmatics, social and regional dialectology, and oral stylistics. (W)

200. Graduate Prosopminar in Linguistics. (4) Two 1-hour meetings per week. Prerequisite: graduate standing. Critical reading of some of the major works in linguistics of the past 20 years, chosen from the works of such authors as Saussure, Trubetzkoy, Jakobson, Sapir, Bloomfield, Harris. (F)

201A. Graduate Prosopminar. (4) Two 1-hour meetings per week. Prerequisite: graduate standing. Critical reading of recent work in phonology, with primary emphasis on generative phonology. (W)

201B. Graduate Prosopminar. (4) Two 1-hour meetings per week. Prerequisite: 201A. Critical reading of recent work in syntax, with primary emphasis on generative syntax. (F)

Mass Communications

New Course

197C. Field Studies in Media and Society. (5) Three 3-hour seminar and 10-12 hours of field laboratory per week. Analysis of contemporary media in terms of access, ownership, and control; political and economic role of media; the future of alternative institutions and new media; advertising; field placements; national and local news magazines, television and radio stations, newspapers. Pre-enrollment essential. Course limited to 20 students (Sp)

Mathematics

Page 166 (column one)

Major in Applied Mathematics

104A, 105, 113A, 112; at least one course from 128A, 128B; at least one course from 104B, 105, 120C; three additional upper division courses, approved by a major adviser, which may make a coherent cluster in some applied direction. The following clusters illustrate the wide variety of possibilities, but many combinations are possible.

Numerical Analysis: Math 123, 126, 128B.
Computer Science: Math 120B and any two of Computer Science 163, 164, 167, 168.
Decision Theory: Statistics 100A, 168, 181A.
Approximation Theory: Math 105A, 155A, 181A.
(prepared for the Actuarial Examinations.)


Systems Theory: Electrical Engineering 104AB, and 119 or 123.


Fluid Dynamics: Math 128B, Mechanical Engineering 151 and 162.


Geophysics: Math 126, Geophysics 104AB, 122A.

Economics: Economics 101A, 104.

Middle Eastern Studies

(New Group Major) Page 172

Group Major Office, Division of Special Programs, 301 Campbell Hall, 642-2626

The interdisciplinary major in Middle Eastern Studies offers an opportunity to study a region of historic and current importance whose current development is bound up with the political, economic, and cultural development of the rest of the world, Turkey, Iran, and Israel. This program is designed to allow students to pursue a broad and balanced course of study which will familiarize them with the languages, culture, and history of the region, its basic geographic, demographic, and ethnic characteristics, and with the course of recent political, economic, social, and cultural change. The program draws on 200 Middle East-related courses available in 15 different departments of the University.

The program is under the supervision of an interdisciplinary committee of faculty members organized through the Center for Middle Eastern Studies of the Institute of International Studies. Students will be assisted in planning their programs by a faculty committee representing several academic departments and by a major adviser who will help to define courses of study which suit individual needs. Professor William M. Brinner of the Department of Near Eastern Languages and Cultures (122D Dimond Hall, 942-3377) serves as major adviser.

Major Program

I. Lower Division

A. An alternative language introduction course. Near Eastern Studies 10A-10B, a survey introducing the fundamentals of Middle Eastern history and culture, geography and ethnicity, and current economic, political, and developmental problems. Taught by faculty from the several departments contributing to this program, the two-quarter sequence is a prerequisite for upper division lecture courses.

B. Language—Students are required to take two years of a Middle Eastern language: Arabic, Hebrew, Persian, or Turkish. (In the case of Arabic and Hebrew, this will entail 30
lower division units, in the case of Persian and Turkish, 15 lower division units and 15 upper division units.)

II. Upper Division Survey Program

Students will choose at least one course in each of the following three groups, so as to provide a broad introduction to the geography and ethnography of the Middle East, its history and cultures, and current political, economic, and social developments.

A. Anthropology 185, The Near East
B. History 202A, The Islamic History
C. Political Science 142C, Government and Politics in the Middle East

Sociology 167, Modern Social Structure in the Near East
Economics 172, Case Studies in Economic Development

III. Concentration

In addition to the interdisciplinary survey, the student will pursue advanced studies, focusing on a particular region, discipline, or thematic problem relating to the Middle Eastern region. The program of advanced and more specialized study may be flexibly designed in consultation with the adviser to meet the interest of students and to create a cohesive program which is sensitive to a specific region and Middle Eastern affairs. Courses in this part of the program may be selected from any of the courses in the catalogue, available from the Center for Middle Eastern Studies, 207 Moses Hall, or in the Division of Special Programs, 301 Campbell Hall. The courses should be selected with a view toward developing a knowledge in depth of a particular aspect of the subject.

Specialized fields of study may include advanced language study, religious and cultural studies, history, contemporary trends in economic development and social change, urbanization, nation building, the impact of imperialism and colonialism on the Middle East, or any topic agreed upon by the student and the adviser. The student will take a minimum of 3 courses to meet the requirements of this part of the program. The courses selected may not overlap the survey courses above. The following sample programs are given purely by illustration and do not indicate any requirements for the program.

Culture and Language

Advanced Arabic, Hebrew, Persian, or Turkish (beyond two years)
Comparative Literature 120, Hebrew Literature
Near Eastern Studies 140A-140B, Islamic Art
History 139A-139B, The Middle East
Middle East Religions History 122A-122B, Islamic History
Near Eastern Studies 190A-190B, Islamic Institutions
Near Eastern Studies 151A-151B, Aspects of Biblical Religion
Near Eastern Studies 154A-154B, Judaism in Late Antiquity
Near Eastern Studies 160A-160B, Islam in Iran
Economic Development and Social Change Geography 101, Principles of Cultural Geography: Culture and Urban Environments
Geography 104, The Third World Geography 107, Religious Geography
Sociology 167, Modern Social Structure in the Near East
Political Science 142A-142B-142C, Government and Politics in the Middle East
History 183C, Modern History of the Middle East

IV. Recommended Courses

Strongly recommended are courses which are not necessarily Middle Eastern, but which will serve as a broad introduction to other disciplines and fields of study. In consultation with the adviser, students will choose courses appropriate to their own program of study. Examples of such courses are the following:

Antropology 155, Economic Anthropology
Anthropology 162, Anthropology and the Environment
Geography 130, Natural Resources and Population
Geography 170, The Arctic
Economics 141, Economic Development
Economics 181, International Economic Relations
Conservation and Resource Studies 161, Agriculture in Ecological Development
Conservation and Resource Studies 163, Economic Analysis of World Agriculture
Conservation and Resource Studies 170A-170B, Sociology of Rural Development
Political Economy of Natural Resources 102, Macroeconomics of Growth and Development
Sociology 146, Sociology of Religion

Molecular Biology
New Course
IDS 205. Topics in Embryology. (2) See Interdepartmental Studies for the complete description of this course.

Music
New Course
H195. Honors Course. (2-5) Formerly H196. Seminar offered during Winter Quarter. Completion of thesis, or, in exceptional cases, supervised independent study projects. Students must complete a minimum of four units in order to receive departmental honors. Prerequisites: consent of instructor, student's adviser, and honors program advisor. Restricted to seniors with an overall GPA of 3.9 and a GPA of 3.3 in the major. (F, W, Sp)

Near Eastern Studies
New Course

Near Eastern Studies
New Course

Oriental Languages

Chinese
New Courses
206A-206B. Chinese Vernacular Literature. (4-4) One 2-hour seminar per week. Detailed study of a text with its literary and historical background. May be repeated once for credit with consent of instructor. Cross listed as Comparative Literature 230. (W, Sp)

214A-214B. Readings in Newly Discovered Ancient Chinese Manuscripts. (4-4) One 1-hour meeting per week. Prerequisites: eight units of upper division classical Chinese. Survey of recently unearthed Shang and Chou dynasty oracle bone and bronze inscriptions as well as Warring States, Ch'in, and Han religious, scientific, and political writings on silk, wood, and bamboo. Emphasis on phonological, morphological, and semantic components to the entire new corpus. Credit and grade will be awarded upon completion of the sequence. (F, W, Sp)

Japanese
New Courses
157. The Modern Japanese Short Story. (3) Three 1-hour lectures per week. Prerequisites: 108B-108C. Reading and intensive criticism of selected modern Japanese short stories, with particular emphasis on the period before World War II. (W)

158. The Post-War Japanese Short Story. (3) Three 1-hour lectures per week. Prerequisites: 108B-108C or consent of instructor. Reading and analysis of selected post-1945 Japanese short stories and comparison with Latin American short stories in English translation. (F)

251. Seminar in the Theory and Practice of Naturalism in Japan. (4) One 2-hour meeting per week. Prerequisites: 159A or equivalent. Focuses on several major Japanese naturalist writers and examines them from the point of view of the relationship between their theory and their practice, with particular attention given to French and German influence and models. (W)

Change in Description


Korean
New Course
10A-10B-10C. Intermediate Korean. (5-5-5) Five 1-hour meetings and 1 hour of laboratory per week. Prerequisites: 1C and consent of instructor. Students who have attended a Korean school admitted only by consent of instructor. Sequence beginning Fall. Non-sequence grading. (F, W, Sp)

Tibetan
New Course
1A-1B-1C. Elementary Spoken Tibetan. (5-5-5) Five 1-hour meetings per week. Introduction to standard Central Tibetan (Lhasa dialect).

Paleontology
New Courses
198. Directed Group Study and Research. (1-5) Must be taken on a passed/not passed basis. (F, W, Sp)

280. Directed Research Preparation. (1-8) Prerequisites: graduate standing and consent of instructor. Directed guidance in design of research.

284. Directed Thesis Research. (1-8) Open to qualified graduate students working on Master's Thesis Research. Must be taken on a satisfactory/unsatisfactory basis. May be repeated for credit.

286. Directed Dissertation Research. (1-9) Prerequisite: admission to doctoral degree program in paleontology, open to qualified students who are engaged directly in research on the doctoral dissertation. Must be taken on a satisfactory/unsatisfactory basis.

Change in Description

2. Topics in Paleontology. (2) Two 1-hour lectures per week. Open without prerequisite to all students and designed for those not specializing in paleontology. May be repeated for credit without consent of instructor. (F, W, Sp)

2A. Ecology and Evolution of Dinosaurs.

2C. Ancient Landscapes.
Philosophy

Page 185 (column two)

Upper Division. The student must take one course from the 180-179 series and one additional course either from the 180-179 series or from the 181-190 series.

New Courses

90. Freshman Seminar. (4) One 3-hour session per week. Study of a wide variety of philosophy of special interest to freshmen. Restricted to 15 students per section. Topics vary from quarter to quarter and will be individually announced.

191F. Ethics and Business. (4) Three hours of lecture per week. Prerequisite: 2 or 104 or Business Administration 111 or consent of instructor. Ethical issues connected with private property, profit (and loss) taking, inheritance government redistribution of wealth, discrimination (direct and reverse) in employment; and corporate responsibilities. (Sp)

Physical Education

New Courses

405. Exercise Stress Testing Techniques. (1-3) One hour of discussion and one 3-hour laboratory per week for each unit. Prerequisite: 165A or consent of instructor. Theory and exercise of stress testing and prescription. Techniques include: pulmonary function testing, body composition analysis, recording of ECG, determination of blood pressure, treadmill and bicycle ergometer testing, maximal consumption determination, data interpretation and exercise prescription. (F, W, Sp)

600. Teaching in Laboratory/Discussion Sections. (1-6) Hours to be arranged. Open only to graduate students. (Sp)

600A. History of Physical Education and Sport. (Sp)

600B. Kinesiology (W)

600C. Motor Development. (F)

600D. Physiological Hygiene. (F, W)

600E. Psychological Bases of Physical Activity. (W)

600F. Socio-Cultural Bases of Human Movement. (W, F, Sp)

605. Research Assisting. (1-6) Hours to be arranged. (F, W, Sp)

Physiology-Anatomy

New Course

214. Intracellular Signaling. (2) Two 1-hour seminars per week. Prerequisite: 101 or consent of instructor. Experimental methods for studying some of the mechanism by which one part of a cell can tell another what to do; changes in membrane potential and ion fluxes, pH, free calcium, cyclic nucleotides, protein phosphorylation, lipid pathways. Must be taken on a satisfactory/unsatisfactory basis. (W)

Political Science

New Courses

108A-109B. Women and American Politics. (5-6) Three 1-hour lectures and 1 hour of discussion per week. 1901 considers the impact "the woman question" had on traditional social and political theory. Analysis of the history of the contemporary woman's movement focusing primarily on American politics. 191B traces the political history of American women focusing on the strategy and tactics of the women's political groups and the relationship between various stages of the women's movement and major political events. Not open to students who previously took 191F. (F, W)

148C. Research Seminar on Latin American Politics. (5) One three-hour meeting and one scheduled individual conference per week. Prerequisite: 145A or 148B or consent of instructor. Intensive reading and discussion on selected topics in Latin American Politics. Research paper required. (F, W, Sp)

179. Undergraduate Colloquium on Political Issues. (1) One hour of lecture per week. Political issues facing state of California, United States, or international community. May be taken on a pass/no pass basis and can be repeated for credit with permission of the faculty sponsor. (F, W, Sp)

190. Senior Seminar. (5) Four hours of seminar per week. Prerequisite: consent of instructor. Discussion of major topics relevant to current issues in the field of political science. (Sp)

191E. American Development. (3) Three 1-hour lectures and 1 hour of discussion per week. Prerequisite: 101 or consent of instructor. Theory and exercise of stress testing and prescription. Techniques include: pulmonary function testing, body composition analysis, recording of ECG, determination of blood pressure, treadmill and bicycle ergometer testing, maximal consumption determination, data interpretation and exercise prescription. (F, W, Sp)

191F. Ethics and Business. (4) Three hours of lecture per week. Prerequisite: 2 or 104 or Business Administration 111 or consent of instructor. Ethical issues connected with private property, profit (and loss) taking, inheritance government redistribution of wealth, discrimination (direct and reverse) in employment; and corporate responsibilities. (Sp)

191I. Political Theory of Urbanization. (5) Two 1-hour lectures and one 1-hour conference per week. Prerequisite: consent of instructor. Use of political theory to study urban life, and the use of urban life as a way to understand politics. (Sp)

191M. Contemporary Mexican Development. (5) Two 1-hour lectures and one 1-hour discussion per week. Prerequisite: 101 or consent of instructor. Use of political theory to study urban life, and the use of urban life as a way to understand politics. (Sp)

191N. Comparative and Historical Approaches to Politics. (5) Two 1-hour lectures and one 1-hour conference per week. Prerequisite: consent of instructor. Use of political theory to study urban life, and the use of urban life as a way to understand politics. (Sp)

191P. American National Security Policy. (4-4) One 2-hour seminar per week. Prerequisite: 228A is a prerequisite for 228B. 228A. Historical evolution of national security policy, processes involved in policy making, the role of Congress and the Executive, deterrence and strategic stability, arms racing and the arms race, the force in a nuclear environment, and future challenges to American national security. 228B: Strategic concepts, theories of national security, and the relationship of conflict-theory to policy planning and national action. Special, but not exclusive, emphasis on United States data and policy problems. (W, Sp)

Population Studies

New Course

100L. World Population Problems Discussion Session. (1) One 1-hour meeting per week. Optional weekly discussion meetings for Population Studies 100.

Psychology

New Course

48. Psychology Seminars for Lower Division Students. (3-5) Three units: one 2-hour seminar per week. Five units: one 3-hour seminar per week and individual conferences with the seminar instructor. Prerequisites: 1, 2, or consent of instructor. Seminars in various fields of psychology designed to introduce beginning students to basic methods, concepts, and issues in psychology. Work in the seminars will include readings in primary and secondary sources.

191M. Survey of Mathematical Psychology. (4) One 2-hour seminar per week. Prerequisite: consent of instructor. Examination of various factors in the national-state relationship, critical dimensions of cultural diversity. (Sp)

205A. The Nation-Building Process. (4) One 2-hour seminar per week. The nation-state is the most significant political unit in the contemporary world. Course focuses on its origins, essential characteristics, different patterns of national development, relations of national development to modernization, the role of internal and external factors in the national development process and current challenges to the national definition of political life. (Sp)

205B. Problems of Generation Succession. (4) One 2-hour seminar and one 1-hour conference per week. Analysis and comparative study of the relationship and conflicts between generations, with implications for national integration and preservation of ethnic identities. Exploration of different political and historical experience of parents and children and how they affect reactions to politics. (W)

Change in Description

103. Congress. (5) Three hours of lecture and 1-2 hours of discussion per week. Prerequisites: 1 and 2. Nomination and election, constituent relations, the formal and informal structures of both houses, relations with the executive branch, policy formation, and lobbying. (W)

153A-153B. Comparative and Historical Approaches to Legal Institutions. (5-3) Three hours of lecture and 1 hour of discussion per week. Development and agencies of legal growth since primitive times and the interactions between law and government. Early legal institutions of national states and their influence on modern legal systems. Two quarter sequence course with in-progress grading for 1982-83 only. (W, Sp)

228A-228B. American National Security Policy. (4-4) One 2-hour seminar per week. Prerequisite: 228A is a prerequisite for 228B. 228A. Historical evolution of national security policy, processes involved in policy making, the role of Congress and the Executive, deterrence and strategic stability, arms racing and the arms race, the force in a nuclear environment, and future challenges to American national security. 228B: Strategic concepts, theories of national security, and the relationship of conflict-theory to policy planning and national action. Special, but not exclusive, emphasis on United States data and policy problems. (W, Sp)

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Social Science. Two courses from among the following: Anthropology 3, Linguistics 20 or Anthropology 4; Sociology 111, 112, 114, 124, 129A-129B, 141, 149A-149B, 151L, 153, 182, 183, 172L.

New Courses

191A. Survey of Mathematical Psychology. (4) Two 2-hour lectures per week. Emphasis on use of mathematics to solve psychological problems. Topics will include measurement theory, scoring, model-testing, individual decision-making, theory of signal detection, mathematical learning theory, etc. (W)

191R. Psychology of Sex Roles. (4) Two 1-hour lectures and 1 hour of discussion per week. Prerequisite: consent of instructor. Examination of various factors in the national-state relationship, critical dimensions of cultural diversity. (Sp)
development of feminine and masculine roles, including personality, social processes, biology, and cross-cultural comparisons. (Sp)

165A - 165B. Special Study for Honors Candidates. (1-5; 1-5) Individual hours to be arranged. Prerequisites: open only to seniors in psychology in the Honors Program. Integration of an hour per week in the form of thesis under the supervision of a faculty member. Credit and grade awarded upon completion of honors project. May be taken for 15 units total. (F, S)

204A - 204B. Data Analysis. (3-6) Two hours of lecture per week in Winter and 4 hours of lecture per week in Spring. Also one 2-hour discussion/laboratory section per week each quarter with a teaching assistant. Students will need to work through problems (homework). A general data analytic course that emphasizes design issues and problems from pura and applied fields. Techniques of ANOVA and multiple regression/correlation presented as analytical models for both lab and field research. (W, Sp)

208A. Measurement of Individual Differences. (5) Three 1-hour lectures per week, introduction to classical true score theory and to measurement theory. Emphasis on developing various concepts of reliability of measurement and assessment of validity through alternative criteria and item analysis. Special attention will be paid to the consequences of the use of alternative criteria and item analyses due to unreliability and restriction of range. Either 208A, an equivalent course, or Psychology 208A will be offered in alternate years.

208B. Modern Mental Test Theory. (5) Three 1-hour lectures per week. Prerequisites: 208A or 208A. Development of latent trait and item response theory by way of classical true score theory and the Rasch model. Introduction to Rasch-based class models, special topics in classic true theory. Tailored testing will be introduced. Either 208B or Education 208B will be offered in alternate years.

208C. Psychological Scaling. (5) Three 1-hour lectures per week. Introduction to procedures whereby stimuli of various sorts can be measured with respect to psychological continua such as loudness, social desirability, etc. Thurstonean judgment models emphasized with discussion of pair comparison and category scaling. Introduction to related procedures. Recent advances in methodology appropriate for ratings such as evaluating judgment and response functions with related tests. Introduction to multidimensional scaling techniques. Either 208C or Education 208C will be offered in alternate years.

