

C. S. Smith

UNIVERSITY OF CALIFORNIA AT IRVINE
INITIAL BULLETIN / 1965-66 CATALOGUE



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On June 20, 1964, dedication ceremonies were held on the site of a completely new campus of the University of California—the University of California at Irvine. The event was distinguished by the participation of the President of the United States and the Governor of California, whose presence and words demonstrated the importance attached to higher education today by our society.

Irvine will enroll its first students in September, 1965. These "pioneers" will have an opportunity to share in the exciting beginning of a great new University campus, located in a part of the State that is growing rapidly in population and in economic importance. The Irvine campus will be the focus for this region, serving many of its needs, and influencing its development.

The University of California, Irvine, like the other campuses of the University, will be "a place where all the experience of past generations, so far as it is of record, and all that is known of the

laws of nature, shall be at command for the benefit of this generation and those who come after us...here shall be heard the voices of the wisest thinkers...here shall be seen the example of the most diligent students in every department of science...

here shall be brought together the books of every nation, and those who can read them; the collections from all the kingdoms of nature, and those who can interpret them; the instruments of research and analysis, and those who can employ them."

These words, taken from the inaugural address of an early President of the University, Daniel Coit Gilman, proved an accurate prophecy of a bright future for the infant University of California; I am sure they will prove equally prophetic for the new Irvine campus of the University.

CLARK KERR

President of the University

Even while the permanent buildings were still on the drawing boards, a group of experienced scholars, representing many fields of learning and drawn from many institutions, began to meet in the interim headquarters of the University of California, Irvine. These men had and continue to have an exciting responsibility—to guarantee that when the University begins its first day of instruction in September of 1965, there will be available to the students a program of the quality and comprehensiveness long the hallmark of the University of California. They are building on nearly a century of accumulated wisdom in the University, and they are profiting as well from the experiences of universities throughout the world.

As part of the University of California, the Irvine campus will have the same standards of admission and performance for its students, the same standards for teaching, research, and creative activity for its faculty, as the other campuses of the University. But faculty and students will have an unusual opportunity to develop new programs, to explore new organizational arrangements, and to participate in new approaches to and techniques for learning.

What follows here is the first detailed statement of the initial program of the University of California, Irvine.

DANIEL G. ALDRICH, JR.

Chancellor

CALENDAR 1965 / 1966

FALL QUARTER / 1965

Fall Quarter Begins	September 27
New Student Orientation	September 27-28
Registration	September 28
Enrollment in Classes	September 29-October 1
Instruction Begins	October 4
UCI Conclave	October 27
Thanksgiving Holiday	November 25-26
Instruction Ends	December 11
Examinations Begin	December 13
Fall Quarter Ends	December 18

WINTER QUARTER / 1966

Winter Quarter Begins	January 3
New Student Orientation	January 3-4
Registration	January 5
Enrollment in Classes	January 6-7
Instruction Begins	January 10
UCI Conclave	January 27-28
Washington's Birthday—Holiday	February 22
Instruction Ends	March 19
Examinations Begin	March 21
Winter Quarter Ends	March 26

SPRING QUARTER / 1966

Spring Quarter Begins	April 1
New Student Orientation	April 1, 4
Registration	April 4
Enrollment in Classes	April 5-6
Instruction Begins	April 7
Good Friday—Holiday	April 8
UCI Conclave	April 27
Memorial Day—Holiday	May 30
Instruction Ends	June 15
Examinations Begin	June 16
Spring Quarter Ends	June 22

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UC IRVINE - 1965-1966

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The faculty of the University of California, Irvine, believes that education is a continuing process, not the simple product of any particular number of years of formal work, and that a university fulfills its purpose when its students learn how to learn. The faculty recognizes that its own intention to help students learn cannot be achieved unless the student understands that the primary responsibility for learning is his own. Since the student has that primary responsibility, his time is precious, and the faculty must make certain that it is not squandered.

It follows from these assumptions that the academic program should include only such curricula as can be most effectively offered in a university environment or are necessary to the student's pursuit of a liberal education. It follows also that academic progress should be thought of not merely, or even necessarily, in terms of courses taken but in terms of the acquisition of competence and knowledge and the growth of intellectual ability and creative power. The faculty, therefore, has adopted the principle that credit for many courses can be achieved by means other than the actual taking of the formal course.

Further, by refusing to stipulate a large and complex system of university and college requirements, the faculty has indicated

that it envisages many possible avenues by which the student may reach the proper goals. The faculty is prepared, in its advisory capacity, to aid each student individually in avoiding the

extremes of narrow specialization and superficial generalization and in planning a coherent program with maximum opportunity for independent study. It encourages the student to use whatever is the most stimulating and efficient means of instruction and whatever resource is best suited to the subject under study and to his own ability.

In 1965-66, instruction in the basic disciplines will be provided by the College of Arts, Letters, and Science and by the Graduate Division. The first two professional schools on the Irvine campus will be the School of Engineering, beginning instruction in 1965-66, and the Graduate School of Administration, which will offer a program in 1966-67.

THE
ACADEMIC
PLAN

1

The College of Arts, Letters, and Science

The College is composed of the Divisions of Biological Sciences, Fine Arts, Humanities, Social Sciences, and Physical Sciences. Programs of the College are designed to develop the qualities long associated with a liberally educated man. In keeping with the assumption that breadth as well as depth deserves to be emphasized, the College faculty will direct students toward proficiency in the basic skills of scholarship and will help students to acquire knowledge in more than a single discipline as well as to engage in concentrated study of some specific area of human understanding. The faculty assumes that, for many students, a liberal education is the best professional preparation, especially for those who anticipate careers requiring advanced, professional, or graduate study. Students entering the College in 1965 will be able to undertake studies preparing them for graduate work in biological sciences, physical sciences, fine arts, humanities, or social sciences. Students may also prepare for admission to professional schools such as law, medicine, dentistry, engineering, journalism, business administration, nursing, agriculture, or veterinary medicine; or for careers in many aspects of business, teaching, or public affairs.