208D. Factor Analysis. (5) Three 1-hour lectures per week. Introduction to factor and component analysis and to Guttman's image analysis. Rotation and transformation problems dealt with in detail. Questions relevant to fitting factorial analytic model to data, estimation of independent factors, factor scores, linear structural relations modeling. Either 208D or Education 208D will be offered in alternate years.

208E. Test Construction. (5) Three 1-hour lectures per week. Prerequisites: 208B or Education 208B. Either 208B or Education 208B recommended. Practical issues in development, validation, and evaluation of procedures for assessing individual traits and measuring attainment or mastery in educational or psychological contexts. Questionnaire development as well as more traditional areas of test development. Likert Scales and usual form of item construction as dichotomous pass-fail or agree-disagree elements in a test. Items and test calibration procedures based on item response theory. Either 208E or Education 208E, or an equivalent course will be offered in alternate years.

208F. Mathematical Psychology. (5) Two 1-hour lectures per week. Use of mathematical models to help answer psychological questions. Algebraic models (information integration, the laws of scaling (unidimensional)), stochastic models (Markov models of learning), judgment (descriptive vs. normative models, clinical vs. statistical judgment, signal detection theory, contextual effects), and other areas of mathematical psychology. (Sp)

250A. Overview. (5) Two 2-hour lectures per week. Introduction and research and program research of the personality faculty to graduate students with interest in this field. Each week, attention is directed to the work of a different faculty member associated with the personality program. (F)

250B. Personality Development. (5) Two 2-hour lectures per week. Development of personality: 1) development of gender roles; 2) sex-differentiated socialization patterns affecting personality development of males and females; and 3) psychological sex differences. (F)

250C. Self-esteem and Academic Performance. (5) Two 2-hour lectures per week. Examines personality processes within academic settings, including role of self-worth, self-esteem, and self-attribute of ability in performance and satisfaction. (F)

250D. Abnormal Personality. (5) Two 2-hour lectures per week. Empirical approaches in psychopathology and abnormal personality with emphasis on: 1) relationships among cognition, emotion, and motivation; 2) relationship between person and social context, and 3) implications of alternative conceptualizations for the choice of research methodology. (F, W, Sp)

250E. Historical Trends and Current Issues. (5) Two 2-hour lectures. Historical trends and current discussions regarding: 1) concept of disorder; 2) person by environment transactions; 3) observational assessment of persons; 4) personality systematics; 5) personality development and concepts of structure; and 6) formulations of personality system-social system interactions. (W)

250F. Folk Perspectives on Personality. (5) Two 2-hour lectures per week. Measures and methods of assessment attentive to qualities, attributes, talents, and dispositions considered in everyday evaluations people make of self and others. Comparisons made with other approaches. (W)

250G. Personality and Intrapsychic Experience. (5) Two 2-hour lectures per week. Personality as study of intrapsychic experience, addresses general theoretical issues: 1) behavioral methods; what alternatives are there? 2) how people differ in intrapsychic experience and why? 3) how does intrapsychic experience influence personality theories of personality? (W)

250H. Stress and Coping Processes. (5) Two 2-hour lectures per week. The ways stress and coping processes affect health, functioning, and morale as reflected in current models and research. Current human psychological studies of coping and adaptation. Occasionally may deal with theories of anxiety and its links to cognition. (Sp)

250I. Personality and Cognitive-perceptual Processes. (5) Two 2-hour lectures per week. Three of the ways in which: 1) relationship between personality and cognition-perceptual processes are important, e.g., cognitive style, repression, perceptual defense. (F)

250J. Cognitive Views of Personality. (5) Two 2-hour lectures per week. Surveys cognitive views of personality with special attention to G.A. Kelly's psychology of personal constructs. (Sp)

260A. Proseminar: History and Systems: Interpersonal Behavior. (5) Formerly 260C. One 3-hour meeting per week. (F)

260C. Proseminar: Social Interaction Processes; Small Groups. (5) Formerly 260C. One 3-hour meeting per week. (Sp)

Change in Description

191B. Buddhist Psychology. (4) Change: course to be offered Winter 1963 only.

Religious Studies

Page 206 (column one)

II. General Studies. Two of the following methodological courses: Anthropology 156 (F); Philosophy 112 (H); Religious Studies 190 (H) where the topic is psychology of religion; Sociology 112 (H) where the topic is psychological themes. Classics 178 (F); Religious Studies 115 (H, 190) (H) where the topic is myth and ritual. The courses in a particular religious tradition (see Area Studies lists). Additional courses from Area Studies lists (any non-language course) may take a total of at least 45 upper division units. Other courses may be substituted with approval of major adviser (see the Religious Studies secretary at the beginning of each quarter for a current list of courses on religious topics). (W)

New Courses

120B. Varieties of Early Christianity. (5) One 2-hour seminar and one 2-hour lecture per week. Survey of different and competing forms of Christianity that arose and flourished in the late first to early third centuries. Jewish Christianity; Marcion; Gnostic; martyrdom; asceticism; charismatist prophecy. (W)

197. Field Study. (1-5) Individual field work in Religious Studies research under the supervision of a faculty member with written reports required. Description of the field research project signed by the faculty sponsor and approved by the chair of the major program also required. Prerequisites: 90A-90B or consent of instructor. Must be taken on a pass/credit basis. (F, W, Sp)

Rhetoric

New Courses

120. The Lyric Voice in Western Poetic Tradition. (5) Four to 4½ hours of lecture/discussion per week. Prerequisites: upper division standing, 30 or 32A recommended. Rhetorical approach to the scope and variety of typical lyric voices from Archilochus and Sappho to the present.

125. The Rhetoric of Modern Poetry. (5) Three to 4½ hours of lecture per week. Prerequisite: 30. Application of rhetorical methodology to legal texts. Broad selection of important twentieth century poems from Yeats to contemporaries such as Ashbery and Stafford, and including works from such European poets as Valery, Ekelof, and Milosz.

160. Introduction to the Rhetoric of Legal Discourse. (5) Formerly 161. Four to 4½ hours of lecture per week. Prerequisite: 30. Special emphasis on rules and values of use rhetoric in legal arguments. Focus placed on interplay of interpretation and policy in the definition of social values through legal persuasion.

162. Rhetoric of Legal Proof. (5) Four to 4½ hours of lecture per week. Prerequisite: 30. Analyzes development and contemporary practice of persuasive strategies aimed at establishing the factual basis for legal decision. Special attention given relationship between probability, credibility, and argumentation in the process of presenting evidence.

165. Rhetoric of Legal Philosophy. (5) Formerly 169. Four to 4½ hours of lecture per week. Prerequisite: 30. Considers basic philosophical issues related to political and moral foundations of the law.

166. Rhetoric, Law, and Politics in Ancient Greece. (5) Formerly 162. Four to 4½ hours of lecture per week. Prerequisite: 30. Deals with the philosophy of rhetoric and legal thought and legal structures in the ancient world, with an attention to the role of rhetoric in structure of the legal profession and to relationship between legal and political thought.

254A-254B. Advanced Narrative Analysis. (5-1) 4-½ hours of discussion per week. Modern theories of text structure; stylistic, metalinguistic, affective, stylistic, and other Anglo-American and Continental developments. Narratives will generally be used as models for other kinds of texts. Grade given on completion of sequence.

301. Teaching Practice. (6) May be repeated for credit so long as prerequisites are fulfilled. Prerequisites: graduate standing, completion of 300A-300B, and employment as Associate, Teaching Fellow, or Teaching Assistant in the Department of Rhetoric. Must be taken on a satisfactory/unsatisfactory basis. (F, W, Sp)

302. Teaching Public Speaking. (2) One 2-hour discussion session per week. Prerequisite: graduate status in Rhetoric. Instruction in techniques for teaching public speaking and coaching debate teams. (F)
New Courses

23A-23B-23C. Introductory Polish. (5-5-5) Formerly 23, 24A-24B. Four 1-hour meetings per week. (F, W, Sp)
29A-29B-29C. Introductory Czech. (3-5-5) Formerly 29, 30A-30B. Four 1-hour meetings per week. (F, W, Sp)

37. Languages and Peoples of Eastern Europe (4). Two 1½-hour meetings per week. Lower division seminar. Introduction to Eastern Europe (including USSR), its languages and language families, cultures, ethnic composition, political systems, geography, history, and present trends. Work includes library research and a final paper. (F)

191A-191B. Development of Marxist Literary Criticism. (4-4) Three 1-hour lectures per week. Prerequisite: 290. (F)

New Course

Major Requirements

Upper Division (see School of Social Welfare)

Social Welfare

Page 214 (column two)

Major Requirements

Upper Division (see School of Social Welfare)

Sociology

New Course

112. Social Problems: Theoretical Perspectives and Policy Approaches. (4) Three hours of lecture per week. Prerequisite: Sociology course or consent of instructor. Selected social problems in modern societies, e.g., poverty, illness, crime and delinquency. Alternative explanations, actual and potential policies for dealing with the problems.

South and Southeast Asian Studies

New Courses

129. Sultans and Saints of India. (4) Three hours of lecture per week. Development of Sufism and Sultans in India; lives, legends, and contributions of great Indian sultans and Muslim saints; expression of Sufism in Indian literatures; role of sultans, saints, and their worship and shrines in Islam in India and Pakistan.
137. Indian Cinema. (4) Two 1½-hour lectures per week. Study of the development of Indian Cinema, with special emphasis on film genres, popular culture, and the play of Rai, Sen, Bencal, Aranlind. To be offered Fall 1992 only.

294. Departmental Colloquium in South and Southeast Asian Studies. (3) Formerly 29A-29B. Three hours of lecture per week. Preparation and discussion of research papers in the area of South or Southeast Asian Studies. Topics chosen each year in consultation with faculty and students. Students papers prepared under supervision of faculty advisors. Organizational and planning sessions held during Fall Quarter. Papers are presented at weekly meetings during Spring Quarter.

Spanish and Portuguese

Spanish

Change in Description

185. Senior Course in Hispanic Literature. (4) Topic for Fall 1983: Literature and the visual arts.
269A-269B. A Single Author or a Special Topic. (4-4) 269B topic for Spring 1983: Espronceda.

Statistics

Page 225, (column 3) Credit for Overlapping Courses

For questions, exceptions, see the undergraduate major advisor.

Stat 2 may not be taken for credit by students having completed Stat 20, 21, 25 or any upper division course in Statistics.
Stat 5A-B may not be taken for credit by students having completed 2 or 5A-B or any upper division course in Statistics.
Stat 20 may not be taken for credit by students having completed 2 or 5A-B or any upper division course in Statistics.
Students having completed 2 or 5A will receive two units credit, while one unit is given students having completed 5A-B.
Stat 21 may not be taken for credit by students having completed 21, 25, or any upper division course in Statistics.
Students having completed 2 or 5A will receive two units credit, while one unit is given students having completed 5A-B.
Stat 25 may not be taken for credit by students having completed 20, 21 or any upper division course in Statistics.
Students having completed 2 or 5A will receive two units credit, while one unit is given students having completed 5A-B.
Stat 100A may not be taken for credit by students having completed 133A or 133B.
Stat 100B may not be taken for credit by students having completed 133B.
Stat 100C may not be taken for credit by students having completed 133B.
Stat 100D may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
State who have completed 20 or 21 will receive two units credit.
Stat 100E may not be taken for credit by students having completed 133A or 133B.
Stat 100F may not be taken for credit by students having completed 133B.
Stat 100G may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Students who have completed 20 or 21 will receive two units credit.
Stat 100H may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Stat 100I may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100J may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100K may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100L may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100M may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100N may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100O may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100P may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100Q may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100R may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100S may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100T may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100U may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100V may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100W may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100X may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100Y may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.
Mar 100Z may not be taken for credit by students having completed 133A, 133B, 133C, or any upper division course in Statistics.

Zoology

New Courses

206. Advanced Studies in Morphology. (2) One 2-hour meeting per week. Prerequisites: coursework in morphology, graduate standing and/or consent of instructor. Current problems, questions, and techniques in morphology. Topic varies from year to year. May be repeated for credit. Must be taken on a satisfactory/unsatisfactory basis (W).

209. Research. (1-12) Credit awarded according to work planned and accomplished. Must be taken on a satisfactory/unsatisfactory basis (W).

293. Research. (1-12) Credit awarded according to work planned and accomplished. Must be taken on a satisfactory/unsatisfactory basis (W).

IDS 285. Topics in Embryology. (2) See Interdepartmental Studies for the complete description of this course.

Change in Description

165 Herpetology. (5) Two 1-hour lectures and two 3-hour laboratories per week, and 2 weekend field trips. Prerequisites: coursework in biology, three full years of college level Spanish, or equivalent.

School of Library and Information Studies

New Course

230. Systems Analysis in Information Services. (3) Three hours of lecture per week. Systems approach to decision making and policy analysis in libraries and information centers. The role of system analyst in library and information center management.

277. Organizational Aspects of Information Systems. (3) Three hours of lecture per week. Prerequisites: none, but L271, B4, or computer literacy recommended. Information systems framework: Relationship of information systems to decision-making in organizations. Long-range planning for information systems development. Behavioral impact and implementation strategies.

310. Teaching Assistance Practicum. (1-5) Teaching assistance and preparation of instructional materials under supervision of faculty member. May be repeated for credit.

410. Research Skills Practicum. (1-5) Individual research under supervision of faculty members. May be repeated for credit.
College of Natural Resources

Page 234 (column two)

New Division

Molecular Plant Biology
Division Office, 313 Hilgard, 642-3664

Undergraduate Program in Bioenergetics

Bioenergetics 125 has been incorporated in the new division of Molecular Plant Biology.

Undergraduate Courses

Bioenergetics

BIO 101
BIO 107
BIO 117
BIO 125
BIO 185
BIO 199

Molecular Plant Biochemistry 120, Plant Biochemistry

Graduate Courses

Cell Physiology
Cell Physiology 222
Cell Physiology 299
Cell Physiology 620

Conservation and Resource Studies

Page 236 (column three)

The major is in Conservation and Resource Studies, not Conservation of Natural Resources.

Agricultural and Resource Economics

Political Economy of Natural Resources

New Courses

PENR 3. Political Economy of Growth and Institutions. (4) Three hours of lecture and 1 hour of discussion per week. Limits to growth and the political economy of natural resources. History of economic thought and institutions. Macroeconomic, political, economic, and ecological crises. Stagflation and contemporary crisis. Capital versus natural resources in contemporary society. (Sp)

PENR 104. Resource Economics and Environmental Law. (4) Three hours of lecture and 1 hour of discussion per week. Prerequisite: 100 or consent of instructor. CRS 130 recommended. Introduction to general legal concepts and principles which underlie resource economics, and to specific vocabulary and programs in selected resource areas (usually water, minerals/energy, wildlife, timber). Emphasis on developing an understanding of legal approaches to resource issues and information needed in legal displacement. (Sp)

PENR 132. Energy Economics and the Public Lands. (4) Two hours of lecture and 1 hour of discussion per week. Prerequisite: 100 or equivalent or consent of instructor. Introduction to natural resources and preservation of libraries, materials, personnel administration and data processing problems, using the PL/1 programming language.

Change in Description

223. Library Technical Services. (3) Three hours of lecture per week. Prerequisites: 210, 211, and 212. Survey of developments and problems, with emphasis on management of acquisitions, cataloging, classification, storage, and preservation of library materials; personal administration in technical services; application of mechanized systems.

235. Data Processing for Libraries and Information Management. (4) Three hours of lecture and 2 hours of laboratory per week. Introduction to computer programming with emphasis on algorithm development and structured program techniques for solving library and information center data processing problems, using the PL/1 programming language.

Conservation and Resource Studies

New Courses

CPS 130 recommended, introduction to general economic concepts and principles which underlie resource economics, and to specific vocabulary and programs in selected resource areas (usually water, minerals/energy, wildlife, timber). Emphasis on developing an understanding of legal approaches to resource issues and information needed in legal displacement. (Sp)

PENR 132. Energy Economics and the Public Lands. (4) Two hours of lecture and 1 hour of discussion per week. Prerequisite: 100 or equivalent or consent of instructor. Introduction to natural resources and preservation of libraries, materials, personnel administration and data processing problems, using the PL/1 programming language.

Change in Description

PENR 104. Resource Economics and Environmental Law. (4) Three hours of lecture and 1 hour of discussion per week. Prerequisite: 100 or equivalent or consent of instructor. Introduction to natural resources and preservation of libraries, materials, personnel administration and data processing problems, using the PL/1 programming language.

Conservation and Resource Studies

New Courses

CPS 130 recommended, introduction to general economic concepts and principles which underlie resource economics, and to specific vocabulary and programs in selected resource areas (usually water, minerals/energy, wildlife, timber). Emphasis on developing an understanding of legal approaches to resource issues and information needed in legal displacement. (Sp)

PENR 132. Energy Economics and the Public Lands. (4) Two hours of lecture and 1 hour of discussion per week. Prerequisite: 100 or equivalent or consent of instructor. Introduction to natural resources and preservation of libraries, materials, personnel administration and data processing problems, using the PL/1 programming language.
Nutritional Sciences

New Course

IDS 91A-91B. Introduction to Peace and World Order Studies. (4-4) See Interdepartmental Studies for the complete description of this course.

Change in Description

NS 134. Principles of Food Preparation. (4) Two 1-hour lectures, one 1-hour discussion, and one 3-hour laboratory per week. Prerequisite: IDS 105 or consent of instructor. Application of food chemistry to the preparation of foods through study of basic principles, experimentation, and evaluation. Functional properties of fats, proteins, and carbohydrates. Evaluation of quality and sensory aspects of foods. Menu planning, equipment, and procedures of quantity food production and purchasing. (W)

NS 490. Clinical Dietetics Seminar. (0.5-1.5) Two hours of lecture, discussion, field trip and/or clinical presentation per unit per week. Prerequisites: 2.5 GPA in required major courses and consent of instructor. Seminars and discussions on the structure and responsibilities of dietitians, clinical case presentations by professionals and students; special topics in clinical dietetics. May be repeated for credit up to 6 units. (F, W, Sp)

Pest Management

Change in Description

PM 155. Forest Pest Management. (4) Four hours of lecture/discussion per week and 4 overnight field trips. Prerequisites: Entomology 100, Plant Pathology 120 or forrest 105, or consent of instructor. Role of insects, diseases, and other pests in forest ecosystems, their impact on forest resource values and management objectives, and interactions with man's activities. Diagnosis and evaluation of forest pest situations, and strategies of regulation and control in a systems context. (Sp)

Plant and Soil Biology

Bioenergetics

(Incorporated in the new division of Molecular Plant Biology)

Change in Description

Biae. 101. Flow of Energy and Matter in the Living World. (3) Three 1-hour lectures per week. Prerequisites: Chemistry 1A, 1B, 1C, or 6A, Biology 1A, 1B. Energy flow and energy transport in ecosystems, availability, nature of energy transfer in the biosphere; oxygen, carbon, nitrogen, phosphorus. Cycles; cycles of other essential elements in the biosphere; biological and non-biological future sources of energy. (F)

Biae. 107. Bioenergetics. (3) Three 1-hour lectures per week. Prerequisites: Chemistry 1A, 1B, 1C, or 6A, Biology 1A, 1B. Use and sharing of energy in living systems; energy conversion and utilization of energy in the biosphere; oxygen, carbon, nitrogen, phosphorus; cycles; cycles of other essential elements in the biosphere; biological and non-biological future sources of energy. (W)

Biae. 117. Photobiology. (3) Three 1-hour lectures per week. Prerequisites: Chemistry 1A, 1B, 1C, or 6A, Biology 1A, 1B. Interaction of light and living systems as studied from the molecular to the organismal level. Role of light in animal, plant, and microbial processes, including behavior, development, vision, photosynthesis/photoregulation, photomorphism/phototaxis, bioluminescence, carcino genesis, damage and repair of DNA. (Sp)

Plant Nutrition Courses

Change in Description

PN 120. Molecular Plant Biology. (4) Three 1-hour lectures and 1 hour of discussions per week. Prerequisite: Biochemistry 102A or 103A-103B. Biochemistry of plant processes, including photosynthesis, respiration, development, nitrogen and sulfur metabolism. (W)
of major infectious diseases which confront public health workers, emphasis on disease surveillance methods and prevention programs. (W)

Social and Administrative Health Sciences

New Courses

131. Administrative Behavior and Processes in Health Agencies. (3-4) Formerly 130. Two 1-hour lectures and one 2-hour discussion/lab per week. Prerequisites: some experience in health. Students taking 131 may not enroll in 231. Introduction to health administration, focusing on organizational structure, management theory, budget and personnel. Use of cases and simulations. Four units may be earned by submitting a term paper. (Sp)

225A. Financial Management of Publicly Funded Health Care Institutions. (4) Two 2-hour lectures per week. Prerequisites: financial and cost accounting or consent of instructor. Principles of financial management in the context of community clinics and other for-profit ambulatory health care settings. (Sp)

225B. Advanced Financial Management of Publicly Funded Health Care Institutions. (4) One 2-hour lecture and one 2-hour discussion per week. Prerequisite: 225A or consent of instructor. Integration of analytical methods of financial management into the decision-making process in community clinics. Uses of cases which focus on budgetary planning, management planning and control systems, cost-volume-profit analysis, cost analysis, flow requirements, reimbursement analysis and financial statement planning analysis. (W)

231A. Administrative Behavior and Processes in Health Agencies. (4) Two 2-hour lectures per week. Prerequisite: some experience in health care. Not open to students enrolled in 131. Introduction to health administration, focusing on organizational structure and management theory and practices as they relate to administration of health services. Cases, simulation and structured experiences will be used to aid theory to practice. (W)

244L. Advanced Health Education Theory Laboratory. (1) One 2-hour discussion/lab per week. To accompany the Proseminar in Theory, which is to be taken concurrently.enie and interpersonal change processes at the micro- and macro level; small group dynamics; the consequences of risk and change in description.