The Initial Instructional Program

In 1965-66 the College will provide instruction in:

ANTHROPOLOGY
ART
BIOLOGICAL SCIENCES
CHEMISTRY
COMPARATIVE LITERATURE
CREATIVE WRITING
DANCE
DRAMA
ECONOMICS
ENGLISH LANGUAGE & LITERATURE
FRENCH LANGUAGE & LITERATURE
GEOGRAPHY
GERMAN LANGUAGE & LITERATURE
HISTORY
INFORMATION & COMMUNICATION SCIENCES
MATHEMATICS
MOLECULAR & CELL BIOLOGY
MUSIC
ORGANISMIC BIOLOGY
PHILOSOPHY
PHYSICAL EDUCATION
PHYSICS
POLITICAL SCIENCE
POPULATION & ENVIRONMENTAL BIOLOGY
PSYCHOBIOLOGY
PSYCHOLOGY

RUSSIAN LANGUAGE & LITERATURE
SOCIAL PSYCHOLOGY
SOCIAL SCIENCES
SOCIOLOGY
SPANISH LANGUAGE & LITERATURE

Freshmen, sophomores, and juniors entering in 1965-66 will have an opportunity to obtain baccalaureates with the following areas of concentration:

ANTHROPOLOGY	GEOGRAPHY
ART	GERMAN
BIOLOGICAL SCIENCES	HISTORY
CHEMISTRY	MATHEMATICS
COMPARATIVE LITERATURE	MUSIC
DANCE	PHILOSOPHY
DRAMA	PHYSICS
ECONOMICS	POLITICAL SCIENCE
ENGLISH	PSYCHOLOGY
FINE ARTS	SOCIAL SCIENCES
FRENCH	SOCIOLOGY
	SPANISH

Requirements for the Baccalaureate

The faculty will expect each student to demonstrate by course work, by examination, or by other means established by the faculty that he has met the requirements of the University, of the College, and of the division and department or interdepartmental program to which he belongs.

The requirements for the baccalaureate are as follows:

UNIVERSITY REQUIREMENTS/

1. ENGLISH:

A score of at least 600 on the College Entrance Examination Board Achievement Test in English,
 OR passage of the "Subject A" examination by the University,
 OR successful completion of the noncredit course in English composition (Subject A), for which a fee of \$35.00 is charged,
 OR successful completion of equivalent course work elsewhere.

2. AMERICAN HISTORY AND INSTITUTIONS:

Passage of an examination in the subject,
 OR presentation of a certificate of completion of the requirement at another California institution.

COLLEGE REQUIREMENTS/

1. Three courses in each of two divisions other than the division of concentration and six courses in a third division other than the division of concentration.

2. Credit for 45 courses, earned by examination, by other evaluation, or by course work, of which 21 must be at the junior-senior level.
3. A grade average of at least C.
4. Credit, earned in residence on the Irvine campus, for the last three quarters of work immediately preceding graduation.

DIVISIONAL, DEPARTMENTAL, AND INTERDEPARTMENTAL REQUIREMENTS /

As soon as he has determined the area of his concentration, and not later than the beginning of the junior year, the student should enter one of the five Divisions of the College, having made certain that he has the background and preparation necessary to accomplish junior and senior work in that Division. Each Division specifies graduation requirements in addition to those specified by the University and the College. Prerequisites for work in each Division and the departmental and divisional graduation requirements are listed below:

- **THE DIVISION OF BIOLOGICAL SCIENCES**/One year of introductory biology; *Biological Sciences* 101, 102, 103, 104, 105, 106; one year of college-level physics; mathematics through differential and integral calculus; chemistry through organic chemistry.
- **THE DIVISION OF FINE ARTS/Art**: One course in the nature of art; one year's work in visual fundamentals; one year's work in the history and theory of art; seven junior-senior courses, including one studio tutorial; six junior-senior courses in the history and criticism of art; three courses in fine arts outside of the departmental major; and a senior comprehensive examination or a one-man final exhibit.

Dance: Four years' studio work in ballet and contemporary dance, including one studio tutorial; dance notation; one course in theories of dance; two courses in acting; four junior-senior courses in the theory and history of dance, including 120A, 120B, 120C; three junior-senior courses in choreography; and participation in at least two performances a year.

Drama: One year's work in the development of dramatic art; one course in acting; one course in scene design; one course in costume design; two courses in dance; six junior-senior studio courses, including one studio tutorial; five junior-senior courses in the history and criticism of drama; two courses in fine arts outside of the departmental major; and participation in at least two productions a year.

Music: Two years' work in theory; one year's work in the history and literature of music; one year's work in counterpoint;

one year's work in form and analysis; three junior-senior courses in the history and criticism of music; one studio tutorial; command of piano; three courses in fine arts outside of the departmental major; participation in the chorus, or the orchestra, or in chamber music each year; and a senior recital.

Fine Arts (interdisciplinary major): Any two of the following programs plus three junior-senior studio courses and participation in productions, concerts, or exhibits.

Art: One year's work in visual fundamentals; one year's work in the history and theory of art; three junior-senior courses.

Dance: One year's studio work in ballet; one year's studio work in contemporary dance; two courses in the history and criticism of dance; three junior-senior courses.

Drama: One year's work in the development of dramatic art; one course in acting; one course in scene design; one course in costume design; three junior-senior courses.