253. Nutrition for Health Professionals. (3) Two 1 1/2-hour lectures per week. Critical evaluation of concepts of nutrition. Introduction to basic concepts of nutrition. Critical evaluation of current issues and problems in nutrition related to health of public. Implications for health professionals in practice and program development. (F, W, Sp)

Graduate School of Public Policy

New Courses

171. Educational Governance and Policymaking. (5) Two 2-hour meetings weekly. Examines how educational policy is made and who becomes involved in the process. Case histories of such financing public schools are discussed. These case studies illustrate the elements of policymaking including formulating issues, use of social science data, and anticipating implementation problems. Problems will be studied including administrative leadership, political, and fiscal context of public management. Strategic options for determining and implementing policies. Role of doctors, hospitals, and insurers to health policy. (F)

187. Policy Planning and Analysis. (5) Two 2-hour lectures/discussions per week. Prerequisites: major in Public Administration or Planning Policy or Government and Planning or consent of instructor. Concepts and methods of institutional planning for personal health care services. (Sp)

254A. Public Health Aspects of Nutritional Care: In Hospital Setting. (15) Ten weeks of full-time internship. Eight hours of lecture and discussion and 36 hours of field work per week. Prerequisites: admission to MPH Internship in Public Health Nutrition. Organization and delivery of nutrition care services in a hospital setting, including: diet presentation, interview and counseling; nutrition and diet in diabetes, cancer, hypertension,therosclerosis, gastrointestinal tract disorders, hepatic disease, renal disease, surgery, burns; food service administration. (Sp)

256B. Public Health Aspects of Nutritional Care: In Community Agencies. (8) Eight weeks of full-time internship. Four hours of lecture discussion and 36 hours of field work per week. Prerequisites: admission to MPH Internship in Public Health Nutrition. Completion of 256A and consent of instructor. Organization and delivery of nutrition care services in community agencies such as health departments, ambulatory health care settings, child care and education facilities and others. Topics include: nutrition assessment, nutrition education (individual, group, client and staff), short and long range planning, advocacy. (Sp)

256C. Public Health Aspects of Nutritional Care: In Nursing. (4) Eight weeks of full-time internship. Four hours of lecture discussion and 36 hours of field work per week. Prerequisites: admission to MPH Internship in Public Health Nutrition. Completion of 256A and consent of instructor. Organization and delivery of nutrition care services in community agencies such as health departments, ambulatory health care settings, child care and education facilities and others. Topics include: nutrition assessment, nutrition education (individual, group, client and staff), short and long range planning, advocacy. (Sp)

Diploma in Social Welfare

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Major Requirements

Upper Division. A minimum of 45 upper-division units, including Social Welfare 102A-102B (3-5), 103A-103B (2-3), and 110A-110B (5-6), and a minimum of five courses chosen from the following list with three of the courses taken in one department and two selected from the other departments: Anthropology 140, 143, 144, 149, 150, 152; Economics 100A, 100B, 133, 134, 151, 152, 155, 157; Political Science 102, 103, 140A, 140B, 140I, 161, 162, 183, 185; Psychology 130, 140, 150, 151, 160, 161, 172, 180; Public Policy 170, 179, 182, 184, 185, 195, Sociology 107, 110A, 120, 130, 142, 140, 160, 163, 176, 178, 179; Social Welfare 111 may be offered in lieu of one Public Policy course.

Special Studies

Demography

New Courses

212. Advanced Demographic Methods. (4) Three hours of lecture per week. Prerequisites: 210, 211. Statistical analysis of demographic data, sensitivity testing of standard methods, refinement of analytic techniques, microsimulation.

292A-292B-292C. Advanced Research Seminars: Special Topics. (2-4; 2-4; 2-4) Prerequisite: consent of instructor. None of the segments is prerequisite to any other. Special research topics in advanced areas, by lecture or seminar conferences on topic to be announced. May be repeated without duplication of credit. (F, W, Sp)

293. Advanced Research Seminar. (4) Discussion of current topics in demography. May be repeated without duplication of credit.

296. Research Seminar—Research Design. (4) Two hours of seminar per week. Prerequisites: 200, 201, 211, or equivalent. Introduction to demographic research. May be repeated without duplication of credit. (Sp)

Energy and Resources Group

New Course

141. Residential Energy Conservation. (4) Three hours of lecture and 1 hour of laboratory per week. Prerequisite: upper division standing. Engineering, economic, and policy aspects of residential energy conservation: building heat loss calculations, thermal comfort, life cycle costing, and economic analysis of conservation potentials in appliances, houses, hospitals, and national and local conservation policies. (F)
New Course

148. Economic Development in Third World Communities in the U.S. (5) Two 2-hour lectures and one 1-hour discussion per week. Prerequisite: Consent of instructor. Analysis of effects of Afro-Asian migration. Some references: Allen, Robert B. 1958, AsianSt. 20A, Chicano, Eth. Stud. 21, NatAmSt. 719. Analyzes economic development in U.S. minority communities: Black, Chicano, Asian, and Native American; views economic well-being, income differentials and inequality; analyzes patterns of minority business enterprises and barriers to economic development in terms of capital, resources, labor, technology, and markets; reviews past and present government intermediary programs.

Asian American Studies Program

New Courses

20C. Introduction to the Culture of Asians in the United States. (5) Two 2-hour lectures and 1 hour of discussion per week. Analysis of intellectual and artistic activities of Asians in United States culture and ideology, racism in art and culture. Artistic expression as it reflects Asian-American responses to issues of race and culture. Major emphasis placed on literature, though music and visual arts will be discussed.

125. Historical and Contemporary Issues in the Vietnamese-American Community. (5) Two 2-hour lectures and 1 hour of discussion per week. Prerequisite: 20A or consent of instructor. Analysis of U.S.-Vietnamese relations, flight of Vietnamese and other Indo-Chinese refugees to the U.S., their settlement in and adaptation to American society, and major problems faced by Vietnamese Americans today. Library and community field research using sources in both Vietnamese and English.

129. Asian American and Pacific Islanders in Hawai'i: A Comparative Historical Analysis. (5) Two 2-hour lectures, and 1 hour of discussion per week. Prerequisite: 20A. Comparative historical study of experiences of Asians and Pacific Islanders in Hawai'i from 1778 to the arrival of Captain James Cook to the present. Examines immigration, labor, culture, politics, and economic developments in the islands.

146M. Selected Topics and Issues in the Asian American Community: Immigration. (4) Three hours of lecture and 1 hour of discussion per week. Prerequisite: 20A, Chicano 20, or consent of instructor. Focus on analyses of government policies on immigration, socio-economic and employment status of Asian American populations in the U.S. since 1965, especially focusing on recent major legal immigration from Mexico and Central America; immigration law, amnesty issues and citizenship will be covered.

156. Comparative Analysis of Asian American Communities. (5) Two 2-hour lectures and 1 hour of discussion per week. Prerequisite: 20A, Chicano 20, or consent of instructor. Focus on analyses of government policies on immigration, socio-economic and employment status of Asian American populations in the U.S. since 1965, especially focusing on recent major legal immigration from Mexico and Central America; immigration law, amnesty issues and citizenship will be covered.

Field Studies Program

New Course

IDS 196A-196B. The Developing Child in Contemporary Society. (5-5) See Interdepartmental Studies for complete description of this course.

Health and Medical Sciences Graduate Program

New Courses

208A-208B. Introduction to Clinical Psychiatry. (3) One 1 1/2-hour lecture and one 3 1/2-hour laboratory per week. Prerequisite: Basic principles of human development emphasizing its dynamic course from birth through maturity. Psychological theories emphasized, but emphasis on child development; professionalization of personnel; age grading; cross-cultural and historical comparisons; issues in current child care policy; etc. Field placements: child care centers, Montessori schools, children's trauma centers, children's media; child study and therapy settings. Field Studies Program, Education.

205. Topics in Embryology. (2) One 1/2-hour lecture/discussion section per week. Prerequisite: consent of instructor. Seminar devoted to analysis of major problems in animal and plant embryology—cell type determination, pattern formation, cell and tissue interactions, and mechanisms of morphogenesis. Emphasis on regulation and integration of developmental events at the cellular, molecular, and tissue levels of organization. Must be taken on a satisfactory/unsatisfactory basis. Zoology, Molecular Biology (F, W, Sp).

231. Environmental Simulation and Public Communication. (4) Two 1-hour lecture and 2-hour laboratory per week. Prerequisite: consent of instructor. Introduction to theory of experimental simulation, criteria for a good presentation, case studies in use of models and media in citizen participation and environmental design; instruction in model-making, slide photography, video-taping, use of environmental simulation, film-making, script writing, and presentation design. Exercises and projects. City and Regional Planning, Landscape Architecture (Sp).

251. Ancient History: Problems and Progress. (5) Three hours of lecture per week. Interdisciplinary study of ancient history with emphasis on the problems it poses and the progress made in solving them. Classics, History (F).

Neurobiology of Vision. (3) Three hours of lecture per week. Prerequisites: IDS 111, Psychology-Neurology 110, Zoology 139, or equivalent consent of instructor. Phototransduction physiology and biochemistry, lateral interactions, gradient potential cells: active membranes, synaptic transmission, reciprocal synapses, color coding, movement coding, retinal output codes. Lateral geniculate physiology, geniculate-cortical connectivity, cortical architecture, cortical physiology, plasticity cortical codes. Optometry, ECE.

299. Interdepartmental Studies

New Courses

191A-191B. Introduction to Peace and World Order Studies. (4-4) Two 1 1/2-hour lecture and one 1-hour discussion section per week. Prerequisite: coursework in western civilization or consent of instructor. 91A: analysis of major global problems and their linkages, with particular emphasis on war. History and theory of peace efforts. Recent trends towards stability and integration. 91B: theories and practices of human community, emphasis on present crisis. Possible futures and their implications. Intentional change strategies: personal, communal, international. Sequence begins Winter. To be offered 1982-83 only. Nutritional Sciences, Public Health, Classics.

198A-198B. The Developing Child in Contemporary Society. (5-5) Formerly Field Studies 198A-198B. One 3-hour seminar and 10-12 hours of field laboratory per week. Interdisciplinary focus on theory of child development and practice of child care. Seminar topics: models of child development; professionalization of personnel; age grading; cross-cultural and historical comparisons; issues in current child care policy; etc. Field placements: child care centers, Montessori schools; children's trauma centers; children's media; child study and therapy settings. Field Studies Program, Education.

197. Special topics in Psychology. (4) Two 1-hour lecture/discussion section per week. Prerequisite: consent of instructor. Seminar devoted to analysis of major problems in animal and plant embryology—cell type determination, pattern formation, cell and tissue interactions, and mechanisms of morphogenesis. Emphasis on regulation and integration of developmental events at the cellular, molecular, and tissue levels of organization. Must be taken on a satisfactory/unsatisfactory basis. Zoology, Molecular Biology (F, W, Sp).

173. History of Indians of the Northeast Woodlands. (5) Two 2-hour lectures per week. Prerequisite: 718 or consent of instructor. Indian groups and cultures from the eastern seaboard to the Mississippi River and from lower Virginia to southern Canada; precontact ecological adaptations, language, and cultures, and historical consequences of European colonization.

Change in Description

156. Native American Medicine. (5) Two 2-hour seminars per week. Prerequisite: 71A, Anthropology 2, or consent of instructor. Theories of health and illness, and curing practices, including herbal medicines, ceremonies, and physical therapies among Native American groups in North and South America.

Native American Studies Program

New Courses

104. Native American Economic Development. (5) Three 1 1/2-hour lectures per week. Prerequisite: IDS 714 or consent of instructor. Analysis of impact of U.S. economic policies on tribal lands and resources. Examination of the effect of federal legislation, BIA regulations and corporate interests on tribal economic life. Consideration of alternative strategies of development. (Sp)

173. History of Indians of the Northeast Woodlands. (5) Two 2-hour lectures per week. Prerequisite: 718 or consent of instructor. Indian groups and cultures from the eastern seaboard to the Mississippi River and from lower Virginia to southern Canada; precontact ecological adaptations, language, and cultures, and historical consequences of European colonization.

Field Studies Program

New Course

IDS 196A-196B. The Developing Child in Contemporary Society. (5-5) See Interdepartmental Studies for complete description of this course.

Health and Medical Sciences Graduate Program

New Courses

208A-208B. Introduction to Clinical Psychiatry. (3) One 1 1/2-hour lecture and one 3 1/2-hour laboratory/laboratory per week. Prerequisite: graduate standing in Health and Medical Sciences or consent of instructor. Theories of health and illness, and curing practices, including herbal medicines, ceremonies, and physical therapies among Native American groups in North and South America.

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Health and Medical Sciences Graduate Program

New Courses

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Berkeley

General University Catalog of California 1981-82
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# Academic Calendar 1981-82

## Fall Quarter 1981
- **Registration by Mail**: May 11*—August 21
- **Labor Day**: September 7
- **Fall Quarter begins**: September 22
- **Late Registration**: September 22–25
- **Pre-enrollment**: September 28
- **Instruction begins**: August 17 (for Law School)
- **Thanksgiving Holiday**: November 26, 27
- **Instruction ends**: December 5
- **Final Examinations**: December 7–12 (for Law School)
- **Fall Quarter ends**: December 12
- **New Year Holiday**: December 31, January 1

## Winter Quarter 1982
- **Registration by Mail**: November 2–20
- **Late Registration**: January 7
- **Pre-enrollment**: January 7, 8
- **Instruction begins**: January 11
- **President's Day**: February 15
- **Instruction ends**: March 20
- **Final Examinations**: March 22–27 (for Law School)
- **Winter Quarter ends**: March 31 (For Health Sciences Programs)
- **Spring Holiday**: March 29

## Spring Quarter 1982
- **Registration by Mail**: February 8–26
- **Spring Quarter begins**: April 1
- **Late Registration**: April 1, 2
- **Pre-enrollment**: April 1, 2
- **Instruction begins**: April 5
- **January 11**: (for Law School)
- **Memorial Day Holiday**: May 31
- **Instruction ends**: June 12
- **Final Examinations**: June 14–19 (for Law School)
- **Spring Quarter ends**: June 22 (for Law School)
- **September 20**: (for Health Sciences Programs)

## Summer Session 1982
- **Registration**: June 17, 18
- **Instruction begins**: June 21 (8-week and 10-week sessions)
- **Independence Holiday**: July 5
- **Instruction ends**: August 13 (8-week)
- **August 27**: (10-week)

*Continuing students receive registration forms beginning May 11.
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<td>Athletics, Intercollegiate</td>
<td>Men: Harmon Gymnasium, 642-0580</td>
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<td>Women: 177 Hearst Gymnasium, 642-2098</td>
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<td>Botanical Garden</td>
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<td>Career Planning and Placement</td>
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<td>Housing</td>
<td>2401 Bowditch Street, 642-3642</td>
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<td>224 Sproul Hall, 642-3753</td>
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Library Information
Main Library Reference Desk, 64-BOOKS
Pacific Film Archive
2625 Durant Avenue, 642-1124
Panhellenic Office (Sororities)
224 Sproul Hall, 642-7507
Physically Disabled Students’ Program
2515 Channing Way, 642-0518,
642-6376 (TTY)
Relations with Schools
407 Eshleman Hall, 642-5135
Sports, Intramural and Recreational
193 Harmon Gymnasium, 642-8342
Strawberry Canyon Recreational Area
Strawberry Canyon, 642-5575
Student Activities and Programs
103 Sproul Hall, 642-5171
Student Information Center
102 Sproul Hall, 642-6412
Student Learning Center
Building T-8, 642-7332
Summer Session
22 Wheeler Hall, 642-5611
Tours, Campus
Visitor Center, Student Union, 642-5215
University Art Museum
2625 Durant Avenue, 642-0808
University Extension
2223 Fulton Street, 642-4111
Visitor Center
Student Union, 642-5215
Women’s Center
112 Building T-9, 642-4786
When author Joan Didion recently spoke of the Berkeley she knew as a student, she offered an important insight into this University.

She spoke first of her love of the fog, of the view of the Bay, of hearing Strawberry Creek, of the bookstores and coffee shops, and of being "forced to make leaps of understanding."

Then she went on to say, "I loved most of all that very aspect of the Berkeley experience that came into such strenuous question a decade later, in the '60s. I loved the laissez faire spirit of the place. I loved being let alone. I loved the very absence of that enforced community that I so disliked and found false and sentimental in other institutions I knew about."

What she loved most about Berkeley is what lies at the heart of this place. In that, Berkeley is more like the great European universities. It has high expectations for its students, believing that they are able to search out the rewards of a great faculty and a great library. In doing that, they will acquire the excellent education they came here to seek, and with it the personal resources needed for a full and creative life.

Ira Michael Heyman
Professor of Law, and
City and Regional Planning
Chancellor

The reference room of the main library serves as an information center for the entire campus library system.
All About Berkeley

During the Gold Rush Days of 1849, even before it was a state, California committed itself to the creation of a public university.

Nineteen years later the legislature and the governor made their commitment a reality, and in 1868, the University of California came into being. An instant faculty and student body were supplied by a small college in Oakland, and five years later, the University established itself in Berkeley with 189 students and 20 faculty members.

Soon the University was given a medical college in San Francisco, and the foundations of today's multi-campus system were laid. In 1905 the University Farm at Davis was added, followed by a research station at Riverside in 1907. Later campuses were opened in San Diego, Los Angeles, Santa Barbara, Santa Cruz, and Irvine.

Today the nine campuses enroll more than 131,000 students and have a full-time faculty of 6000. Constitutional responsibility for the University rests with the Board of Regents, which in turn delegates authority to the President, the Chancellors of the nine campuses, and the Academic Senate of the faculty.

South Hall and the oaks along Strawberry Creek link Berkeley to its beginnings in 1873. The Campanile, Life Sciences Building, and the Student Union record the changes which have brought the campus to the 1980s, from the country to the city.

With 31,000 students, a distinguished faculty, nearly 300 degree programs, and alumni in positions of national and international leadership, Berkeley today is a large and complex institution, offering students a vast range of scholarly endeavor and an unusual depth of inquiry both for personal growth and individual involvement with others.

The Berkeley Campus. The campus is surrounded by wooded, rolling hills and by the town of Berkeley (population 112,000). Students study, work, and relax among academic buildings, wooded glens, and parklands spread across 1232 scenic acres overlooking the San Francisco Bay.

The campus is internationally noted for its academic excellence. Its faculty includes 11 Nobel Laureates, 85 members of the National Academy of Sciences, and more Guggenheim Fellows than any other university in the country. Twenty-six of its departments are ranked as the first, second, or third best in the nation.

The quality of Berkeley's student body complements the stature of its faculty. The majority of students are Californians, but people come from every part of the United States and 100 foreign countries to study at Berkeley. Perhaps the prime characteristic of all the students is their diversity—one quarter of the student population consists of minorities—which yields the wide range of opinion and perspective essential to a great university.