Music: Command of piano; one year's work in theory; one year's work in the history and literature of music; three junior-senior courses.

■ **THE DIVISION OF HUMANITIES/*Divisional Requirements:*** *English* 5, 10, 15, or the equivalent; competence equivalent to two years of college work in a single foreign language; three courses in history; two courses in philosophy.

Departmental Requirements:

Comparative Literature: *English* 100 plus about six courses in English or drama of which four should be at the junior-senior level; study of a foreign language and literature through the senior year; *Comparative Literature* 189 (the senior seminar); the senior comprehensive examination.

English: *English* 100 (taken twice) plus about seven courses in English or drama of which five should be at the junior-senior level (for those emphasizing the art of writing program, eight courses in English, including writing, as advised); one course in the literature of a foreign language; *English* 189 (the senior seminar) or *Wr* 125 (the senior workshop in writing); the senior comprehensive examination in literary history.

Foreign Languages and Literatures: Two courses in composition and grammar; one course in phonetics; nine courses in literature of which six must be at the junior-senior level; one course in linguistics; the senior comprehensive examination.

History: One year of general European History, normally 10A-10B-10C; one year of American History, normally 50A-50B-50C; one year of Asian History; one course in

historiography; five courses in history on the junior-senior level; the senior seminar in history; the senior comprehensive examination in history.

Philosophy: History of Philosophy 20, 21, 22 and six junior-senior courses including metaphysics and epistemology.

- **THE DIVISION OF PHYSICAL SCIENCES/Chemistry:** One year of general chemistry and ten more advanced courses, including *Chemistry* 51C, 131C, and 151 or the equivalent; 12 courses in mathematics, physics, or the biological sciences, including at least one year of calculus and one year of college-level physics; a reading comprehension of scientific material in Russian, German, or French.

Mathematics: Nine courses of junior-senior level mathematics; a reading comprehension of scientific material in Russian, German, or French.

Physics: 5A, 5B, 5C, 5D, 5E, and eight courses in physics numbered between 110 and 190, including two quarters of advanced laboratory; *Mathematics* 2ABC, 3ABC, and 100; *Chemistry* 1A-1B-1C; knowledge of Russian, German, or French equivalent to that gained in 6 quarters of instruction. *Recommended:* *Biology* 1; *Mathematics* 143; knowledge of a second foreign language, as above.

- **THE DIVISION OF SOCIAL SCIENCES/** Divisional requirements are stated generally in terms of knowledge possessed rather than courses taken. In planning his program, however, the student may find it useful to think in terms of three clusters of work:

Freshman-Sophomore Work: *Social Sciences* 1A, 1B, 1C, and three courses chosen from the following: *Anthropology* 1, *Economics* 1, *Geography* 1, *Political Science* 1, *Psychology* 1, and *Sociology* 1.

Junior-Senior Work: Satisfactory performance on the Junior Examination (a three-course sequence in the field of concentration—the 100A-100B-100C sequence—is the normal method of preparation) and two senior research papers in the area of concentration (a three-course sequence—the 190A-190B-190C sequence—is the normal method of preparation).

Quantitative Methods: Six courses in mathematics; three courses in probability and statistics; one course in computer science. (A special intensive six-course program is available to transfer students who have not had at least the equivalent of three courses in mathematics at the college level.)

Proficiency in English & Foreign Languages

There are no College requirements in English composition for all students at UCI (though it is required by some divisions), but ability to write well is a basic requirement for all course work. Students who are reasonably competent in the use of English would profit from additional study with the aim of further improving their writing. Students who transfer elsewhere from UCI should have taken English composition, since formal instruction in this subject is a graduation requirement of almost all universities.

There are no College requirements in foreign languages for all students at UCI (though it is required by some divisions), but the ability to read French, German, or Russian is a requirement of most graduate schools. Students who transfer elsewhere from UCI should have included a foreign language in their programs, since knowledge of a foreign language equivalent to two years of college-level work is a requirement for the baccalaureate in almost all colleges of arts, letters, and science, including those of the other campuses of the University of California. Furthermore, mastery of a foreign language is in itself an important goal.

Credit & Scholarship

COURSES AND CREDIT: The amount of a student's work is judged in terms of courses. However, since emphasis at Irvine is upon the acquisition of knowledge and skills rather than the taking of formal course work, fulfillment of a requirement stated in terms of courses should be construed to mean acquisition of the knowledge and skills equivalent to those ordinarily acquired in a formal course. Credit for many courses may be obtained by examination. For a list of such courses in each Division the student should consult the office of the Dean. Transfer students may, in general, determine the equivalence of work done elsewhere by equating one course at UCI with four quarter units of credit, and by considering three courses at UCI equivalent, in respect to credit, to two courses at an institution which operates on the semester system.

ADVANCED PLACEMENT AND PROFICIENCY EXAMINATIONS: Except for certain studio, seminar, and other such special experiences, students may obtain credit for most courses by special examination. At the time of admission to the University, advanced standing credit will be given for passage with a grade of 5, 4, or 3 of a College Entrance Board Advanced Placement Test. Advanced Placement Test credit may be used to fulfill requirements of the College of Arts, Letters, and Science.

TRANSFER CREDIT: Students who transfer from a four-year institution, and who have met the general breadth requirements of that institution, will be considered to have met the College requirements at UCI. Students who transfer from a junior college and have met

the general breadth requirements of any campus of the University of California, will be considered to have met the College requirements at UCI. Students who, upon transfer, have not completed these breadth requirements may elect to complete those in progress at the institution from which they transfer or those at UCI.

SCHOLARSHIP GRADES: Quality of scholarship is reported in one of the following scholarship grades: A, excellent; B, good; C, fair; D, barely passing; F, not passing; I (incomplete), undetermined; P (see below), pass. Grade points are assigned as follows: A = 4, B = 3, C = 2, D = 1, F = 0, Incomplete = none, P = none. All grades except Incomplete are final when filed by an instructor on his course report at the end of the quarter. The grade of Incomplete may be assigned when a student's work is incomplete because of circumstances beyond his control. To replace this grade a student must undertake an examination equivalent to the final examination, or must complete some required assignment, but not the entire course. When this grade is thus converted to a passing grade, the student receives course credit and appropriate grade points. An incomplete grade must be made up before the end of the student's next quarter in residence.

THE PASS-FAIL OPTION: In order to encourage students to venture into courses when they might otherwise hesitate because they are uncertain about their aptitude or preparation, students are allowed to enroll in certain courses, principally in areas beyond their own area of concentration, on a pass-fail basis. A decision so to enroll must be made at the beginning of the course and cannot be altered. A student who fails such a course will have the failure recorded, and it will be counted as would a failure in any other course. A student who makes a grade of "D" or better will have the grade recorded as "P." He will receive credit, but the grade will not be included in determining his academic average.

MINIMUM SCHOLARSHIP REQUIREMENTS: An undergraduate student who makes less than a C average may be placed on probation and in the following quarter may be dismissed if he fails to achieve an overall C average. He may also be dismissed if, in any quarter, his scholarship falls substantially below a C average. For details see the Student Handbook, to be published in the fall.

NORMAL PROGRAM: A student normally carries four courses each quarter. He may carry three. If he wishes to carry fewer than three or more than five, he will need the permission of his advisor.

Advisor & Dean

Each student will be assigned an advisor and an academic dean. Students who express a preference will be assigned an advisor from a particular division, and his dean will be the dean of that division. Once assigned to an advisor and to a dean, the student

will remain with that advisor and in that division unless he requests reassignment (for example, if he changes his field of interest). The student is encouraged to consult his advisor—or any member of the faculty. He must see his advisor prior to registration. However, the advisor does not dictate. The student, not the advisor, is responsible for meeting requirements and remaining in good academic standing.

The dean of the division to which a student is assigned has authority over the student's academic program. A student who wishes to drop or add a course, seeks a waiver of a graduation requirement, or has other questions relating to his academic progress, should see the dean of the division to which he has been assigned.

Freshmen and sophomores intending to enter the School of Engineering will be assigned advisors from the faculty of that School, but until admitted to it they will remain, in respect to academic matters, subject to the jurisdiction of one of the deans of the College of Arts, Letters, and Sciences.

A period will be set aside during each quarter when other campus activities are suspended and the entire student and faculty body meet for several days to consider matters of contemporary intellectual importance. Each conclave

UC/I CONCLAVE

will involve a series of formal presentations devoted to a single major problem, focusing upon it

the resources of varied disciplines. It is anticipated that members of the University will share in these conclaves during their entire stay at UCI, and that these meetings will offer exceptional opportunities for discussion among students and faculty.

THE FACULTY

- GILBERT W. BANE, JR., *Assistant Professor of Biological Sciences.*
- ARTHUR S. BOUGHEY, *Professor of Biological Sciences and Chairman of the Department of Population and Environmental Biology.*
- RICHARD D. CAMPBELL, *Assistant Professor of Biological Sciences.*
- RALPH W. GERARD, *Professor of Biological Sciences, Dean of the Graduate Division, and Director of Special Studies.*
- LELAND H. HARTWELL, *Assistant Professor of Biochemistry.*
- JOHN J. HOLLAND, *Professor of Microbiology and Chairman of the Department of Molecular and Cell Biology.*
- DONALD R. KAPLAN, *Assistant Professor of Biological Sciences.*
- STUART M. KRASSNER, *Assistant Professor of Biological Sciences.*
- JAMES L. MCGAUGH, *Associate Professor of Psychobiology and Chairman of the Department of Psychobiology.*
- CALVIN S. MC LAUGHLIN, *Assistant Professor of Biochemistry.*
- EDWARD A. STEINHAUS, *Professor of Biological Sciences and Dean of Biological Sciences.*
- GROVER C. STEPHENS, *Professor of Biological Sciences and Chairman of the Department of Organismic Biology.*
- NORMAN M. WEINBERGER, *Assistant Professor of Psychobiology.*
- RICHARD E. WHALEN, *Assistant Professor of Psychobiology.*
- ROBERT H. WHITTAKER, *Professor of Biological Sciences.*
- CLIFFORD A. WOOLFOLK, *Assistant Professor of Microbiology.*
- DANIEL L. WULFF, *Assistant Professor of Biochemistry.*

The Division of Biological Sciences reflects the "new biology" in both its curriculum and its research program. The faculty, the methods of teaching, the content of courses, and the facilities are dedicated to providing each student with the opportunity to avail himself of the ever-increasing knowledge of the facts and principles of biology. At both the graduate and undergraduate levels traditional administrative rigidity has been relaxed in order to maintain continuing interaction between classroom education and research, between departments and individuals. The curriculum, both undergraduate and graduate, is characterized by the greatest flexibility in meeting the present needs not only of the biology major but also of students in other disciplines. The major in biological sciences should understand the tremendous impact biology is now exerting upon matters of public policy and society in general and the importance of society's reaction to these discoveries. He should, therefore, avail himself of the broad opportunities allowed by the curriculum to study in other Divisions of the College. By the same token, students in other disciplines should realize that a knowledge of the basic principles of the life sciences is necessary for a proper understanding of the world in which they live. The impact of the biological sciences upon human affairs during the coming years is certain to be very great. It is important to the future welfare of mankind that educated men and women appreciate the contributions of the biological sciences to man's intellectual development, material progress, and ethical and aesthetic senses.