Colleges and Schools. For purposes of instruction 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 or graduate level and provide students with training preparatory to 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.
Special Studies. There are several innovative and interdisciplinary programs of study not within the colleges and schools. Special Studies courses provide credits directly applicable to a University degree and are established through interrelationships among colleges, schools, and departments, and, in certain cases, in conjunction with community groups, other UC campuses, and other universities.

The University Library. The Berkeley campus library system consists of the Main Library, the Moffitt Undergraduate Library, 22 branch libraries, and numerous special libraries. The combined holdings of the libraries total more than 6,000,000 volumes, 99,000 current serial publications, 40,000 manuscripts, 1,500,000 microform items, 300,000 maps, and 40,000 sound recordings.

Students are entitled to use the libraries upon presentation of their registration cards. Borrowing privileges and access to the collections vary from unit to unit. Orientation tours are scheduled at the beginning of each quarter, and other library instructional assistance and information are available from reference desks.

Most of the UC Berkeley humanities and social sciences materials are located in the Main Library. In addition, an open stack core collection of 165,000 volumes and 500 serial titles, designed to provide a convenient entry into the library system for Berkeley’s 20,000 undergraduate students, is available in the Moffitt Undergraduate Library.

A cooperative program between the university libraries of UC Berkeley and Stanford University provides convenient interlibrary services to faculty and graduate students. Together the two libraries have more than 10,000,000 volumes, a combined research collection that is one of the richest in the world.

Sports and Recreation. Each year more than half the Berkeley student body regularly uses the campus sports and recreation facilities. The campus has two gymnasiums as well as swimming pools, squash, handball, and tennis courts, and athletic fields. Except in summer, when students are required to purchase a gym privilege card, these facilities can be used by registered Berkeley students free of charge.

Strawberry Canyon Recreational Area serves the entire University community with swimming pools, lounge, play, and picnic-barbeque areas. Further information may be obtained by calling the Haas Clubhouse at 642-5575.

The Department of Intramural and Recreational Sports offers a wide range of intramural, sport club, and open recreation activities. For further information, contact 193 Harmon Gymnasium or call 642-8342. In addition, the Department of Men’s Intercollegiate Athletics and Women’s Intercollegiate Athletics offers extramural competitive sports for the highly skilled.

The Department of Physical Education offers all students an opportunity, through instructional classes, to learn and to improve skills in a wide variety of sports, dance, and gymnastic activities and to maintain and develop physical fitness.

University Art Museum. The University Art Museum, located on Bancroft Way, is the major art museum serving the University community. Facilities include galleries, a fine arts bookstore, restaurant, sculpture garden, and the Pacific Film Archive. Museum hours are 11 a.m. to 5 p.m., Wednesday through Sunday. Admission to most exhibits is free. For a taped message about exhibits, call 642-0808; for a taped message on the Pacific Film Archive program, call 642-1124.

The Museum annually offers about 15 exhibitions; some are nationally-circulating and others originate at the Museum. A permanent collection of Western and Asian art is on display on a rotating basis. The MATRIX program is a changing exhibition of contemporary art.

Special study collections are available to students and faculty. Works in storage are made available for study upon request, and various exhibitions are prepared for and by University classes and seminars. In addition, the Museum has a developing program in which advanced students receive practical experience by assisting in museum work.

Lectures on art, as well as video programs, performances, and exhibition-related projects, are regularly offered.

The Museum’s film department, the Pacific Film Archive, is one of the major film exhibition centers in the country. It maintains a study collection of 5000 prints and provides facilities and a media information service for both film study and research screening. Free film showings for classes are held several times weekly. In addition, the Pacific Film Archive offers 800 public film programs annually.

Lowe Museum of Anthropology. Facilitating scholarly research and educating undergraduate and graduate students from many disciplines including Anthropology are among the primary functions of the Lowe Museum. Teaching exhibits are installed to assist faculty and students with on-going instruction and individual study. The Museum also maintains a program of changing exhibits in its Exhibit Hall and at other points on campus to meet the varied educational and aesthetic interests of the University community and general public. Currently, there are 500,000 catalogued specimens in the Museum’s holdings. The Exhibit Hall is open during the week from 10 a.m. to 4 p.m., Thursdays until 9 p.m., and on weekends from 12 noon to 4 p.m. For further information, please call (415) 642-3681.

Botanical Garden. The Botanical Garden was established in the 1890s and transferred to its current location of 23 acres in Strawberry Canyon in 1926. Although relatively small in area, the Garden ranks with the world’s leading gardens in the variety and quality of its plants. There are 8000 different species, and something is in bloom every month of the year.
The major collection is cacti and other succulent plants. Native plants of California occupy the largest area devoted to a regional collection. Special collections include: herbs and spices, palms, rhododendrons, gymnosperms, ferns, carnivorous plants, orchids, and economically important species.

The Botanical Garden offers free tours to the public every Saturday and Sunday. Special group tours may be arranged for a nominal charge by phoning 642-3343, Monday through Friday, 9 a.m. to 4 p.m. The Garden is open to the public daily, except Christmas, from 9 a.m. to 5 p.m. An Information/Visitor's Center is also open daily. There is no admission charge. The Humphrey Go-Bart bus provides free transportation to and from the Garden on weekdays.

Lawrence Hall of Science. The Lawrence Hall of Science is both a public science center and a research unit in science education. In attempting to increase public understanding of science, the Hall's programs are designed to involve participants actively in science. Visitors play logic games on computers, participate in interactive planetarium shows, and explore a myriad of other exhibits dealing with everything from pulsars to energy conservation. The Hall also offers public lectures, science and general interest films, and numerous special events, as well as workshops in biology, physical sciences, astronomy, computers, and math for both school and after-school groups.

Science curricula developed at the Hall are used throughout the world. Teacher-training workshops actively involve participants in curriculum development. The Hall is open every day from 10 a.m. to 4:30 p.m. and on Thursdays until 9 p.m. There is an admission fee. Free transportation to and from the Hall is available on Humphrey Go-Bart on weekdays, excluding UC holidays. For more information, call 642-5132.

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

Committee for Arts and Lectures (CAL)—a year-round program of drama, music, dance, films, and lectures. Some events are open to students and to the University community without admission charge. For those events requiring tickets, a reduced rate is usually available for registered students. For information, or to make telephone reservations, call 642-9988.

Music—a large selection of student performing groups may be joined for credit in the Department of Music, 104 Morrison Hall (642-2678). Included are the University Chorus, Orchestra, Collegium Musicum, Concert Band, chamber music ensembles, Javanese Gamelan, and African drumming. Groups without credit are offered through the Office of Student Musical Activities, 103 Sprout Hall (642-5171). These include the Concert Chorale, the Chamber Singers, Jazz Ensembles, and the UC Marching Band. The Department of Music also presents free noon concerts on Wednesdays in Hertz Hall. San Francisco and Oakland Symphony tickets are available to students at special prices.

Theater and Dance—The Department of Dramatic Art offers a series of plays to all registered students interested in acting, design, or stagecraft. In addition, there are concerts and choreographic workshops in modern dance techniques. An in-residence dance company gives concerts and demonstrations throughout the year in schools and community centers on the West Coast. Unit credit may be earned by work on play and dance production.

Computing Services and Computer Facilities and Operations. Located in Evans Hall, Computing Services directly assists users in instructional and research computing through several specialized services: User Services, an instructional and consultation group that provides drop-in consulting and free non-credit short courses at the central site and at remote campus facilities; Applications Programming, a general programming and documentation support group with specialized services such as statistical packages and graphics; and a small reference Library that houses computer science materials, hardware and software manuals, available applications programs and periodicals.

Computer Facilities and Operations, also in Evans Hall, provides comput-
ing, hardware, software, and operational services for instructional, research, and administrative purposes. Operations manages computing facilities, and Systems Support maintains computer system software. Additional support includes Production Control, Key Data Entry, and Hardware Maintenance.

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

Language Laboratory. Located in the southwest corner of Dwinelle Hall, the Language Laboratory has audio-taped material in 91 languages for group or individual study. Some materials may be borrowed for home use or be purchased at cost. Facilities include 180 positions for listening and nine for videocassette viewing, a fully-equipped recording studio, and a tape duplication service.

Women's Center. The Center for the Study, Education, and Advancement of Women is located in 112 Building T-9. Hours are from 9 a.m. to 5 p.m. The Center provides lectures, workshops, and academic and career advising for women students and the campus community. It also supports the academic work of students through its library of research materials on women, publications, an Undergraduate Research Program, and an annual research conference on current issues of interest to women. The Center is open to all interested persons from the campus and the community.

University Extension. UC Berkeley Extension brings the scholarly resources of the University to the wider community through continuing education courses in nearly all the fields of study represented on the campus. It ranks among the top few university-level extension programs in size, scope, and quality of instruction. Each year 50,000 adults enroll in courses that meet a broad range of needs—professional growth, career development, cultural interests, and understanding of current issues. A major emphasis is on disseminating the latest research—the "growing edge" of learning.

Summer Session. An extensive offering of regular academic courses and special programs is available through University Summer Session. While admission to Summer Session does not constitute regular admission to the University, it is possible at UC Berkeley to complete the equivalent of a full quarter's work by attending Summer Session. Students in good standing at any campus of the University or at another collegiate institution are eligible for enrollment. Equally eligible are high school graduates, qualified adult applicants of sufficient maturity and aptitude for the work they plan to undertake, and, in certain cases, high school juniors and seniors.

Tuition varies with the number of units taken. Introductory and advanced courses for University credit are offered, and there are also special sessions for selected intensive language workshops. Extensive cultural and recreational activities are provided. Courses are taught by both regular and visiting faculty.

Research. The Berkeley campus is renowned for its programs of faculty and graduate student research which are conducted within teaching departments and organized research units. In some instances, special departmental laboratories have been established to provide essential services to instruction and research projects.

Organized research units are established and administered separately from the teaching departments. These units are interdisciplinary in nature and organized around the work of a group of faculty and graduate students whose research interests transcend traditional disciplinary areas. The organized research unit aims primarily to support the research of faculty and to assist in graduate student training.

Organized research units may bear the designation of institute, center, laboratory, museum, station, or other titles, depending on the nature of the activity supported and the organization visualized when a particular unit was established. These units are grouped administratively according to the breadth of interest they represent. Specific administrative groupings are listed in the Appendix.
The latest addition to campus architecture and spirit is a towering Golden Bear atop an 18-foot pedestal. Located in lower Sproul Plaza, the bear is a 50th anniversary gift of the Class of '29. The 500-pound bronze statue was created by sculptor Tom Hardy.
Fifty years ago I was taking the Subject A examination to enter the University. They weren't very anxious to let me in; they thought I had too many physical handicaps. But we worked it out. The first day I was sitting in a class of 500 students and the boy next to me said, "You look as if you could use some help. My fraternity could use some jobs. Why don't we trade?" So I said, "Fine," and all through the years I have depended on students for aid in getting around. Wonderful people.

I didn't plan to do graduate work, because I'd had a bunch of operations, and people said, "We wouldn't want to expose such a delicate nature to the rigors of our campus." But it was suggested that I teach here for a year, to demonstrate to the other campuses that it could be done. A year later, they said, "Why don't you stay on for awhile?" After that, I just kept on, because I enjoyed the teaching, research, and writing so much.

In all my courses, whether they're writing courses or not, my students do a good deal of writing. I get to know them pretty well that way. I can't conceive of teaching without getting some word back from students. In fact, that's what you do your teaching for: to get the word back from students, and to know how much better they get as they learn.

Josephine Miles
University Professor of English, Emeritus
American Academy of Arts and Sciences
Undergraduate Education at Berkeley

To enter the University of California as an undergraduate student requires completion of a set of procedures which determines, as accurately as possible, whether applicants have sufficient intellectual knowledge, skills, and interests to pursue a degree at the level set by the University.

Students should begin fulfilling University admission requirements by the ninth grade and may need to continue working on them through the first two years of college. Admission requirements include completion of specific courses with specified minimum grades and achievement of specific scores on nationally-administered examinations. While these requirements are somewhat rigorous, consideration is given to special circumstances.

Applying for Admission

You may obtain a University of California Undergraduate Application Packet containing all necessary forms and instructions from California high school or community college counselors or from the Office of Admissions and Records, 120 Sproul Hall, University of California, Berkeley; Berkeley, CA 94720. This office accepts completed applications between July 1 and 31, 1981 for the Winter Quarter, 1982; between October 1 and 31, 1981 for the Spring Quarter, 1982, and between November 1 and 30, 1981 for the Fall Quarter, 1982. After the indicated filing period, applications are accepted only until application targets are met.

You must include with your completed application forms a non-refundable fee of $25.

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

Subject Requirement

At the heart of the admission process is a set of high school courses called the "a to f requirements." These consist of 11 year-long courses, each of which must be completed with at least a C grade. Your grades in the "a to f" required courses are the only grades used in calculating your grade-point average for determining admission. Courses that fulfill the "a to f" requirement must appear on a list that your high school principal has certified meet University requirements. This list is called "Courses to Meet Requirements for Admission to the University of California" and can be obtained from your school counselor.

The "a to f" requirement courses are:

a. History. One year of United States history or one-half year of United States history and one-half year of civics or American government.

b. English. Three years of university preparatory English composition and/or literature; not more than one year will be accepted from the ninth grade.

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

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

e. Foreign Language. Two years of one foreign language with a written literature are acceptable.

f. Advanced Courses. One or two years must be chosen from the following: Mathematics, a total of one year of advanced mathematics, intermediate algebra, trigonometry, or other comparable mathematics courses. Foreign language, either one additional year in the same foreign language offered under (e) or two years of another foreign language. Science, a year course in any laboratory science completed after the laboratory science used for (d) above.

Elective Courses. Applicants, except those with a certificate of proficiency, are required to complete at least 15 high school units. The "a to f" subject requirements can be fulfilled with 10 or
11 units, which leaves four or five units for electives. Your electives should strengthen your preparation for the University. Additional courses in mathematics are essential in the preparation for majors in engineering, mathematics, the sciences, and many other fields of study.

Scholarship Requirement

If you attain a grade point of 3.3 in courses listed in “a to f,” taken after the ninth grade, you will be eligible to enter the University regardless of your scores on standardized tests. Students with grade-point averages below 3.3 but greater than 2.77 will be admitted to the University if they achieve specified scores on the standardized tests. (See University of California Freshman Eligibility Index.)

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

You may repeat up to a total of two semester courses (or one year course), in which you received a grade of D or lower, in order to meet the subject and scholarship requirements. The grades you earn in repeated courses, however, will not be counted higher than C in determining your scholarship average.

If the courses you repeat were taken before the ninth grade, they will be treated as if you were taking them for the first time.

High School Proficiency Examination

The University of California will accept the Certificate of Proficiency, awarded by the State Department of Education, upon successful completion of the California High School Proficiency Examination, in lieu of the regular high school diploma. However, all other University entrance requirements (subject pattern, grades, tests) must be met. The date of graduation on University records will be the date of the certificate. Entrance by standardized test scores will remain an option for the student ineligible on the basis of high school record.

Examination Requirement

All freshman applicants must submit test scores as described below. If you are applying for admission to the Fall Quarter, you should take the tests by December of your senior year. The following tests are required:

1. One Aptitude Test—Either: (a) the Scholastic Aptitude Test—SAT—the verbal and mathematics scores you submit from this test must be from the same sitting); or (b) the American College Test—ACT—composite score.

2. Three College Entrance Examination Board Achievement Tests, which must include (a) English Composition, (b) one from among the social studies or foreign languages, and (c) mathematics (level 1 or 2).

Admission by Examination Alone

If you do not meet the scholarship and subject requirements for admission and have completed less than 12 transferable college units since graduation, you can qualify for admission as a freshman by examination alone. (Note: If you have completed transferable college courses, CEEB tests cannot be taken in academic subjects covered in those courses.) The required total score on the Scholastic Aptitude Test is 1100. Your total score on the three Achievement Tests must be 1650 or higher, with no score less than 500 on an individual Achievement Test. High school graduation or a certificate of proficiency is required for students who qualify for admission by examination.

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*A-F ACT* SAT** GPA Composite Total GPA Composite Total

| A-F | ACT* SAT** GPA Composite Total | A-F | ACT* SAT** GPA Composite Total |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 2.78 | 35 | 1600 | 3.05 | 22 | 970 |
| 2.79 | 35 | 1580 | 3.06 | 21 | 950 |
| 2.80 | 34 | 1550 | 3.07 | 21 | 920 |
| 2.81 | 34 | 1530 | 3.08 | 20 | 900 |
| 2.82 | 33 | 1510 | 3.09 | 19 | 880 |
| 2.83 | 33 | 1480 | 3.10 | 18 | 850 |
| 2.84 | 33 | 1460 | 3.11 | 18 | 830 |
| 2.85 | 32 | 1440 | 3.12 | 17 | 810 |
| 2.86 | 32 | 1410 | 3.13 | 16 | 790 |
| 2.87 | 32 | 1390 | 3.14 | 15 | 770 |
| 2.88 | 32 | 1370 | 3.15 | 14 | 750 |
| 2.89 | 31 | 1340 | 3.16 | 14 | 740 |
| 2.90 | 31 | 1320 | 3.17 | 13 | 730 |
| 2.91 | 30 | 1300 | 3.18 | 12 | 720 |
| 2.92 | 29 | 1270 | 3.19 | 11 | 710 |
| 2.93 | 29 | 1250 | 3.20 | 10 | 700 |
| 2.94 | 28 | 1230 | 3.21 | 9 | 690 |
| 2.95 | 28 | 1200 | 3.22 | 9 | 680 |
| 2.96 | 27 | 1180 | 3.23 | 8 | 670 |
| 2.97 | 27 | 1160 | 3.24 | 8 | 660 |
| 2.98 | 26 | 1130 | 3.25 | 7 | 650 |
| 2.99 | 26 | 1110 | 3.26 | 7 | 640 |
| 3.00 | 26 | 1090 | 3.27 | 6 | 630 |
| 3.01 | 25 | 1060 | 3.28 | 6 | 620 |
| 3.02 | 24 | 1040 | 3.29 | 5 | 610 |
| 3.03 | 24 | 1020 | 3.30 | 5 | 600 |

**SAT** is scored in intervals of 1 point from a minimum of 400 to 1600 maximum.

Admission of Nonresident Applicants. The admission requirements for nonresidents differ from those for residents in that the required grade-point average is higher. For freshmen, the average is 3.4. Admissions procedures and examination requirements are the same as for California residents described above except that to be admitted by examination alone requires the same total score on the Scholastic Aptitude Test of 1100 but a higher total score on the three Achievement Tests (1730 or higher, with no score less than 500 on an individual Achievement Test).

For detailed information on these requirements, and admission by examination alone, consult the publications Information for Prospective Students or the Undergraduate Application Packet, obtainable from California high school or community college counselors, or the Office of Admissions and Records, 120 Sproul Hall.

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

The requirements for admission in advanced standing vary according to your high school record. The transcript you submit from the last college you attended must show that at minimum you were in good standing and you earned a grade-point average of 2.0 or better. If your grade-point average was below 2.0 at any college you attended, you may have to meet additional requirements to qualify for admission.

Admission requirements differ depending on when you graduated from high school. Old requirements: if you graduated from high school prior to the end of academic year 1978-79. New requirements: if you graduated at the end of academic year 1978-79 or thereafter.

1. Old Requirements. If you completed all the "a to f" subjects and your grade-point average in those subjects was 3.0 or better, you may be admitted any time after you have established an overall college grade-point average of 2.0 or better.

New Requirements. If you completed all the "a to f" subjects and met the Eligibility Index, you may be admitted any time after you have satisfied the examination requirement for freshmen.

2. Old Requirements. If your high school scholarship average in the required subjects was 3.0 or better but you had not studied one or more of the "a to f" required courses in high school, you may be admitted after you have met the criteria below.

New Requirements. If you met the Eligibility Index but you have not studied one or more of the "a to f" courses in high school, you may be admitted after you have met the criteria below.

3. Old Requirements. If you were not eligible for admission as a freshman because of low scholarship or a combination of low scholarship and a lack of required subjects, you may be admitted after you have met the criteria below.

New Requirements. If you did not meet the Eligibility Index, or did not meet the Eligibility Index and lacked required subjects, you may be admitted after you have: (a) established an overall grade-point average of 2.4 or better in another college or university; and (b) completed 84 quarter units (56 semester units) of college credit in courses accepted by the University for transfer; and (c) completed the following: (1) appropriate college courses, with a grade of C or better, in high school subjects that you lacked—up to two units (a unit is equal to a year's course) of credit may be waived; or (2) one college course in mathematics; one in English; and one in U.S. history or a laboratory science or a foreign language, all with grades of C or better.

The course in mathematics must complete a sequence of courses at least as advanced as the equivalent of two years of high school algebra (elementary and intermediate) or one year of algebra (elementary) and one year of high school geometry. Courses other than mathematics must be transferable to the University.

Admission in Advanced Standing for Nonresidents. If you met the admission requirements for freshman admission as a nonresident, you must have a grade-point average of 2.8 or better in college courses that are accepted by the University for transfer credit.

If you are a nonresident applicant who graduated from high school with less than a 3.4 grade-point average in the "a to f" subjects required for freshman admission, you must have completed at least 84 quarter units (56 semester units) of transferable work with a grade-point average of 2.8 or better. In addition, if you lacked any of the required subjects in high school, you must complete appropriate college courses as outlined in 3c (1) or (2) above.

Intercampus Transfers. An undergraduate student who is registered on any campus of the University, or who was previously registered in a regular session of the University and has not since been registered in another institution, may apply for transfer to another campus of the University by filing the proper forms on the campus where last registered. The intercampus transfer application forms and application for transcript of record forms may be obtained from the Office of Admissions and Records and must be filed with that office. There is a fee of $25 at the time of filing. Dates for filing are the same as those listed for new applicants.

Additional Requirements for Admission in Advanced Standing. Refer to the announcement of the individual college or school to which you seek admission for additional requirements.

Special Admission Circumstances

Admission by Exception. A limited number of students who have not met the regular requirements for admission, but can offer evidence of their potential to succeed at the University, may be considered for admission by exception. Information on such admission may be obtained from the Office of Admissions and Records.

Educational Opportunity Program. This program (EOP) provides the opportunity for entrance to the University to students of minority and low-income background, who might not be able to...
attend otherwise. Prospective students who meet the regular admission requirements, as well as those who do not, may apply to the University through EOF. Prospective EOF students must show a potential to benefit from higher education. Financial aid, counseling, tutoring, and housing aid are available under the program.

To be admitted to EOF, you must apply to the Office of Admissions and Records and complete a regular undergraduate application for admission. If you are interested, you should apply as early as possible.

Foreign Applicants. An applicant from another country should request the brochure, Information for Prospective Students from Other Countries, designed to answer questions about admission to the University, visas, special examinations, fees and expenses, housing, and travel. Prospective undergraduates should direct inquiries to the Office of Admissions and Records. Applicants who need to improve their English language skills should contact the English Language Program, University of California Extension, 2223 Fulton Street, Berkeley, CA 94720, USA. All nonimmigrant foreign students must check in at the Advisers to Foreign Students and Scholars Office, International House, as soon as possible.

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

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

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

Getting Your Bachelor's Degree

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 described below. You should also be fully aware of the rules and regulations listed in the Appendix that pertain to all Berkeley students. For more information, please visit the Office of Admissions and Records, 120 Sprout Hall.

University Requirements

The University sets two requirements which all undergraduates must satisfy in order to graduate: Subject A and American History and Institutions.

All students are advised that fulfillment of these requirements is the responsibility of the individual student.

Subject A. All University departments assume that students are proficient in reading and writing English, and understand how to compose an essay on an academic topic. Evidence of such proficiency is required of all undergraduates upon entrance to the University.

Students not satisfying the requirement must enroll in the Subject A Department's course "Introduction to Language" or in a related course (see English as a Second Language below) during their first quarter of residence at the University.

The Office of Admissions and Records accepts the following as evidence of having fulfilled the Subject A requirement (the examinations cited in 1-4 below must be taken prior to entering the University):

1. A score of 600 or above on the English Composition Test of the College Entrance Examination Board (CEEB);
2. A score of 3, 4, or 5 on the CEEB Advanced Placement Test in English;
3. A score of "Pass for Credit" on the California State University and Colleges English Equivalency Examination;
4. Foreign students without previous academic work in an English-speaking country: a score of 600 or above on the Test of English as a Foreign Language (TOEFL);
5. Completion with a grade of C or better of a college-level course in English composition taken at a previous institution and judged acceptable by the Office of Admissions and Records;
6. A satisfactory grade on an essay examination administered by the Subject A Department or the English as a Second Language program. This examination may be taken only once.

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

English as a Second Language. Students whose native language is not English and who have had less than four years at an American high school may fulfill the Subject A requirement (1) by demonstrating superior writing ability on the Subject A Placement Examination in English as a Second Language, or (2) by completing with a grade of C—or better one to three composition courses in the ESL program of Subject A, followed by successful completion of the regular Subject A course. Students must enroll in these courses in successive quarters beginning with their first quarter in residence at the University.

American History and Institutions. The American History and Institutions Requirements are based on the principle that a U.S. citizen enrolled at an American university should have an understanding of the history and the public institutions of the United States. These requirements may be met as follows:
American History Requirement

1. For students entering Berkeley Fall 1981 or later: By completion in high school of two semesters of U.S. History with an average grade of B or better. If the high school transcript does not say United States (or American) History, the Office of Admissions and Records will mark the requirement as still unsatisfied. It will be the responsibility of the student to petition any other high school courses at the American History and Institutions Office, 29 Dwinelle. Option 1 does not apply to students who entered Berkeley prior to Fall 1981.


Please Note: The above list may change during the year. It is the student's responsibility to check with the AH&I Office at the beginning of each quarter to see whether any courses have been dropped from or added to the list.

3. By presenting official evidence of completion of a course, taken at an accredited college or university, which is equivalent in scope and content to those on the approved UC Berkeley American History List. The Admissions Office will approve some but not all such courses. Students not cleared by Admissions should present a syllabus, reading list, and grade report from the course to the American History and Institutions Office, 29 Dwinelle Hall. Students are encouraged to submit such course descriptions for approval prior to enrolling in the course.

4. By passing an essay examination in U.S. History. The exam is based upon a reading list (three topics), graded passed/not passed, and is offered on campus twice each quarter. If you wish to take the examination, you may obtain the reading list, sample answers, and test dates at the AH&I Office, 29 Dwinelle.

5. By completing the College-Level Examination Program (CLEP) subject Exam in American History I, American History II, or Afro-American History with a score of 50 or better. (Note: Although CLEP has been discontinued for UC course credit, it can still be used to satisfy the AH&I Requirements.)

6. By passing the Advanced Placement Test in American History with a grade of 3, 4, or 5.

7. For students entering Berkeley Fall 1981 or later: By passing the College Board Achievement Test in U.S. History with a score of 500 or better. Option 7 does not apply to students who entered Berkeley prior to Fall 1981.

American Institutions Requirement

1. For students entering Berkeley Fall 1981 or later: By completing in high school of one semester of U.S. Government with a grade of B or better. If the high school transcript does not say United States (or American) Government (or Civics), the Office of Admissions and Records will mark the requirement as still unsatisfied. It will be the responsibility of the student to petition any other high school courses at the American History and Institutions Office, 29 Dwinelle. Option 1 does not apply to students who entered Berkeley prior to Fall 1981.

2. By completing one quarter (or Summer Session) of a course from the following list (may be taken passed/not passed): Asian American Studies 145; Chicano Studies 70; Conservation and Resource Studies 131; Native American Studies 50; Political Science 1, 100, 102, 103, 104, 106, 150, 170A, 171A, 181; Public Policy 170, 187.

Please Note: The above list may change during the year. It is the student's responsibility to check with the AH&I Office at the beginning of each quarter to see whether any courses have been dropped from or added to the list.

3. By presenting official evidence of completion of a course taken at an accredited college or university (see History option 3 above for details).

4. By passing an essay examination in U.S. Government (see History option 4 above for details).

5. By completing the College-Level Examination Program (CLEP) Subject Exam in American Government with a score of 50 or better. (Note: Although CLEP has been discontinued for UC course credit, it can still be used to satisfy the AH&I Requirements.)

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

College and School Requirements

Every college and school has established a program of requirements for the degree, which may be in addition to those of a field of concentration. These requirements may include: (1) preparatory subject requirements for admission; (2) preparatory college-level courses for your particular field of study—to be completed, if possible, during your early period of residency in the college or school, or in some cases before entrance; (3) breadth requirements, courses outside the field of study, considered essential to a well-rounded curriculum; (4) the credit requirement, which is 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.

Declaration and Change of Major

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

Undergraduate Honors

Standards for honors status are set by the colleges and schools. Departments may, in addition, recommend students for inclusion on the Honors List. Honor students are usually accorded special privileges, including eligibility for honors programs. For details on undergraduate honors, please consult your college, school, or department.
Minimum Scholarship Requirements. Failure of undergraduate students to maintain a minimum grade-point average prescribed by the college or school will normally result in probation or dismissal. Since scholarship rules are applied only at the close of regular sessions, grade points earned in a University of California summer session or by removing an Incomplete grade are not taken into consideration until the close of the student's next quarter of attendance.

Minimum Progress. Beginning in the Fall Quarter 1981, each student's transcript of record, at the end of every three regular quarters of enrollment on the Berkeley campus and regardless of whether these quarters are taken consecutively, must aggregate a minimum of 39 units of work completed on a campus of the University in those quarters, regardless of grade. The continued enrollment of a student who fails to achieve minimum progress shall be subject to the approval of the Dean. A 15-unit study list is considered to be a normal course load; a study list of fewer than 12 units must be authorized by the Dean of the appropriate college or school.

Academic Probation. Except in the Colleges of Chemistry and Engineering, undergraduate students are placed on academic probation if at the end of any term their cumulative grade-point average is less than 2.0 (C average) computed on the total of all courses undertaken in the University. Students on probation are not entitled to take courses with a passed/not passed option.

Academic Dismissal. College of Chemistry and College of Engineering: undergraduate students shall be subject to dismissal from the University (a) if during any term they fail to maintain at least a C average in all courses for which they are enrolled; or (b) if at the end of any term they have failed to maintain at least a C average in all courses undertaken at the University, not including courses graded P, NP, I, and IP. College of Environmental Design, College of Letters and Science, College of Natural Resources, and School of Business Administration: undergraduate students are subject to dismissal (a) if their grade-point average falls below 1.5 for any term; or (b) if after one term on probation they increase their grade-point deficit; or (c) if after two terms on probation they have not achieved a grade-point average of 2.0 (C average) computed on the total of all courses undertaken in the University, not including courses graded P, NP, I, and IP.

All other colleges and schools: undergraduate students are subject to dismissal (a) if at the end of any term their grade-point average for that term is less than 1.5; or (b) if they have completed two consecutive terms on academic probation without achieving a cumulative grade-point average of 2.0 (C average) computed on the total of all courses undertaken in the University, not including courses graded P, NP, I, and IP.

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

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

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

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

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, for example, with Business Administration, Optometry, and others—the school and the department are synonymous. In some cases—as, for example, the humanities field major in the College of Letters and Science—a major may embrace more than one department.

Residence Requirement

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

Declaration of Candidacy

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

Studying Abroad

While progressing toward the bachelor's degree, you have a number of opportunities to earn University of California credit while studying abroad. The Universitywide Education Abroad Program has study centers at the following universities:

- **Africa**
  - University College, Nairobi

- **Asia**
  - Chinese University of Hong Kong
  - International Christian University, Tokyo, Japan

- **Central America**
  - National Autonomous University of Mexico, Mexico City
Undergraduate Degrees

Europe
Universities in France: Bordeaux, Grenoble, Marseille, Montpellier, Paris (Film, History, Literature), Pau, Paris, Poitiers
Georg-August University, Goettingen, Germany
University of Dublin, Trinity College, Ireland (a part of the United Kingdom and Ireland program)
University of Padua, Italy: Academy of Fine Arts, Venice; G.B. Martini Music Conservatory, Bologna
University of Bergen, Norway
Universities in Spain: Barcelona, Madrid
University of Lund, Sweden
State University of Leningrad, USSR

Middle East
Universities in Israel: Haifa, Jerusalem (Hebrew University)
American University of Cairo, Egypt

South America
University of Sao Paulo, Brazil
Pontifical Catholic University of Peru, Lima, Peru

Requirements for participation are a grade-point average of 3.0, upper division standing, and sufficient language preparation. University scholarships, loans, and grants may be used to finance the year abroad.

Berkeley also participates in several intercollegiate consortia for advanced language studies: Rome Classics Program (requiring Latin fluency), Japanese language study in Tokyo, Mandarin Chinese study in Taipei, and Arabic study in Cairo.

Graduate students may study in most of the programs subject to the approval of their advisers and the Graduate Division. One year of graduate study must have been completed prior to the year abroad.

If you are interested, consult your academic advisers and the Education Abroad counselor in the International Education Office, 2538 Channing Way, 104 Building D, 642-1356.

Undergraduate Education / 21
I like to compare scientific research to mountain climbing in an unexplored range. Considerable preparation, training, and a strong motivation are required to get up to the upper altitudes even if no particular stretch of the way is particularly difficult. But once there, it is relatively easy for one to see vistas or even to stumble across new riches that people of equivalent ability who have stayed behind have no possibility to see or to find.

There is beauty in discovery, mathematics in music, a kinship of science and poetry in the description of nature, and exquisite form in a molecule. Attempts to place different disciplines in different camps are revealed as artificial in the face of the unity of knowledge. Above all, we must always emphasize efforts to understand people in their great wonder and variety.

Glenn T. Seaborg
Professor of Chemistry
Nobel Laureate, Chemistry

Doe Memorial Library, the academic heart of the campus, is one of the largest university libraries in the nation. With the Moffitt Undergraduate Library and 22 branches, the Library has more than six million volumes and 100,000 journals and serial publications.
Graduate Education
at Berkeley

Graduate study embraces all study for degrees and certificates beyond the bachelor's degree—principally the master's and doctor's degrees.

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

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

The Nature of Graduate Instruction. A graduate course is a highly advanced course in a field of study already intensively presented in the upper division. Graduate courses demand, on the part of both instructor and student, either a capacity for critical analysis or a specialization of research interests not normally appropriate to an undergraduate major. These courses may be conducted in a number of ways: (1) as advanced lecture courses; (2) as seminars in which faculty and students present critical studies of selected problems within the subject field; (3) as independent study or reading courses; or (4) as research projects conducted under faculty supervision.

The main purpose of graduate study is to inspire independence and originality of thought in the pursuit of knowledge. The graduate student is expected to achieve mastery of the chosen field through advanced coursework and—equally important—through independent study and research. Considerable liberty is accorded in the choice of courses, at the discretion of the graduate adviser, as long as minimum requirements for academic residence are met.

Possession of a bachelor's degree does not in itself entitle a student to enroll in a graduate course. These courses assume adequate preparation at the upper division level in the subject field (a minimum of 18 units of upper division work basic to the subject matter of the graduate course; this basic work may be pursued in more than one department). Graduate students are encouraged, therefore, to take such upper division work as will provide them with the background needed for advanced work; they are not confined to graduate courses.

Graduate courses completed before attainment of the bachelor's degree are not acceptable for unit credit toward an advanced degree. Courses in the 300 and 400 series, which are professional in nature, are not acceptable for unit credit as part of the program for an academic degree. They may, however, satisfy certain substantive requirements in particular academic programs, such as engagement in teaching activity or particular kinds of research or technical work.
Graduate Advisers. Graduate advisers are appointed by the Dean of the Graduate Division for each academic unit and are announced before the opening of each quarter. Their responsibilities include: (1) assisting students in selecting programs of study; (2) reporting to the Dean of the Graduate Division on the acceptability of upper division and graduate courses completed by a candidate at other institutions; (3) endorsing applications for candidacy for higher degrees and for qualifying examinations; (4) acting on petitions by graduate students; (5) maintaining records of all students enrolled under their jurisdiction; (6) supplying information requested by the Dean of the Graduate Division regarding a student's progress; and (7) assisting the Dean in the enforcement of regulations, particularly those relating to registration, admission to graduate courses, and maintenance of acceptable scholastic performance. The graduate advisers are deputies of the Dean of the Graduate Division and the chief representatives of the department of the school or college in all matters related to graduate study, and their signatures are recognized as expressing official decisions.

Graduate students also have individual advisers, usually assigned after advancement to candidacy for the doctorate, but frequently appointed in the earlier stages of their training. The individual advisers may or may not be the same as the official graduate advisers. All graduate students should keep in close touch with their individual advisers and must confer with their official graduate adviser at the beginning of each quarter to obtain approval of their programs of study (by signature on the Study List).

Applying for Admission

Completed applications for admission, as well as all additional documents specified on the application form (including transcripts from each college-level institution previously attended) and an application fee of $25, must be filed with the Graduate Admission/Fellowship Office by the established deadlines.

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

The final dates of the Graduate Division for acceptance of applications for admission for the 1982-83 academic year are: Fall Quarter, February 1; Winter Quarter, September 1; and Spring Quarter, November 1. The School of Law admits only for the Fall Term; the deadline is February 1.

Limited Enrollment. Each graduate program at Berkeley has a maximum enrollment that may not be exceeded. Almost invariably, this maximum is smaller than the number of persons who are at least minimally qualified for admission. Selection procedures are designed to admit applicants in accordance with their relative merit and promise among those at least minimally qualified. It is to the applicant's advantage to make early inquiry about the possibility of study at Berkeley.

Admission Requirements. The University requires of the applicant the following: (1) a degree from an accredited institution, comparable to the bachelor's degree offered at Berkeley; (2) sufficient undergraduate training to undertake graduate study in the chosen field; and (3) a satisfactory scholastic average.

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

Graduate Record Examination. Applicants for graduate admission (with certain exceptions listed below) are required to take the Aptitude Test of the Graduate Record Examination and to have their scores on this examination reported by the Educational Testing Service. Although current test scores are preferred, reports up to five years old—but not older—will be accepted. Foreign applicants from any country in which the official language is English, or those who have studied for one year or more in schools or universities where English is the language of instruction, must take the Graduate Record Examination. In general, others applying from countries outside the United States need not submit GRE scores, unless their major departments so require. A list of departments or groups that require the GRE of all their applicants is included in the application packet.

Applicants to the School of Business Administration take the Graduate Management Admission Test (GMAT) in place of the Graduate Record Examination. Applicants to the School of Law for the J.D. degree take the Law School Admission Test (LSAT) rather than the GRE. However, law students applying to any other field of study in the
Graduate Division must take the Graduate Record Examination.

Teaching Credential applicants (Multiple and Single Subject only) are not required to take the GRE. However, applicants for the M.A.T. degree must fulfill the GRE requirement.

Arrangements to take the GRE should be made directly with Educational Testing Service at least three weeks before the desired test date (six weeks, if registering to take the examination at a center outside the United States).

Applications for the GRE examination and GMAT examination are obtainable from the Educational Testing Service, Box 955, Princeton, NJ 08540 or from its Western Office at 1947 Center Street, Berkeley, CA 94704.

Domestic candidates from families with extremely low incomes may qualify for a waiver of GRE test fees. Such applicants should see their undergraduate financial aid offices to determine whether their institution participates in the GRE Fee Waiver Program and whether they qualify. Fee waivers are not available directly from the Educational Testing Service.

Foreign Applicants. In addition to the admission requirements previously mentioned, foreign students are expected to have an excellent command of English before beginning graduate study at Berkeley, as no student is admitted to graduate standing for the sole purpose of learning English. Since official evidence of English proficiency is a requirement for admission consideration, and since the Test of English as a Foreign Language (TOEFL) is the only evidence accepted by the Graduate Division (a score of 550 is required), applicants from countries whose official language is not English should register to take this test as soon as possible. The test is given throughout the world only five times a year and registration materials are available by writing directly to TOEFL, Box 899, Princeton, NJ 08540, U.S.A. The Graduate Admission/Fellowship Office at the University of California, Berkeley, must be indicated by the applicant as one of the recipients of the test scores. Scores from an institution test of the TOEFL are not acceptable and will not be considered in place of the international test scores or special center test scores.