The rapid increase, turnover, and overlapping of information in the biological sciences since mid-century make it futile to define distinctly a specific body of biological knowledge. For this reason, and because of the current revolution in the organization and realignment of the numerous biological sciences, UCI's pedagogical approach and departmental organization recognizes several levels of biology and those well-established themes which give biology its pattern, texture, and unifying concepts. The levels include molecules, subcellular organelles, cells, tissues, organs, organ systems, organisms, populations, communities, ecosystems, and the bio-

THE DIVISION OF
BIOLOGICAL
SCIENCES



sphere. They are reflected in the Division's departmental organization: Molecular and Cell Biology, Organismic Biology, Population and Environmental Biology, and, in addition to these, Psychobiology, which is concerned with the biological significance and bases of behavior. Psychobiology is set apart primarily to give it an integrity of its own and to distinguish it from social and clinical psychology. The themes weaving through these levels include evolution and genetic continuity, regulation and homeostasis, adaptations, complementarity of structure and function, complementarity of organism and environment, and others. These themes unify the fields of biology—in the past all too rigidly separated and grouped according to whether their subject matters were animals, plants, or microorganisms.

Undergraduate Program

Both the major and nonmajor should consider biology as an integrated whole. Neither student should be subjected to beginning courses in each of the numerous branches or subdivisions of biology. Instead, he should gain a solid overview of unifying concepts. This is doubly important in the case of the biology major who intends later to specialize in a particular area or branch of biology. The Division offers a three-year core of courses for all biology students regardless of subsequent graduate specialization, whether it be in biological sciences, teaching, medicine, agriculture, or some other field. The Division is vitally concerned that its offerings be readily available to students in any and all disciplines. The first year of the core is designed with the nonmajor, as well as the major, in mind, and every effort is made to make biology meaningful to the student majoring in another discipline.

At the undergraduate level there is a minimum of departmentalization. The core courses are taught by teams of instructors from the several departments, each dealing with an area of his particular skill and interest, with no attempt to delimit instruction artificially on the basis of a particular instructor's special interest. The introductory course is taught by a cadre of at least four instructors representing the four departmental areas. The biology major begins study with the same introductory year of courses (1A-1B-1C) as that taken by the nonmajor. (The nonmajor may take courses 1A-1B-1C at any time; the major usually takes them in his sophomore year.) Any one of the three quarters of the introductory year, or all three quarters, may be omitted if the student can pass an appropriate comprehensive examination. The major should begin as soon as possible to fulfill his requirements in the physical sciences and mathematics. He should carefully select and begin to complete his requirements in the other divisions.

The core curriculum continues in the junior year in a progressive "spiral" fashion to include molecular biology and biochemistry

through cell biology; tissue, organ, and organismic biology; psychobiology; population, community, and environmental biology. The courses are characterized by a sequential ordering of content with greater emphasis on the unity—and less on the diversity—among living organisms than has been the case in the past. While the core curriculum is administered by the Division with the cooperation of the several departments, undergraduate special subject matter courses (primarily on the junior-senior level), service courses, or other satellite courses may be offered and administered by the departments.

TRANSFER STUDENTS: Students who transfer to the Division from other accredited institutions will be given credit for the work they have done elsewhere. Wherever they have the opportunity, students intending to transfer are advised to elect the more broadly based biological courses and to postpone specialization within biology until their junior and senior years.

MEDICINE AND DENTISTRY / PREPROFESSIONAL TRAINING: A student who plans to enter a school of medicine or dentistry may receive his required preprofessional training on the Irvine campus. This preprofessional training may be accomplished by (a) completing the professional major (i.e., the core curriculum) in biological sciences, or (b) majoring in any division or department but fulfilling concurrently the specific course requirements of the medical or dental school he expects to attend. A few schools make specific additional requirements; a student should, therefore, check early with the professional school he seeks to enter.

More than 90 percent of the students admitted to medical schools in the United States have attained the A.B. or B.S. degree, and a large percentage of those admitted to dental schools have had three or more years of undergraduate work—this despite the fact that technically it is possible under the regulations of the American Medical Association and the American Dental Association for a school to admit students who have had as few as two years premedical or predental training. Leaders in medical and dental education urge prospective students to arrange their programs so that they will obtain a liberal education, since the humanities and social sciences are not offered by the professional schools. They, therefore, recommend that students preparing to seek admission to medical or dental school plan to obtain a Bachelor's degree. Rather than require their students to have taken specific premedical courses, many medical and dental schools now prefer that their students come to them having the type of training in the biological sciences (with prerequisites in physical sciences, social sciences, and humanities) offered at Irvine.

NECESSARY COMPETENCE: Ability to write reports and to read with comprehension are essential for successful work in biology.

Students who lack these skills are strongly advised to take whatever formal instruction is necessary to improve. Ability to read the literature of science in French, German, and Russian is desirable; and for students intending to do graduate work, mastery of two of these languages is essential.

For students who wish to specialize in molecular biology, courses in physical chemistry are desirable.

Graduate Programs

Graduate instruction is under the immediate jurisdiction of the several departments in the Division. (See the curriculum of each department for course listings.) The student selects one of these departments in which to major, but he may take courses in any one or all of the departments and confer freely with any professor in any department.

Scholarship requirements for students entering the graduate program in Biological Sciences at UCI conform to those established by the Graduate Council of the Academic Senate and to those of the University in general. Approval by the staff members of the department concerned, following careful review of the grades, letters of recommendation, and other qualifications of the applicant, is also required.

A two-man committee is assigned to each student upon entrance. This committee, in consultation with the student, will outline a program of study. In the course of the first two years, the student will seek out his area of interest and commence some research activity. The staff member with whom the research is being done will join the committee and assume the major responsibility for further guidance. He will take on the role of the student's prospective major professor.