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

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

Notification of Action on Admission. A written notice from the Dean of the Graduate Division is valid proof of admission. Admission to graduate study is limited by the number of places available in the various schools, colleges, and departments of the University of California, Berkeley. Applicants for admission and fellowship consideration will be notified on or about March 1 of the action on their applications. Applicants for admission only will be advised as soon as possible after a decision to admit or deny admission has been reached. Normally, however, acceptance letters for applicants for admission only will not be issued until after March 1 for the Fall Quarter, July 1 for the Winter Quarter, and October 1 for the Spring Quarter.

Statement of Firm Intent to Register and Failure to Register. The admission notice to new (including reactivating) graduate students contains a statement of firm intent to register which must be filled out and returned to the Graduate Admission/Fellowship Office by the date indicated therein. Only the return of the form to the Graduate Admission/Fellowship Office indicating a firm intent to register will reserve the allocated registration slot for the successful applicant. Applicants wishing to retain a record of the return of their firm intent to register should send it by certified or registered mail. Students who do not wish to accept the offer of admission should return the Notification of Declination of Admission so that their places can be reallocated to other applicants.

Students who fail to return the firm intent to register form and those who do, but do not follow through with registration for the quarter in which they were admitted, must request reactivation of their application if they wish to attend any subsequent quarter. They have no priority over other applicants for any subsequent quarter by virtue of their previous admission.

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

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

Fellowships and Scholarships. Awards at Berkeley carry varying stipends. Some awards are restricted to beginning graduate students or to specific departments but most are available in open competition.

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

Foreign Language and Area Studies Fellowships. Awards are available under Title VI of the National Defense Education Act to students who are (1) U.S. citizens or have permanent resident status and (2) preparing to teach foreign languages or related area studies in institutions of higher education or elementary or secondary schools in the United States, or preparing for employment in a governmental, private professional, or technical capacity which would contribute to the welfare of the nation. Students may apply for these awards through the regular University fellowship competition.

Fellowship Application Procedure. The fellowship application is combined with the application for admission and for financial aid. The fellowship application deadline for the 1982-83 competition is December 1, 1981. Applications for fellowships and graduate scholarships are considered only once a year, and appointments are made for the academic year beginning with the next Fall Quarter.

New foreign applicants submit an application for admission only. Departments may recommend individuals of high academic distinction to the Fellowship Committee for consideration for an award. This will be done entirely by departmental recommendation, not by the applicant's request. Those who do receive awards will be notified by the Graduate Admission/Fellowship Office by April 1. Foreign students not receiving an award will be notified of their admission or denial of admission without reference to the April 1 date. Foreign students should not assume that admission carries any assurance of financial support or remission of fees.

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

Criteria of Appointment. The number of awards is limited, and since several thousand students apply each year, the competition is very keen. In assigning awards, the Committee on Fellowships and Graduate Scholarships considers: the extent and quality of previous academic work, evidence of ability in research or other creative accomplishments, intellectual capacity, and promise of productive scholarship. The amount of the award is based on the total resources available to the student as evidenced in the financial statement, and the determined need.

Announcement of Awards. Awards are announced by April 1, and must be accepted or refused, in writing, by April 15. The acceptance of a fellowship or graduate scholarship carries with it the presumption that the incumbent will devote full time to graduate study and research at UC Berkeley.

Fellowship Supplementation. Fellowships may supplement their fellowships with no more than 25 percent time employment per quarter as a Teaching or Research Assistant or similar educationally relevant position. Any exception to this policy must be specifically approved by the Dean of the Graduate Division upon recommendation of the graduate adviser.

Waiver of the Nonresident Tuition Fee. A limited number of waivers of the nonresident tuition fee are available each academic year. These are awarded to graduate students with distinguished academic records or to teaching assistants, by departmental recommendation, until departmental waiver quotas are filled. Applicants must be enrolled full-time in a program of study leading to a higher degree and cannot be the recipients of a fellowship, scholarship, grant-in-aid, or other award from a foreign government. Applications can be obtained from the Office of the Dean of the Graduate Division and should be returned to that office by May 1. Awards are usually made during the summer, and applicants are then notified of the action taken on their requests. There is no waiver privilege for summer session registrants since the nonresident tuition fee is not assessed during the summer. For information regarding the establishment of legal residence in the state of California, see Appendix.

There are also a limited number of Earle C. Anthony Tuition Scholarships covering the nonresident tuition fee open to students who plan to study in the physical, biological, and agricultural sciences, in mathematics, or in engineering. The application procedure is the same as above.

Graduate Minority Program. This program provides financial assistance to students from groups which have been traditionally underrepresented in
graduate and professional education programs. The University has identified Blacks, Chicano/Latino (Hispanics), Native American Indians, and Filipinos as most severely underrepresented in these programs. It recognizes that Asian Americans are underrepresented in certain fields. Assistance is available for United States citizens only.

Awards are based upon evaluation of academic promise, financial need, and availability of program funds. Approximately 200 awards, ranging from $300 to $3600 stipends plus payment of fees, are granted annually to incoming students. Awards are made for one year but are renewable on condition of satisfactory academic progress.

Applications for prospective students are available in the Graduate Application for Admission, Fellowship and Financial Aid. Applicants are required also to complete the Office of Financial Aid application with all necessary supporting documents for determination of need.

Teaching and Research Positions. Salary figures for all positions mentioned in the following sections are subject to United States income tax deductions. Figures given are gross, not net, and do not reflect deductions. Information about salary payment schedules should be obtained when an appointment is offered, since payment for work performed is later than dates when registration fees are due.

Appointments carry no guarantee of waiver of the nonresident tuition fee or any other fees. Appointments are for a period of from one to three academic quarters. Reappointment may be recommended. Employment in the summer sessions may be additional and, in some cases, may be full-time. For teaching assistants and teaching fellows, payment is in nine equal installments (three installments per quarter). Registered graduate students may not be employed by the University in any capacity at more than half-time without the express consent of the Dean of the Graduate Division. Registered graduate students employed half-time by the University are nevertheless considered full-time students if they are taking a full academic load; i.e., registered for at least six units of upper division and/or graduate work.

Teaching Assistantships. Many departments make teaching assistantships available to outstanding graduate students, providing them a salary of $765 per month. Appointments are for half-time service. The teaching assistant must be a registered full-time student. Chosen for scholarly achievement and promise as a teacher, the appointee serves the apprenticeship under active supervision of the regular faculty. In some departments, students working for the Ph.D. degree are required to complete a specified minimum period of teaching as a part of their degree program. Application is made directly to the chairperson of the department in which the student wishes to teach.

Research Assistantships. Qualified registered full-time graduate students may seek positions as research assistants in the departments, centers, and institutes of the University. The stipend is $593 per month for a half-time appointment. The duration and extent of such employment is variable. Application is made directly to the department, center, or institute.

Teaching Fellowships. An appointee must be a registered full-time student who has been advanced to candidacy for the doctorate, or who has otherwise achieved appropriate professional maturity. The appointee is chosen for competence to conduct the entire instruction of a group of students in a lower division course, under general supervision of a regular faculty member. The stipend is $897 per month for a half-time annual appointment. Application is made to the individual departmental chairperson.

Associateships. The title "Associate" is assigned to teachers employed temporarily and not under consideration for appointment as Instructor or Professor. Associates are employed to give independent instruction in lower division courses. Individuals holding this title must have the master's degree or equivalent training and at least one year of teaching experience (including that of a teaching fellowship or assistantship) in or outside of the University. Associate appointments are for a half-time annual appointment. Application is made to the individual departmental chairperson.

Exchange Programs

Foreign Language Training. When space is available, graduate students and faculty may facilitate their research and overseas field work by enrolling in courses for oral proficiency training in any of the languages taught at the Defense Language Institute of the Presidio of Monterey. Application forms may be obtained from the Secretary, Language Training Advisory Committee, Merrill College, University of California, Santa Cruz, CA 95060.

Intercampus Exchange Program. A graduate student registered on any campus of the University may go to another campus of the University as an Intercampus Exchange Graduate Student with the approval of the adviser, the chairperson of the department in which study is proposed, the Dean of the Gradic Division on the home campus, and the Dean of the Graduate Division on the campus visited. This program will also include those students who take courses on more than one campus of the University in the same quarter.

Application forms for the Intercampus Exchange Program for Graduate Students may be obtained from the Office of the Dean of the Graduate Division on the student's home campus. Application forms should be completed and filed at least three weeks before the opening of the quarter of enrollment in the program.

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

Although the intercampus exchange student registers and pays fees on the home campus, such a student has library, infirmary, and other student privileges on the host campus. The exchange student should make arrangements with the Office of Admissions and Records to follow the enrollment procedure of the host campus so that grades obtained in courses taken here will be transferred to the record on the home campus. An exchange student is considered a graduate student in residence on the home campus. The enrollment of the intercampus exchange student is not transferred to the host campus and formal admission to the host graduate school and department is not granted. Unless specifically restricted, holders of fellowships may participate in the Intercampus Exchange Program.

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

Exchange Programs with Hayward, Mills, and Sonoma. Graduate and undergraduate students may participate in exchange programs with California State University, Hayward; Mills College, Oakland; and California State College, Sonoma. With the approval of the Graduate Division and the department, participants in these programs may register and pay applicable fees at Berkeley and be exempt from tuition and fees at the host campus. The participant may enroll for only one course per quarter at the host campus. It should be noted that the number of graduate and upper division units completed in an exchange program is limited to six units toward the master's degree.

Graduate Theological Union. There are two types of programs which include the facilities of the Graduate Theological Union in Berkeley: the "Casual Program" and the joint Ph.D. program in Near Eastern Religions.

The Casual Program is open to all students in the GTU community and all graduate students at UC Berkeley. This program provides cross registration between the two campuses whereby a student registered on one campus may take courses on the other campus, subject to the appropriate academic approvals. Applications and deadline dates can be obtained from the Petitions Desk in the Graduate Division, 1 California Hall.

The Joint Doctoral Program in Near Eastern Religions is open only to students who intend to work toward the Ph.D. degree, but all students must first possess an M.A. (or equivalent) in the field of Near Eastern Studies or in a related field provided they have at least two ancient languages suitable to the proposed program. Applicants must be admitted to both the Graduate Theological Union and the University, as the degree is conferred jointly by both institutions. Students in the joint doctoral program are under the administrative supervision of the graduate dean at each institution, and final action on a student matter may only be taken after both deans have participated in the decision. Students in this program may use the extensive library holdings of the Union and supplement their programs with selected courses in Palestinian archaeology, Biblical studies, Semitic epigraphy, and philology. Initial information about the program, a catalog, and application forms should be obtained from the Graduate Theological Union, 2465 LeConte Avenue, Berkeley, CA 94709.
Study Abroad. Graduate students who have been admitted for study toward a higher degree may, under certain conditions, be granted permission to study abroad. An applicant must have completed at least one year in residence before departure for study abroad, and must demonstrate language proficiency, where required.

Graduate students are eligible to apply to most of the study centers under the universitywide Education Abroad Program. A student must obtain the approval of both the department and the Dean of the Graduate Division.

Internship/Study Opportunities in Professional Studies Program in India. The Professional Schools at Berkeley conduct a program in New Delhi. Students earn credit for internship work in local government agencies appropriate to their professional interest, and enroll in an Indian university. For additional information on all the above programs, write to: Office of International Education, 2538 Channing Way, 104 Building D, University of California, Berkeley, CA 94720, 642-1356.

Tropical Biogeography. Registered graduate students interested in doing field research in the tropics may be assisted by the Associates in Tropical Biogeography who among other objectives have that of serving as an advisory committee to the Dean of the Graduate Division. Please see listing under Biology 250 for more information.

Berkeley-Harvard Exchange Program. Graduate students who have majors in the College of Letters and Science and who have superior academic records may, with the approval of the graduate adviser and the Dean of the Graduate Division, participate in the Berkeley-Harvard Exchange Program. Participants in this program register and pay fees at Berkeley and are exempt from tuition at Harvard. Students may take courses only in the Faculty of Arts and Sciences at Harvard and are limited to two semesters of participation in the program. Approval should be secured at least two months in advance of the date of proposed registration. Further information and application forms may be obtained from the Office of the Dean of the Graduate Division, 1 California Hall.

The Master's Degree

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

Specific regulations governing the professional master's degrees are set forth in the individual Announcements of the colleges and schools. This section will deal primarily with the academic master's degree.

Residence Requirement. A minimum of three quarters of academic residence is required for the master's degree. Specific subject requirements are set by the schools and departments.

Transfer of Credit from Other Institutions. Up to six quarter units (or four semester units) of courses completed at other institutions may be applied toward the degree, upon approval of the Dean of the Graduate Division. These units are allowed if earned in graduate status at an institution of high standing, but they cannot be used to reduce the minimum residence requirement or minimum requirement of graduate-level units. Course content of the units to be transferred should be equivalent to work normally offered within the student's program of study. A letter grade of B or better in the course is required for transfer credit. Requests for degree credit for such courses are not considered until a student has completed at least one half of the program for the master's degree and is applying for advancement to candidacy. The student's entire record must indicate superior scholarship. Credit for graduate work completed on other campuses of the University of California may be granted in excess of six units, and under certain circumstances up to one-third of the academic residence requirement may be transferred. Requests are handled on an individual basis.

Concurrent Enrollment/University Extension. Concurrent courses through Extension are those taken on the Berkeley campus under the instruction of a regular member of the Berkeley faculty. In general, such course work cannot be applied toward a Berkeley Master's degree. These courses are intended to provide Extension students with an opportunity to take course work that would not ordinarily be available to them. They are not intended to provide a substitute for normal registration by Berkeley graduate students, nor are they to be used as a means of accumulating credit toward a Berkeley degree by an individual not formally admitted to graduate standing on this campus. Exceptions to this rule will be made only when there is clear evidence that such course work was taken by the student while in graduate standing at another institution and with the intent of applying the units earned toward a graduate degree at that institution. Exceptions must be fully justified by the Graduate Adviser and will require special approval by the Dean of the Graduate Division.

Amount and Distribution of Work. Students working for academic master's degrees on the Berkeley campus will pursue one of two plans, as determined by the individual department (departments may adopt either or both plans, and will, in the latter case, designate which plan is to be followed by each student):

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

Plan II requires at least 36 quarter units of upper division and graduate courses, followed by a comprehensive final examination administered by the student's department or group. At least 18 of the units must be in graduate courses in the major subject.

Students under both plans are guided by their graduate advisers regarding distribution of course work among the departments. Further requirements are specified by the major department.
Advancement to Candidacy. Admission to candidacy for a master's degree is not automatic upon completion of the degree requirements; it requires a formal application to the Dean of the Graduate Division that bears the approval of the student's major department or school and a precise statement of the studies on which the application is based. Application must be made not later than the end of the second week of instruction of the quarter in which the degree is to be awarded. If a student is to submit a thesis, however, the adviser should be consulted about advancement to candidacy as early as possible so that the appropriate committee can be formed.

The Master's Thesis. Students under Plan I described above must submit a thesis in typewritten form, double-spaced on medium weight, 8½ by 11 inch paper of good quality, with a minimum left hand margin of two inches. Consult the Degree Staff in the Office of the Dean of the Graduate Division for required brands of paper. The thesis must be unbound and without perforations. The type must be adequate for photographic reproduction. Following approval by the student's thesis committee, two copies are filed with the Dean of the Graduate Division. Further information regarding the organization and format of the thesis is available from the Degree Staff, Office of the Dean of the Graduate Division.

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

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

Three years is the normal time period allowed for completion of the thesis. Candidacy for the master's degree will be lapsed automatically at the end of that time. Reinstatement can be accomplished upon the recommendation of the graduate adviser to the Dean at the time a final draft of the thesis has been approved by the thesis committee members.

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

The Doctor's Degree

Instruction is offered on the Berkeley campus leading to both academic and professional degrees. Professional degree programs are outlined in the individual Announcements of the colleges and schools offering them. The general procedures given in this section apply primarily to the academic doctoral degree.

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

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

The field of study may be in a single department, except for essential related courses in other departments, in several departments, or in an interdisciplinary group. Once a field of study has been chosen, students should confer with their graduate advisers to select the sequence of courses that will best prepare them for qualifying examinations and research work.

Residence Requirement. A minimum of two years or six quarters of academic residence is required for the Ph.D. degree. A maximum period in candidacy determined by the department and the Graduate Division is permitted, after which candidacy for the degree is likely to lapse. The department or the Graduate Division should be consulted for the time permitted in candidacy.
Foreign Language Requirement. The requirement serves (1) to make certain that Ph.D. candidates have the ability to acquire wide knowledge in their field of study; and (2) to enable them to keep up with foreign developments in the field. Students are urged to complete the foreign language requirement early in their graduate career. They must fulfill the foreign language requirement for the Ph.D. before advancement to candidacy and preferably before admission to the Qualifying Examinations according to the policies current in the department or group. Each graduate program may have somewhat different foreign language requirements, not only with respect to the particular languages required but also with respect to their number. Some graduate programs include the satisfaction of the foreign language requirement for the doctorate in their requirements for admission to doctoral programs. Prospective students are urged to inquire about the foreign language requirement as soon as possible and, if they can, to fulfill it while still in undergraduate status.

Qualifying Examinations. Before admission to candidacy, students must pass a series of qualifying examinations administered by a five-member committee approved by the Graduate Council. The student must be registered in the quarter the examinations are taken. Any previous deficiencies in training must have been removed, including satisfactory resolution of any incomplete grades in courses required by the graduate adviser for the individual program. At least a B average in all course work undertaken in graduate status must have been maintained, and the language requirements must have been fulfilled.

Advancement to Candidacy. Application is made on a form furnished by the Graduate Division, no later than the quarter following the one in which the qualifying examinations were passed. The completed form, bearing the endorsement of the student’s department, is filed with the Dean of the Graduate Division, who determines whether all formal requirements have been met. A fee of $25 must be paid when the application is filed. All requirements for the doctoral degree except the dissertation must have been completed before the student may be advanced to candidacy.

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

- Agricultural and Resource Economics
- Ancient History and Archaeology
- Anthropology
- Applied Mathematics
- Architecture
- Astronomy
- Biochemistry
- Biostatistics
- Botany
- City and Regional Planning
- Classics
- Comparative Literature
- Computer Science
- Demography
- Dramatic Art
- Economics
- Education
- Endocrinology
- Engineering
- English
- Environmental Planning
- French
- Genetics
- Geography
- German
- Hispanic Literatures
- History
- Immunology
- Italian
- Latin American Studies
- Library and Information Studies
- Linguistics
- Logic and the Methodology of Science
- Mathematics
- Microbiology
- Molecular Biology
- Near Eastern Religions
- Near Eastern Studies
- Nutrition
- Oral Languages
- Paleontology
- Physical Education
- Physiology-Anatomy
- Plant Pathology
- Plant Physiology
- Political Science
- Psychology
- Rhetoric
- Romance Languages and Literatures
- Romance Philology
- Scandinavian Languages and Literatures
- Science/Mathematics Education
- Slavic Languages and Literatures
- Soil Science
- Statistics
- Wildland Resource Science
- Wood Science and Technology
- Zoology

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

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

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

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

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

After the dissertation has been approved by the candidate’s committee, the original is filed with the Dean of the Graduate Division on a date proved by the candidate’s committee, and an abstract of it in duplicate is filed with the Graduate Division. Each academic department may adopt additional requirements, as approved by the Dean of the Graduate Division and the Graduate Council, according to the demands of a candidate’s field of study. Programs using Plan A and Plan B are listed below.