At the appropriate time, the student's formal doctoral committee will assume guidance for the remainder of the work.

THE MASTER OF ARTS IN BIOLOGICAL SCIENCES

PLAN I: THESIS PLAN

1. A reading knowledge of one foreign language (German, French, or Russian).
2. Seven approved courses, (i.e., graduate and junior-senior undergraduate courses, including a minimum of five regular nonresearch courses).
- *3. A thesis.

PLAN II: COMPREHENSIVE EXAMINATION PLAN

1. A reading knowledge of one foreign language (German, French, or Russian).
2. A minimum of nine courses of graduate and junior-senior undergraduate courses, of which at least five must be in the 200 series courses in the specialization or major.

3. A comprehensive final examination in the major subject, its kind and conduct to be determined by the department concerned.

THE DOCTOR OF PHILOSOPHY IN BIOLOGICAL SCIENCES

A student may pursue the Ph.D. directly without first attaining the M.A. The language requirement will normally be satisfied by examining the student with regard to his reading proficiency in two foreign languages (usually French, German, or Russian), or as to his ability to both read and speak one appropriate foreign language. Ordinarily, not later than the second year of residence, the student will be required to take a single written or oral test. This test constitutes the first part of his qualifying examination. If he passes this test, then shortly afterward (usually within the same or the succeeding quarter) he is given the second part of his qualifying examination by his doctoral committee. If this examination is passed and the student admitted to candidacy, he may formally commence his dissertation research. Normally, it is expected that by this time some of his research would be underway. After presentation of the dissertation, the candidate is subject to an oral examination in defense of the dissertation.

The qualifying examination is given at two levels of competence. The first level will contain questions which all students are expected to answer and will test their broad knowledge of the unifying aspects of biology. The content of the second level examination will vary with the student's field of interest or specialization.

FIRST LEVEL OF COMPETENCE

Students are tested on their knowledge of those phenomena common to all living organisms as well as those unifying fields which deal with aggregates of living organisms. Specifically, broad knowledge of the following fields is required: biochemistry, cytology, genetics, morphology, physiology, psychobiology, ecology, and evolution. The level of performance demanded is that between a UCI graduate (B.A.) in Biological Sciences and a Ph.D. candidate who has one of these fields as his special area of concentration. For instance, two students, one interested in ecology and the other in genetics, will be expected to answer questions in each other's field at a level of sophistication beyond that of a Biological Sciences senior, but not with sophistication and depth required of each in his own field in the second part of the examination.

SECOND LEVEL OF COMPETENCE

Here the student is questioned within the field or fields of his special interest. As already indicated, there is not a fixed set of fields from which the student makes a choice. Rather the field or fields in which a student is tested are based upon the particular student's interests. For example, a student might be examined in

one of the following fields or combinations of fields:

Behavior	Biochemistry	Cell Biology
Comparative Physiology		Developmental Biology
Ecology	Environmental Biology	Evolution
Genetics	Invertebrate Biology	
Microbiology	Neurophysiology	Parasitology
Pathobiology		Plant Morphogenesis
Population Genetics	Psychobiology	Systematics and Taxonomy
		Virology

The questions are designed to test both the student's general knowledge over the extent of his field or fields and detailed knowledge of his special interest within the area.

Courses of Study

HONORS PROGRAM: All honors students majoring in biological sciences are eligible to enroll in the Honors Program. Students enrolled in the program must take at least two quarters of honors courses (197H and/or 198H), and must pass an oral examination at the end of their last quarter. Graduation with honors may be recommended for those who maintain their standing as honors students throughout their last two years, satisfactorily complete the honors courses, and pass the comprehensive examination. The Honors Program advisor will help plan each honor student's Honors Program individually, and the advisor's approval of his program will be required. Students interested in enrolling in the program should consult the Honors Program advisor.

THE UNDERGRADUATE CORE CURRICULUM

- 1A-1B-1C Introductory General Biology** (1-1-1) fall, winter, spring
 Lectures and laboratory. Prerequisite for majors: *Chemistry* 1A, 1B; *Mathematics* (calculus). No prerequisites for nonmajors. May be taken by nonmajors (freshmen through seniors) as well as majors in the biological sciences. Designed as terminal course for nonmajors. Introduction to the Core for majors.
- 2 Introductory Seminar in General Biology** (1) spring
 Not a part of the core, Prerequisites: 1A and 1B, current enrollment in *Biological Sciences* 1C; or passing with a grade of B or better of a special examination in biological sciences. Enrollment by invitation only.
- 101 Organismic Biology** (Structure and Function) (1) fall
 Lectures and laboratory. Prerequisite: 1A, B, C, or equivalents.
- 102 Cell Biology** (1) winter
 Lectures and laboratory. Prerequisite: 101 or equivalent; physics.
- 103 Organismic Biology** (Growth and Development) (1) spring
 Lectures and laboratory. Prerequisite: 102.
- 104 Psychobiology** (1) fall
 Lectures and laboratory. Prerequisite: 103; statistics.

- 105 *Population and Environmental Biology* (1) winter
Lectures and laboratory. Prerequisites: 104; organic chemistry and, if possible, physical chemistry.
- 106 *Molecular Biology* (Microbiology and Virology) (1) spring
Lectures and laboratory. Prerequisite: 105.
- 197H *Special Study for Honors Students* (1) fall, winter, spring
Limited to honors students.
- 198H *Honors Thesis* (1) fall, winter, spring
Prerequisite: 197H.
- 199 *Review of Selected Research Topics* (1) winter, spring
Preparation of a term paper. Group instruction in bibliographic procedures and organization of a review article. Normally taken at the end of the senior year.

■ *Molecular and Cell Biology*

AREA CONCERNED: In addition to covering the usual cytological aspects of biology (with regard to both morphology and function), the activities of this Department include the disciplines of biochemistry, biophysics, microbiology, virology, cell physiology, molecular genetics and cytogenetics, and molecular biology generally. Such subjects as cell growth and development, fine structure, physicochemical organization, cell pathology, homeostatic mechanisms (including energetics and steady-states), cell ecology, and evolutionary potential are among other emphases in graduate courses.

GRADUATE COURSES

- 200A-200B-200C *Research in Molecular and Cell Biology* ($\frac{1}{2}$ to $1\frac{1}{2}$ per quarter) fall, winter, spring
A limited number of qualified graduate students will be admitted with the approval of the staff.
- 201A-201B-201C *Seminar in Molecular and Cell Biology* (1-1-1) fall, winter, spring
Simultaneous enrollment for credit in more than one seminar permitted. Advanced study in areas relating to molecular and cell biology. Topics will vary from year to year.
- 202 *Advanced Microbiology* (1) winter
- 203 *Genetics* (1) spring
- 204 *Biochemistry* (1) spring
- 205 *Cell Biology-Animal Virology* (1) fall

■ *Organismic Biology*

AREA CONCERNED: Although at the molecular and cellular level it is relatively easy to discover universal principles common to all life, at higher levels of biological organization the differences between kinds of organisms may be more significant than their similarities. Accordingly, at the organismic level the comparative approach may be just as important as the search for universal principles, and the

differences between plants and animals, for example, may be of greater import. Nevertheless, unifying concepts are emerging, and these are being integrated with our expanding knowledge of cellular biology on the one hand and population biology on the other. Faculty and students specializing in organismic biology are concerned with structure (morphology) and function (physiology) in the classical sense; the cutting edge of these disciplines includes such challenging problems as those associated with transport mechanisms, hormonal integration, immune mechanisms, electrophysiology, biological rhythms, light and temperature responses, and many others. Graduate courses in organismic biology are concerned with the structure and organization of tissues, organs, and organ systems, the physiology or function of these systems, the growth and development (including embryology) of organisms, heredity, symbiosis (parasitism, commensalism, mutualism) pathology, and others.

It is important for the student to remember that the findings made at any one level of biology assist in understanding phenomena occurring at another level. For example, the ultimate relevancy of the advances being made in molecular biology resides in their relation to the form and function of the whole organism—be it plant or animal—or to a population of the organism. The opposite is also true. In other words, to understand properly a plant or animal, one must study it at all levels of biological organization.

UNDERGRADUATE COURSES

- 130 *Invertebrate Zoology* (1) winter
Lectures and laboratory. Prerequisite: Senior or graduate registration.
- 131 *Comparative Animal Physiology* (1) spring
Lectures and laboratory. Prerequisite: Senior or graduate registration.
- 132 *Biology of Vascular Plants* (1) spring
Lectures and laboratory. Prerequisite: Senior or graduate registration.
- 133 *Symbiosis* (1) spring
Lectures and laboratory. Prerequisite: Senior or graduate registration.

GRADUATE COURSES

- 200A-200B-200C *Research in Organismic Biology* ($\frac{1}{2}$ to $1\frac{1}{2}$ per quarter) fall, winter, spring
Prerequisite: Graduate registration and consent of instructor.
- 201A-201B-201C *Seminar* (1-1-1) fall, winter, spring
Advanced study in various fields of organismic biology. Topics will

vary from year to year. The program for 1965-66 will probably include seminars in:

- (a) Comparative Animal Physiology
- (b) Developmental Biology
- (c) Pathobiology
- (d) Plant Growth and Development
- (e) Topics in Theoretical Biology

■ *Population & Environmental Biology*

AREA CONCERNED: The human population explosion is only one example of the type of problem that might be considered the concern of the Department of Population and Environmental Biology. Others include population dynamics as related generally to animals, plants, and microorganisms. Macroevolution, population genetics, fertility and reproduction, taxonomy and nomenclature (systematics), ecological regulation, homeostatic mechanisms, energy flow, and biogeochemical cycles are others. The term "environmental biology" is essentially synonymous with "ecology," which has been defined as "the study of the structure and function of nature" or "the relations of an organism to its environment," and is concerned with those levels of biological organization known as populations, communities, ecosystems, and the biosphere.

GRADUATE COURSES

- 200A-200B-200C *Research in Population and Environmental Biology*
($\frac{1}{2}$ to $1\frac{1}{2}$ per quarter) fall, winter, spring
- 201A-201B-201C *Seminar in Population and Environmental Biology*
(1-1-1) fall, winter, spring
Simultaneous enrollment for credit in more than one seminar permitted.
- 202A-202B-202C *Systematic Biology and Taxonomy* (1-1-1) fall, winter, spring
- 203 *Population Ecology (Animals)* (1) fall
- 204 *Population Structure (Plants)* (1) winter
- 205 *Environmental Biology* (1) spring
- 206A-206B-206C *Marine Ecology* (1-1-1) fall, winter, spring

■ *Psychobiology*

AREA CONCERNED: The Department of Psychobiology is concerned with those aspects of psychology strongly oriented toward problems of biological nature. Emphasis is given to problems concerning the biochemical, genetic, and neurophysiological systems underlying attention, perception, learning, memory, motivation, emotion, and instinctive behavior. It is recognized that a general understanding of these processes requires a comparative approach. In other words, psychobiology emphasizes areas that are conventionally referred to as experimental, comparative, and physiological psychology.