Plan A
- Anatomy
- Asian Studies
- Buddhist Studies
- Comparative Literature
- Hispanic Literatures
- Logic and the Methodology of Science
- Near Eastern Studies
- Romance Languages and Literatures
- Emphases: French, Italian, Spanish
- Romance Philology
- Plan B
- Agricultural and Environmental Chemistry
- Agricultural and Resource Economics
- Ancient History and Archaeology
- Anthropology
- Applied Mathematics
- Architecture
- Astronomy
- Biochemistry
- Biophysics
- Biostatistics
- Botany
- Business Administration
- Chemical Engineering
- Chemistry
- City and Regional Planning
- Classical Archaeology
- Classics
- Emphases: Greek, Latin
- Comparative
- Biochemistry
- Comparative Pathology
- Computer Science
- Demography
- Dramatic Art
- Economics
- Education
- Endocrinology
- Energy and Resources Engineering
- Engineering Science
- English
- Entomology
- Environmental Health Sciences
- Epidemiology
- French
- Genetics
- Geography
- Geology
- Geophysics
- German
- History
- History of Art
- Immunology
- Italian
- Jurisprudence and Social Policy
- Latin American Studies
- Library and Information Studies
- Linguistics
- Mathematics
- Medical Anthropology
- Medical Physics
- Microbiology
- Molecular Biology
- Music
- Neurobiology
- Nutritional Sciences
- Paleontology
- Parasitology
- Philosophy
- Physical Education
- Physics
- Physiological Optics
- Physiology
- Plant Pathology
- Plant Physiology
- Political Science
- Psychology
- Public Policy
- Rhetoric
- Scandinavian Languages and Literatures
- Science/Mathematics Education
- Slavic Languages and Literatures
- Sociology
- Soil Science
- South and Southeast Asian Studies
- Statistics
- Wildland Resource Science
- Wood Science and Technology
- Zoology

Normative Time. The primary goals of this program are to provide incentives to both students and instructional units to reduce the average amount of time taken to complete requirements for the doctoral degree, to facilitate a greater degree of continuity in doctoral studies, and to provide a more equitable assessment of fees for doctoral students advanced to candidacy. After advancement to candidacy, eligible students will receive a special grant to offset the cost of the Educational Fee.

Normative time is defined as the elapsed calendar time in years (calculated to the nearest third) that under normal circumstances would be needed to complete all requirements for the doctoral degree, assuming that the student is engaged in full-time, uninterrupted study and is making desirable progress toward the degree.

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

Interdisciplinary Groups. UC Berkeley has established graduate programs in a number of fields that cut across conventional departmental lines yet comprise definite cores of knowledge. These programs are administered by groups of faculty from several related departments and, in certain instances, from several campuses. Students enrolled in these programs can work with any faculty member in the group without having to pursue the particular discipline of the department with which the faculty member is associated. Moreover, this arrangement makes available to group students a range of facilities not ordinarily open to students enrolled in departmental programs. In some cases (e.g., Medieval Studies), a faculty committee is specifically appointed to advise both the student and the interested departments on setting up a program that will best meet both the student's needs and the departments' views of the proposed program's intellectual quality. Since groups have no budgets or facilities of their own, however, most applicants, to be accepted by a particular group, must first obtain the sponsorship of one of its faculty members.

Following is a current list of Graduate Groups on the Berkeley campus:

- Group in Agricultural and Environmental Chemistry
  Professor Leonard F. Bjeldanes, Chair
  c/o Department of Nutritional Sciences
  119 Morgan Hall

- Group in Ancient History and Archaeology
  Professor Peter Brown, Chair
  c/o Department of Classics
  5303 Dwinelle Hall

- Group in Asian Studies
  Professor Herbert P. Phillips, Chair
  c/o Group Office
  460 Stephens Hall

- Group in Biophysics, Medical Physics, and Biophysics
  Professor Edward L. Alpen, Chair
  c/o Donner Laboratory

- Group in Biostatistics
  Professors E.L. Scott and C. L. Chiang, Co-chairs
  c/o School of Public Health
  19 Warren Hall
Graduate Education / 33

Individual Doctoral Programs. To allow the student an approach to a field that, in its breadth, falls between that of the department and the interdisciplinary group, the Graduate Division has encouraged the informal establishment of ad hoc programs leading to the Ph.D. degree. Only students who have completed some graduate study here in a doctoral program will be considered for an interdisciplinary program. In such programs, the student may prepare a proposal for a course of study under the sponsorship of the three faculty members. Final approval of every individual graduate program and admission of each student into such a program must be granted by the Graduate Council. Degree requirements must be completed in accordance with Plan A of the Graduate Council policies and the degree is awarded in a field approved by the Council for the individual student.
Graduate Degrees

Academic degrees are the M.A., M.S., M.F.A., and Ph.D. All others are professional degrees. The J.D. in Law is the basic law degree. It is a graduate degree, and application is made directly to the School of Law.

Agricultural and Environmental Chemistry, M.S., Ph.D.†
Agricultural and Resource Economics, M.S., Ph.D.
Anatomy, M.A., Ph.D.
Ancient History and Archaeology, M.A., Ph.D.†
Anthropology, M.A., Ph.D.
Applied Mathematics, Ph.D.
Architecture, M.Arch., Ph.D.
Art, M.A., M.F.A.
Asian Studies, M.A., Ph.D.† M.A. program emphases: East Asian, Southeast Asian, South Asian Astronomy, M.A., Ph.D.
Biology, M.A., Ph.D.
Biophysics, M.A., Ph.D.
Biostatistics, M.A., Ph.D.†
Botany, M.A., Ph.D.
Buddhist Studies, Ph.D.†
Business Administration, M.B.A., M.S., Ph.D.
Chemical Engineering, M.S., Ph.D.
Chemistry, M.S., Ph.D.
City and Regional Planning, M.C.P., Ph.D.
Classical Archaeology, M.A., Ph.D.
Classics, M.A., Ph.D. M.A. program emphases: Greek, Latin
Comparative Biochemistry, M.A., Ph.D.†
Comparative Literature, M.A., Ph.D.
Comparative Pathology, M.S., Ph.D.†
Computer Science, M.S., Ph.D.
Demography, M.A., Ph.D.†
Design (Visual), M.A.
Dramatic Art, M.A., Ph.D.
Economics, M.A., Ph.D.
Education, M.A., M.A.T., Ph.D., Ed.D.
Education (Special Education), Ed.D., Ph.D. (Joint degree program with San Francisco State University)
Endocrinology, M.A., Ph.D.†
Energy and Resources, M.S., M.A., Ph.D.†

Entomology, M.S., Ph.D.
Environmental Health Sciences, M.S., Ph.D.† Environmental Planning, Ph.D.
Epidemiology, M.S., Ph.D.†
Folklore, M.A.†
Food Science, M.S.†
Forestry, M.F.
French, M.A., Ph.D.
Genetics, M.S., Ph.D.
Genetics, Ph.D. (Joint degree program with San Diego State University)
Geography, M.A., Ph.D.
Geology, M.A., M.S., Ph.D.
Geophysics, M.A., Ph.D.
German, M.A., Ph.D.
Greek, M.A.
Health and Medical Sciences, M.S. program emphases: Dual Degree Option, Genetic Counseling, UCB-UCSF Joint Medical Program, Mental Health
Hispanic Languages, Ph.D.
History, M.A., Ph.D.
History of Art, M.A., Ph.D.
Immunology, M.A.† Ph.D.
Italian, M.A., Ph.D.
Journalism, M.J.
Jurisprudence and Social Policy, M.A., Ph.D.
Landscape Architecture, M.A.
Latin, M.A.
Latin American Studies, M.A., Ph.D.†
Law, J.D., LL.M., J.S.D.
Library and Information Studies, M.L.I.S., Ph.D., D.L.I.S.
Linguistics, M.A., Ph.D.
Logic and the Methodology of Science, Ph.D.†
Mathematics, M.A., Ph.D.
Medical Anthropology, Ph.D. (Joint program with San Francisco campus.)
Medical Physics, Ph.D.†
Microbiology, M.A.† Ph.D.†
Molecular Biology, M.A.† Ph.D.
Music, M.A., Ph.D.
Near Eastern Religions, Ph.D. (Joint degree program with the Graduate Theological Union)
Near Eastern Studies, M.A., Ph.D.
Neurobiology, M.A., Ph.D.†
Nutrition, M.S., Ph.D.†
Oriental Languages, M.A., Ph.D.
Paleontology, M.A., Ph.D.
Parasitology, M.S., Ph.D.†
Philosophy, M.A.† Ph.D.
Physical Education, M.A., Ph.D.
Physics, M.A., Ph.D.
Physiological Optics, M.S., Ph.D.†
Physiology, M.A., Ph.D.
Plant Pathology, M.S., Ph.D.
Plant Physiology, M.S., Ph.D.†
Political Science, M.A., Ph.D.

Psychology, M.A.† Ph.D.
Public Health, M.P.H., Dr.P.H.
Public Policy, M.P.P., Ph.D.
Range Management, M.S.†
Rhetoric, M.A., Ph.D.
Romance Languages and Literatures, Ph.D.†
†emphases: French, Italian, Spanish
Romance Philology, Ph.D.†
Scandinavian Languages and Literatures, M.A., Ph.D.
Science/Mathematics Education, Ph.D.†
Slavic Languages and Literatures, M.A., Ph.D.
Social Welfare, M.S.W., D.S.W.
Sociology, M.A., Ph.D.
Soil Science, M.S., Ph.D.†
South and Southeast Asian Studies, M.A., Ph.D.
M.A. program emphases: Hindi-Urdu, Malay-Indonesian, Sanskrit, Tamil, South Asian Archaeology, and South Asian Civilization. Ph.D. program emphases: Hindi-Urdu, Malay-Indonesian, Sanskrit, Tamil, and South Asian Archaeology
Spanish, M.A.
Statistics, M.A., Ph.D.
Wildland Resource Science, M.S., Ph.D.
Wood Science and Technology, M.S., Ph.D.†
Zoology, M.A., Ph.D.

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

| Indicates established interdisciplinary group or field. |
| Indicates established interdisciplinary program or field. |

*Students are not admitted to work for the M.A. degree, although it may be awarded to students pursuing work toward the Ph.D. degree after fulfillment of the appropriate requirements.
Certificate in Russian and East European Studies. Students who have had substantial training in the Russian and East European Area in at least two departments and have had 16 quarter units (or equivalent knowledge) of an East European language can, by taking a required number of additional courses in the area, obtain a Certificate in Russian and East European Studies. The certificate course requirements can be fulfilled either as part of a program leading to a higher degree in the social sciences or humanities or after receipt of such a degree.

Certificates of Completion of Graduate Curricula in the School of Library and Information Studies. A certificate program has been established which is designed to meet the need for advanced studies beyond the first professional degree (M.L.I.S.) and short of the doctoral degrees (Ph.D., D.L.I.S.). Inquiries should be directed to the School of Library and Information Studies.

Master of Arts in Teaching. The degree of Master of Arts in Teaching is offered by the School of Education jointly with the Departments of Comparative Literature, English, French, and German. At the present time, it is limited to the four academic fields of study named above. Only the M.A.T. program with the Department of English will be offered in 1981-82. Candidates must satisfy all requirements to be certified to teach in the State of California in addition to completing academic training in one of the four subject fields. Inquiries should be directed to the appropriate academic department and to the School of Education.

Joint Doctoral Programs. An intercampus joint degree program has been established between the Berkeley and San Francisco campuses of the University of California in Medical Anthropology. This program leads to the Ph.D. in Medical Anthropology. Admission to the program is obtained by making application to the campus where the student expects to do research for the dissertation. Near Eastern Religions—A program leading to the Ph.D. degree has been established which will be conducted jointly by the Berkeley campus and the Graduate Theological Union. Applicants should make application both to the Graduate Admission/Fellowship Office on the Berkeley campus and to the Graduate Theological Union.

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

Genetics—A joint doctoral program in Genetics leading to the Ph.D. degree is offered by the University at Berkeley and San Diego State University. For application material and additional information, write to: Professor James W. Fristrom, Department of Genetics, 345 Mulford Hall, University of California, Berkeley; Berkeley, CA 94720.

Concurrent Degree Programs. Concurrent degree programs provide an integrated curriculum of greater breadth between two disciplines. Inquiries should be directed to the departments or schools involved.

Architectural, M. Arch.—Engineering (Structural), M.S.
Business Administration, M.B.A.—Law, J.D.
(Dean)
Business Administration, M.B.A.—Law, J.D. (Davis)
Business Administration, M.B.A.—Law, J.D. (Hastings)
City and Regional Planning, M.C.P.—Law, J.D.
City and Regional Planning, M.C.P.—Public Health, M.P.H.
Economics, M.A.—Law, J.D.
Journalism, M.J.—Law, J.D.
Library and Information Studies, M.L.I.S.—History of Art, M.A.
Library and Information Studies, M.L.I.S.—History of Science, M.A.
Nutrition, M.S.—Public Health, M.P.H.
Public Health, M.P.H.—M.D. (School of Medicine, San Francisco)
Public Policy, M.P.P.—Law, J.D.
Public Policy, M.P.P.—Engineering, M.S.
Social Welfare, M.S.W.—Law, J.D.

Medieval Studies. Please see Index for further information.

Teaching Credentials. Work leading to the Multiple Subject or Single Subject Teaching Credentials is given on the Berkeley campus. For details, please consult the Announcement of the School of Education.
You asked me what is the
good of reading the
Gospels in Greek.
I answer that it is proper
that we move our finger
Along letters more endur-
ing than those carved in
stone,
And that, slowly pro-
nouncing each syllable,
We discover the true digni-
ty of speech.
Compelled to be attentive
we shall think of that
epoch
No more distant than yes-
terday, though the
heads of Caesars
On coins are different to-
day. Yet still it is the
same eon.
Fear and desire are the
same, oil and wine
And bread mean the
same. So does the fick-
leness of the throng
Avid for miracles as in the
past. Even mores,
Wedding festivities,
Drugs, laments for the
dead
Only seem to differ.
Excerpt from “Readings”
in Bells of Winter
Czeslaw Milosz
Professor of Slavic
Languages and Literatures
Nobel Laureate,
Literature

Sather Tower, known as
the Campanile for its
resemblance to the
campanile in the Piazza
San Marco, Venice, was
completed in 1914.
Fees and Financial Aid

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

Part of the fees may be refunded to students who cancel their registration prior to the opening day of the quarter or who withdraw before the beginning of the sixth week of classes of any quarter. (See Index, Schedule of Refunds.) A separate circular on refunds, Student Fees and Deposits, is also available from the Office of Admissions and Records, 120 Sproul Hall.

Table of Fees

At the time of registration, by mail or in person, the following fees are paid by each student:

<table>
<thead>
<tr>
<th>Student Category*</th>
<th>Fall, Winter, or Spring Quarter 1981-82</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident Undergraduate</td>
<td>$ 266.50</td>
</tr>
<tr>
<td>Nonresident Undergraduate</td>
<td>1228.50</td>
</tr>
<tr>
<td>Foreign Undergraduate</td>
<td>1253.50</td>
</tr>
<tr>
<td>Resident Graduate</td>
<td>288.50</td>
</tr>
<tr>
<td>Nonresident Graduate</td>
<td>1248.50</td>
</tr>
<tr>
<td>Foreign Graduate</td>
<td>1273.50</td>
</tr>
</tbody>
</table>

*Effective in the Winter Quarter 1982, registration fees will increase $75 per quarter.

<table>
<thead>
<tr>
<th>School of Law **</th>
<th>Fall or Spring Term 1981-82</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident Graduate</td>
<td>442.75</td>
</tr>
<tr>
<td>Nonresident Graduate</td>
<td>1882.75</td>
</tr>
<tr>
<td>Foreign Graduate</td>
<td>1920.25</td>
</tr>
</tbody>
</table>

**Effective in the Spring Term 1982; registration fees will increase $112.50 per term.

Required Fees

University Registration Fee—$156 per quarter; $244 per term (for students in the School of Law). Paid by all students. Covers normal expected usage of such facilities as laboratories, gymnasiums, counseling and placement services, health services, etc.

Educational Fee—Paid by all undergraduates at $100 per quarter, by students in the School of Law at $180 per term, and by all other graduate students at $122 per quarter. Used to support a portion of the cost of the educational program. The Educational Fee may be reduced to $50 for undergraduate students who have received prior approval from the Dean of their College or School to enroll in a program of less than 9 units. Eligibility must be established no later than the end of the third week of classes.

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

Nonresident Tuition—$960 per quarter; $1440 per term, School of Law. At the time of registration, every entering student is classified as a resident or nonresident for tuition purposes. Only U.S. citizens and holders of immigrant visas can become qualified for resident classification. Under California law a student is classified as a resident for tuition purposes if the student has had residence in the state for more than one year immediately prior to the day instruction begins at the last of the campuses to open for a quarter. Residence is the combination of physical presence within the state plus intent to reside in California permanently.

Nonresidents must pay a nonresident tuition fee each quarter. For detailed information regarding the establishment of California residence, see Appendix, or write to the Attorney in Residence Matters, 590 University Hall, University of California, Berkeley, CA 94720.
Foreign Student Health Insurance—$25.00 per quarter; $37.50 per term, School of Law. Required of all students on nonimmigrant visas. Payment of the fee for three consecutive quarters (two terms in the School of Law) covers the student for the full academic year, including summer.

Additional Fees and Expenses

Late Registration—$25. Students who register during the late registration period (see Calendar for dates) are liable for this fee.

Late Study List Filing—$10. Students who file their Study Lists late (see Calendar for dates) are liable for this fee.

Reinstatement—$10.

Athletic Privilege Cards—$20, Student Football Season Ticket; $15, Basketball/All Sports Card. Both Optional. Permit free admission or reduced rates to most University athletic events.

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

<table>
<thead>
<tr>
<th>Estimated Student Budget, 1981-82</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Food &amp; Housing</strong></td>
</tr>
<tr>
<td>At Home</td>
</tr>
<tr>
<td>On Campus</td>
</tr>
<tr>
<td>Off Campus</td>
</tr>
<tr>
<td><strong>Single Student Living</strong></td>
</tr>
<tr>
<td>$1449</td>
</tr>
<tr>
<td>$2576</td>
</tr>
<tr>
<td>$3339</td>
</tr>
<tr>
<td><strong>Married</strong></td>
</tr>
<tr>
<td>Student (no child)</td>
</tr>
<tr>
<td>$5949*</td>
</tr>
<tr>
<td>Parent (1 child)</td>
</tr>
<tr>
<td>$5751*</td>
</tr>
<tr>
<td><strong>Graduate</strong></td>
</tr>
<tr>
<td>$805</td>
</tr>
<tr>
<td>$805</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
<tr>
<td>Undergraduate</td>
</tr>
<tr>
<td>Graduate</td>
</tr>
<tr>
<td>$3604</td>
</tr>
<tr>
<td>$4965**</td>
</tr>
<tr>
<td>$5494</td>
</tr>
<tr>
<td>$5956</td>
</tr>
<tr>
<td>$5918</td>
</tr>
<tr>
<td>$5890</td>
</tr>
<tr>
<td><strong>Total includes $1545 for each additional dependent.</strong></td>
</tr>
</tbody>
</table>

Financial Aid

The Financial Aid Office is located at 201 Sproul Hall. By visiting or writing that office you may obtain information about the various types of student aid offered. Undergraduate students may apply to the Financial Aid Office for undergraduate scholarships (including Regents' Scholarships) and Supplemental Educational Opportunity Grants (SEOG). Both undergraduate and graduate students may apply for University Grants-in-Aid, Educational Fee Grants, National Direct Student Loans, University Loans, Guaranteed Student Loans, Educational Fee Deferment Loans, Work-Study Program, and other aid programs.

All financial aid except honorary scholarships and prizes are granted on the basis of financial need. Financial need is the difference between the parents' expected contribution plus the student's own resources and the allowable education expenses. Prizes are awarded on the basis of competition or outstanding ability in some area of creative or scholarly achievement. Undergraduate scholarship awards are made on the basis of scholarship and financial need, except Regents' and Alumni Honorary Scholarships which are awarded in recognition of outstanding achievement and promise. Complete information concerning all of these programs except prizes is contained in the Financial Aid Handbook 1982-83 which may be obtained from the Office of Financial Aid. A separate booklet describing the various prizes offered is also supplied on request by the Committee on Prizes, 205 Sproul Hall.

Financial Aid application information for entering undergraduate students is in the Admission Packet. Financial Aid Application forms for entering graduate students are in the Graduate Admission Application. Application forms for continuing undergraduate and graduate students are available at 201 Sproul Hall. The deadline for submitting these forms will be announced during the Fall Quarter.

Information and application materials concerning graduate fellowships and graduate scholarships may be obtained separately from the Graduate Division, 1 California Hall. The application is normally due by December 1.

Cal Grants A (California State Scholarships) are awarded by the State and are open for application to undergraduates and, in some years, to graduates. They range in value from $300 to $800 and apply toward the registration and educational fees. Cal Grants B (College Opportunity Grants) are also awarded by the State and are open to undergraduates who can demonstrate exceptional financial need. The awards range from $1100 to $1800 per academic year.

Pell Grants are awarded by the federal government to undergraduates.
The foyer of Zellerbach Hall displays festive banners which highlight the performing arts. The Committee for Arts and Lectures brings the finest performing arts to the campus. This year, C.A.L. celebrates its 75th Anniversary Season with events from September to May, including Alvin Alley American Dance Theater, Marcel Marceau, the Juilliard and Guarneri String Quartets, The Acting Company, Oscar Peterson, and the Grateful Dead. Concerts, recitals, plays, and dance performances are presented in Zellerbach Hall, Hertz Hall, the Greek Theatre, and Zellerbach Playhouse.
The land on which the University of California stands today was formerly the home of Native American people of the Huchiun-Ohlone group. Today, members of California tribes attend the University of California as students. The very fact that these Native Americans are attending the University is evidence of the survival of a sense of culture and identity that persists even today.

A commitment of all teaching institutions is to seek the truth, but the truth of culture is in its variations and in the differences as well as the similarities of people's experiences. Students at Cal come from many backgrounds, and their presence at the University is an important statement about the diversity of cultures that exist in American society today.

Power to make changes comes through knowledge, and there are many sources of knowledge on the Berkeley campus. I would encourage you to take advantage of as many of them as possible.

Clara Sue Kidwell
Associate Professor of Native American Studies
Associate Dean of the Graduate Division

Lawrence Hall of Science, a center for research in science education, sits high on a hill above campus. The Hall reaches out to the community with a myriad of programs that serve the entire Bay Area.
Student Services

This section offers general information on student services available on the Berkeley campus. Further information may be obtained directly from the appropriate office.

Student Information Center. Located in 102 Sproul Hall, the Center provides general information, counseling, and referral for specialized assistance. The Center should be the initial contact for students with questions or problems. A lawyer is available to provide legal advice and referral for representation.

The Center operates an orientation program for new students in the summer (CalSO) and at the start of each quarter. On-the-spot information and advice are provided to new students to assure a quick and easy adjustment to life at UC Berkeley. During pre-enrollment and the first week of the quarter, the Center operates a Help Center in the Student Union for both new and continuing students who need assistance in arranging their class schedules. Student counselors from the orientation program staff this unit with the support of professional staff from the Information Center.

Among other services provided are: the Student Handbook, covering general information about student life at Berkeley; emergency information; handling of complaints of a nonacademic nature; administrative assistance in withdrawals, blocked registration, and reinstatement; and a Notary Public service for students in University-related matters.

Nondiscrimination Policy. The University of California, Berkeley does not discriminate on the basis of race, color, national origin, sex or handicap in any of its policies, procedures, or practices in the areas of admissions, financial aid, programs, activities, services, and employment. Further information about this program, including information regarding Title IX (sex discrimination), may be found on page 279. Student grievance procedures are described on page 279 in the Appendix.

Office of the Ombudsperson. The Ombudsperson assists students and academic personnel with problems that seem insolvable by the usual procedures and agencies. If you have reached a procedural impasse or believe you have been treated unfairly in a matter affecting your academic status, there are two ombudspersons to try to help you effect a satisfactory solution. They are tenured faculty members who investigate the circumstances of complaints and make recommendations for their resolution. The Ombudspersons Committee also makes general recommendations for changes of the policies that produce unworkable or unfair regulations. The Committee is located in 328 Stephens Hall, 642-5754.

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

Hospitalization, surgery, and other non-SHS emergency care require insurance payment. Students should bring information about insurance coverage when coming to campus. Since services and insurance information may change from year to year, it is important that all students obtain The Well Body Student Health Manual, All About Health Insurance, and Your Guide to Using the Student Health Service.

The SHS is not responsible for ongoing care of chronic medical problems or for continuing care of problems diagnosed prior to registration at Berkeley. Injuries sustained in the course of employment may be treated but payment is subject to standard Worker's Compensation Insurance procedures. Treatment for injuries sustained due to the fault of someone other than the injured student will be treated but will
not be covered financially by the registration fee, and payment arrangements will be made at the time that service is provided.

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

**Housing.** Admission to the Berkeley campus does not guarantee housing reservations. You should acquaint yourself well in advance of your enrollment with the various living arrangements. Undergraduates check the appropriate section on the Application for Admission to receive descriptive material; graduates should write directly to Housing, Child Care, and Food Services, 2401 Bowditch Street, Berkeley, CA 94720, to receive descriptive material. The office also maintains listings of rentals in the community, but you must visit the office after you arrive on campus to make use of files, which change daily.

More than 3000 men and women live in University residence halls. An equal number live in fraternities, sororities, and co-operatives. There are apartments for 1022 in University Family Student Housing. Early application to living groups is recommended. The remaining students live in rooms and apartments in the community.

**International House.** International House is a coeducational residence and program center for American and foreign students, primarily at the graduate level. Cultural and social events, home hospitality, and tours and visits around California are designed to promote better understanding and friendship among all nationalities. For application and further information, write or call the Residence Office, International House, University of California, Berkeley; Berkeley, CA 94720; 642-9470 or 642-9490.

**Career Planning and Placement Center.** The Center provides students and alumni with assistance in defining their career objectives based on factual information about the world of work and an understanding of what it is they have to offer, given their education, life experience, and interests; teaches students job search skills that assist them in finding employment consistent with their career objectives; provides extensive on-campus interviewing opportunities for students seeking both summer and permanent employment; and lists opportunities for full-time, part-time, summer employment, internship, and casual employment.

Advisers are available by appointment to assist students and alumni with any aspect of the career planning and placement process.

Workshops and programs are conducted throughout the year on a variety of career development topics. Examples include "Career/Life Planning," "Identifying Your Marketable Skills," "Job Search Strategies," "Resume Writing," "Interviewing," and "Summer Jobs."

A Career Library (T-6, second floor) provides many valuable reference materials including occupational information, job market studies, directories of employers, and past job listings. A computerized career information system is available for help in career exploration.

Students and their spouses seeking part-time, temporary, odd-job, internship, or summer employment should go to 111 Wheeler Hall. Students interested in Work-Study should go to the Office of Financial Aid, 207 Sproul Hall.

Individuals seeking positions in business, industry, government, social services, and nonprofit organizations should go to the upper floor of Building T-6, 111 Wheeler Hall, or 26 Barrows Hall.

Individuals seeking careers in education should go to the ground floor of Building T-6.

The Career Planning and Placement Center supports and subscribes to all state and federal equal opportunity employment practices.

**Office of Student Activities and Programs.** Located in 103 Sproul Hall, this office works closely with students and staff in their initiation, planning, and implementation of activities, programs, and events to meet the needs of students and the University community. Sponsored groups include honor societies, service organizations, sororities, and fraternities. Assistance is given in registering student groups for their use of facilities, in dissemination of information regarding campus rules and regulations, and in administering funding for student musical activities (e.g., Marching Band, Jazz Ensembles, Choral division).

**Physically Disabled Students Program.** 2515 Channing Way, telephone 642-0518, 642-6376 (TTY). This office offers services to students with diverse disabilities, e.g., blind, deaf, quadraplegia, cerebral palsy, etc., either permanent or temporary. These services include interpreters and notetakers, assistance in locating housing, in pre-enrollment and orientation to campus and community, locating readers and tutorial help, and hiring and training attendants.

**Fraternities and Sororities.** Membership in a fraternity or sorority is by invitation after a period of "rushing." If you are interested, apply through the Interfraternity Council for men, or the College Panhellenic Association for women, both located in 224 Sproul Hall. Each will supply general information regarding programs and costs.

**Counseling and Psychological Services.** Counseling and Psychological Services include the Counseling Center, Psychiatry, and Student Advising—Pre-professional/Pre-graduate.

**Counseling Center.** Regularly enrolled students may talk in confidence with
professional staff about scholastic performance, choice of a major, personal concerns, assessing interests and aptitudes, or exploring long-range career opportunities. Group counseling is also available. Psychological and aptitude testing is provided as part of the counseling process.

The Counseling Center maintains a library of reference materials on occupations, professions, and career opportunities; a comprehensive collection of college catalogs; and directories of colleges, professional schools, and training programs which students may use, even if not seeking counseling services. Special testing for admission to graduate or undergraduate programs (except ETS and Psych Corp.) is administered at no charge. The Counseling Center is located in Building T-5.

Psychiatry. Students may have an appointment with a staff member at any time to discuss matters of concern in any area of personal or campus life. Emphasis is on problems of living rather than "mental illness." An appointment can usually be arranged within a few days and students may utilize the service (once or more) in individual, group, or couple sessions. Information communicated during meetings in Psychiatry is held in professional confidence. Psychiatry is located in 83 Cowell Hospital.

Student Advising—Pre-professional/Pre-graduate. Assistance is provided to students applying to graduate and professional schools. Students interested in careers such as dentistry, law, medicine, nursing, pharmacy, or veterinary medicine can obtain comprehensive advising in these areas and assistance with applications and letters of recommendation to the schools of their choice. Student Advising is located at 2440 Bancroft Way.

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

Student Learning Center and EOP/Affirmative Action Counseling. Located in Building T-8, the Center offers a wide range of group and individual programs that aid students in specific courses and in developing effective general learning skills. Assistance for Educational Opportunity and Affirmative Action students is provided by a staff of counselors.

Learning Center. Learning Assistants provide individual service in a variety of undergraduate courses. There are also noncredit mini-courses in reading improvement, writing, and study skills. Other group sessions include preparation for graduate and professional school exams. The Center's Library-Lab contains books on study skills, learning materials for a number of courses, and programs for improving reading, note-taking, and vocabulary.

All students are welcome; the Center gives priority to individual assistance to EOP and Affirmative Action students, athletes, and students on probation. For additional information, or to register for any of the Center's programs, see the receptionist, ground floor, Building T-8, 642-7332.

EOP/Affirmative Action Counseling. The Counseling Component is a guidance service that helps students to realize their potential and achieve academic success at Berkeley. Counselors assist students with housing, financial aid, and personal concerns. The Counseling Component is located in Building T-8, 642-7224.

Special programs offered through EOP include: (1) the Summer Bridge Program, offered to new EOP and Affirmative Action students to help orient them to the University; (2) the Student Involvement Program, designed to aid new students in their social and personal adjustment to the University; and (3) Peer Advising Services, which are available to assist EOP and Affirmative Action students with pre-enrollment, registration, course selection, and other matters.

Advisers to Foreign Students and Scholars. This office offers a wide range of services to foreign students, foreign scholars, and their families, including a foreign student orientation program, guidance on visa matters, help in solving financial problems, health care counseling, advice on personal difficulties, and information on almost any topic of special interest to foreign students and scholars. Located in International House, 2299 Piedmont Avenue, 642-2818, the Office is open Monday through Friday, 9 a.m. to 4 p.m.

The Program Office, also in International House, 642-9460, plans trips to neighboring communities, industries, and places of geographical interest, and organizes cultural events, dances, and slide shows to enrich the curricular life of foreign students and scholars and to introduce them to American institutions, customs, and families.

Child Care. The Child Care Program is available to registered students and provides care for more than 200 children between the ages of three months and nine years. Families with the lowest income are given the highest priority. Two hours weekly parent participation is required. The Fall Quarter application deadline is August 14. Late applicants are placed on a waiting list. Applications and information: 2537 Haste Street, Berkeley, CA 94720, 642-1827. Address mail inquiries to Child Care Services, 2401 Bowditch Street, Berkeley, CA 94720.

Social Security Benefits. If you have questions regarding Social Security benefits, inquire at the Office of Admissions and Records, 37 Sproul Hall.

Aid to Veterans and Dependents of Veterans. If you are a veteran, or a veteran's dependent, you may secure the appropriate forms from the Veterans Affairs Section, Office of Admissions and Records, 37 Sproul Hall, or from the Veterans Administration Regional Office; 211 Main Street, San Francisco, CA 94105. Information about application deadline dates is contained in the Veterans Affairs publication available in 120 Sproul Hall.
University Police. Police service is available at the University Police Station, 1 Sproul Hall, or by telephoning: Emergency 9-911 from campus extensions or 911 from non-campus extensions; business calls 642-6760. The emergency number should be utilized to report any occurrence requiring immediate response, including fires or ambulance service. Other services are also available from the Police Department, such as providing assistance and counseling in crime prevention and personal protection 642-3185; Rape Prevention Education and Training 642-7202; Operation Identification, engraving of personal property to protect against theft; Bicycle Bureau, located in the old Art Museum at the end of Barrows Lane, issuing California bicycle licenses and advice on bike security (10 a.m. to 2 p.m., Tuesday through Saturday); Lost and Found service located across from 1 Sproul Hall (10 a.m. to 4 p.m., Monday through Friday, telephone 642-4936). Night escort service is available if you are stranded on the campus; call 642-WALK. There are employment programs in the Department for UC students to work as Police Aides.

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 young people the opportunity to qualify for a commission as an officer in the Army, Marine Corps, Navy, or Air Force while completing their college education. Reserve Officer Training Corps (ROTC) courses are offered by three departments: Aerospace Studies (Air Force), Military Science (Army), and Naval Science (Navy and Marine Corps). The programs carry a monthly stipend in the junior and senior years, and additional financial aids are available to qualified students. Individual programs are described under Military Officers' Education Program.

Student Organizations and Activities

Student Union and Student Center. The Student Union, located on Bancroft Way at Telegraph Avenue, is a focal point of student activities and recreation. It contains lounges, meeting rooms, Pauley Ballroom, an art exhibit area, a games room, a meditation room, a check-cashing service, the University Box Office, a complete travel service, the ASUC Store (a comprehensive book, stationery, special services, poster and print sales and sundries supply store), an information center, a visitors center, bowling lanes, billiard tables, a Hair Care Center, a garage, a creative arts studio, the Bear's Lair Pub, and facilities for UC musical organizations. Operating costs of the Student Union are largely financed by revenues from ASUC enterprises and the Berkeley campus fee of $12.50 per quarter.

Eshleman Hall, the student office building located on Bancroft Way next to the Student Union, houses the elected student officers, the Personnel Office for employment with the ASUC, Senate Chambers, and many student activities.

Zellerbach Auditorium, the Dining Commons, Ludwig's Fountain, and the Lower Sproul Plaza complete the Student Center.

The ASUC. The Associated Students of the University of California is the official organization of Berkeley students. The office of the Executive Director is located in 211 Eshleman Hall. This non-profit organization, through its student-elected Senate, is responsible for directing a large variety of student activities and serves as official student spokesperson in University affairs.

The ASUC coordinates student participation in all Registration Fee Committees; it also selects undergraduate and graduate students to serve as interns in units receiving registration fee funding for the purpose of reviewing and commenting upon the use of such funding.

One of the many student activities is ushering: the University Box Office offers opportunities to students to usher at most legitimate theater, symphony, and opera performances in San Francisco and the East Bay, thus providing a way for University students to enjoy first-class entertainment at practically no cost. Another activity of the ASUC is the campus radio station, KALX-FM. In addition to its facilities in the Student Union complex, the ASUC owns and operates Cal Ski Lodge at Norden, California, and operates a bicycle parking lot at Moffitt Library on campus.

The Community Projects Office (CPO). This office, located in 305 Eshleman Hall, serves as the ASUC's resource agency for the development of new student initiated projects. If you are interested in starting a new student project or doing volunteer work of any type, the CPO provides orientation programs and information on various projects administered by CPO. A small foundation library is also kept in the CPO for references on funding sources, project administration, and contacts for proposal writing. The CPO also works with various campus and outside agencies that provide similar services. The CPO has information for those students interested in starting projects to better serve the community. The CPO employs part-time students and often utilizes volunteers. For these students, the CPO provides a meaningful and relevant link to the community while providing them an opportunity to share their learning experiences with the campus and community peers.

SUPERB Productions. The Student Union Program, Entertainment, and Recreation Board, located in Eshleman Hall, is responsible for developing and implementing an activities program for the ASUC to satisfy the cultural, educational, recreational, and social needs of the campus. Programs and activities planned include concerts, speakers, dances, exhibits, coffee hours, recreational exhibitions, cabarets, drama, movies, and art festivals, and special presentations, including noon concerts in the Student Union Plaza each week open free to the general public.

CalPIRG. The California Public Interest Research Group (CalPIRG) is an in-
dependent, nonprofit corporation established by UC Berkeley students for research and advocacy of contemporary public issues. Students propose and conduct CalPIRG projects with the aid of professional staff, and policy is set by a nonpartisan student board of directors. The CalPIRG office is at 2490 Channing Way, Suite 219, 642-9952.

**Student Publications.** Several student publications provide opportunities for activities in all phases of publishing: writing, editing, reporting, art and design, advertising, sales, and general management. Interested students should inquire at 18 or 300 Eshleman Hall.

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

Academic and professional societies, including clubs organized by many of the schools and departments, as well as national professional fraternities, provide students with an opportunity for seminars, discussions, lectures, tutoring services (both giving and receiving), and communication with members of an academic or professional field. Honorary academic societies are open to students of outstanding scholastic ability. These groups include: Honor Students’ Society; Phi Beta Kappa (a national society of historical renown, open by invitation to the top seniors in nonprofessional fields); Tau Beta Pi (a national society of upper division students in the College of Engineering and in Chemical Engineering); and various other groups within the several disciplines. Most of these groups offer tutoring services.

Hobby and recreational groups abound. While the University, as a state-supported institution, does not offer chapel services or religious activity on campus, there are more than 35 churches and student religious clubs located within a few blocks of the campus. For additional information, contact the Office of Student Activities and Programs, 103 Sproul Hall.

**Graduate Assembly.** The Graduate Assembly is the student governance organization primarily concerned with matters pertaining to graduate students. Graduate departments and interdisciplinary group programs send representatives (one per department or group plus one additional representative for each 100 graduate students) to the Assembly meetings which are held monthly during the academic year. The Assembly nominates graduate student members to Committees of the ASUC and the Academic Senate and to advisory committees to the Chancellor. An Assembly officer sits on the Universitywide Student Body Presidents’ Council, which makes policy for the UC Student Lobby.

Members of the Assembly are organized into working committees, supported by Assembly staff, to concentrate on areas of interest. These committees have been concerned with such matters as academic advising, time to degree for doctoral programs, training for Teaching Assistants, affirmative action issues and reports, library facilities, job placement, housing, graduate student orientation, and the quality of masters and doctoral programs.

The Assembly publishes *The Berkeley Graduate*, a graduate student newspaper, and makes funds available to departmental organizations for educational activities through its Departmental Funding program and Educational Improvement Grant program. Funding for a variety of graduate student activities is also available through the Assembly’s Projects and Services program. The Assembly invites graduate students to use the Commons Lounge in 442 Stephens Hall; Assembly offices are located in Anthony Hall (Pelican Building), 642-2175 and 642-2307.

**The California Alumni Association.** More than 90,000 former students are members of the Association in order to keep in contact with Berkeley and work for the continued welfare of the University and its student body. The Association administers the Alumni Scholarship program, which annually awards more than $125,000 to some 600 undergraduates. The Association sponsors the quarterly career workshops and maintains a file of Career Information Aids available for individual consultation with students. It offers free income tax counseling for students and presents orientation programs for new and prospective students and their parents.

Among the many benefits enjoyed by Association members is the award-winning publication, *California Monthly*; free UC library privileges; access to the Lair of the Bear vacation center and to the summer “Berkeley Experience” program on campus; year-round alumni travel programs; and discounts on selected University Press books. The Association recognizes distinguished alumni achievement and outstanding service to the University, its alumni, and the community, and sponsors the Distinguished Teaching Awards for faculty. The alumni records department is the official campus office maintaining address information of former Berkeley students. Alumni Clubs help members stay in close touch with the University and with one another. Information on all Association activities, including young alumni and club programs, and alumni events on Charter Day and Commencement, is available at the Association’s campus headquarters, Alumni House, where students and alumni are always welcome.
Science is an essentially anarchistic enterprise: theoretical anarchism is more humanitarian and more likely to encourage progress than its law-and-order alternatives. This is shown both by an examination of historical episodes and by an abstract analysis of the relation between ideas and action. The only principle that does not inhibit progress is: anything goes.

Proliferation of theories is beneficial for science, while uniformity impairs its critical power. Uniformity also endangers the free development of the individual. There is no idea, however ancient and absurd, that is not capable of improving our knowledge.

Paul K. Feyerabend
Professor of Philosophy
Humanities Research Fellow

Hearst Memorial Mining Building, designed by John Galen Howard, was completed in 1907. A magnificent steel and granite neo-classic structure, it features six torsles of human figures jutting from the front of the building. The sculptures give the effect of supporting the weight of the building on their shoulders.