UNDERGRADUATE COURSES

- 150 *Advanced Psychobiology* (Animal Behavior) (1) winter
Lecture and laboratory. Prerequisite: 103.
151 *Undergraduate Seminar in Psychobiology* (1) spring
Prerequisite: Consent of instructor.

GRADUATE COURSES

- 200A-200B-200C *Research in Psychobiology* ($\frac{1}{2}$ to $1\frac{1}{2}$ per quarter) fall,
winter, spring
201A-201B-201C *Seminar in Psychobiology* (1-1-1) fall, winter, spring
202 *Methods in Psychobiology* (1) fall
203 *Comparative Behavior* (1) fall
204 *Learning and Memory* (1) winter
205 *Neurophysiological Bases of Behavior* (1) spring



THE FACULTY

MAURICE ALLARD, Visiting Assistant Professor of Music

ROBERT S. COHEN, Assistant Professor of Drama

**JOHN COPLANS, Assistant Professor of Art and Director of the
Gallery**

TONY DE LAP, Assistant Professor of Art

JOHN ELLIOTT, Senior Scene Technician and Technical Director

CLAYTON GARRISON, Professor of Drama and Dean of Fine Arts

EUGENE LORING, Senior Lecturer in Dance and Chairman of Dance

**MEHLI MEHTA, Lecturer in Music and Conductor of University
Orchestra**

COLIN SLIM, Associate Professor of Music and Chairman of Music

RICHARD TRIPLETT, Lecturer in Drama

**ROGER WAGNER, Lecturer in Music and Conductor of the University
Chorus**

A professional tutorial staff in vocal and instrumental music supplements the above staff.

Among the instruments of human evolution, the arts are supremely important. Every culture develops art forms as surely as it develops a language. And as in the past, the spirit of the present will be captured and symbolized finally through the arts. The program in the fine arts is committed to significance and excellence in developing the creative efforts of its students.

The Division wishes to provide an education that develops critical and historical understanding as well as creative and performing artistry in each student. The objective of the program is to produce literate artists who are responsive to intellectual stimuli, capable of integrating knowledge into creative acts, and committed to rigorous standards of professional involvement. Offerings in all areas of the fine arts include a comprehensive study of literature, history, theory, and criticism—resources that are not only substantive materials in themselves, but essential research sources for the creative act. Theoretical, literary, and historical courses complement the practical work in studio workshops and performance. The Division does not view the arts merely as ornaments of civilization, but as organic components of life concerned with human vitality and vision.

All courses in all areas of the arts at the freshman-sophomore level, and certain junior-senior courses, will not only provide the broad and fundamental experiences essential for majors but also invite the intellectual and creative participation of the non-specialist as a part of a liberal education. Although public performance and exhibits will aim at a professional level, all departments will provide workshop and studio experiences for the nonmajor.

The Division of Fine Arts is comprised of the departments of Art, Drama, Music, and Dance, with the Dean of the Division and the departmental chairmen administering the academic activities of the four departments.

The Departments of Art, Drama, Music, and Dance offer four-year curricula leading to the Bachelor of Arts degree. All of the Departments are planning to initiate two-year programs leading to the Master of Fine Arts degree in 1966-67. The Division of Fine Arts and the Department of English offer an interdisciplinary pro-

THE DIVISION OF
FINE ARTS



gram in playwriting leading to the M.F.A. Introductory courses in architecture and film are also available in the Division of Fine Arts.

The curricula in the fine arts are organized to achieve a balance between (1) professional competence, and (2) a liberal education which can contribute substantially to the perception of the artist and the significance of what he has to say in his particular medium.

Departmental majors are offered in Art, Drama, Music, and Dance. In addition to the departmental majors, an interdisciplinary major involving studies in two of the four fine arts offerings is available. Departmental requirements include (1) extensive studio and workshop experiences (2) essential theoretical and historical backgrounds, (3) exercises in criticism, and (4) tutorials aimed at independent and creative performance. The requirements for all majors in the fine arts are designed to provide opportunities for the student-artist to work creatively at his medium for at least four hours a day from the freshman year through graduation.

TEACHING CREDENTIALS: Upon completion of a five-year program which includes the divisional and departmental requirements for the Bachelor's degree plus additional requirements established by the California State Board of Education, fine arts majors may qualify for teaching credentials at the elementary, secondary, and junior college levels.

THE UNIVERSITY'S CULTURAL PROGRAMS: In addition to producing student concerts, musicals, and dramatic performances, the Division of Fine Arts in collaboration with UCI's Committee for Arts and Lectures presents a varied offering of cultural events each year, including distinguished lecturers, world-renowned concert artists, outstanding dance and drama groups, jazz and folk performers, a film series, and a gallery program.

The annual All-University Student Art Festival provides an opportunity for students and faculties in the arts on the various University campuses to meet one another, to exchange ideas and to share the results of their creative efforts, to participate in workshops, and to talk with eminent professional people in the creative arts.

■ *Art*

The program in art provides basic studio experiences in the fundamental knowledge and techniques of painting, sculpture, design, and graphic arts, and a comprehensive study of the history and criticism of art. The curriculum constantly relates studio practice to the development of the visual arts and current critical theory. It constantly aims to develop a sense of visual awareness by as wide a range of the study of art as possible. Each student will be able to discover an area and style particularly suited to his own talents and interests. The program is designed for students preparing to continue professionally as artists, as critics, as historians, as cura-

tors in museums, and as teachers, as well as for students who, while not planning to make the study of art their vocation, have a serious interest in the theory, practice, and history of the visual arts.

The distinguishing characteristics of the program leading to the Bachelor of Arts degree lie in the interrelated approach to studio practice, history, and criticism. The art major experiences the creative aspects of art by learning to think with the materials and techniques of his medium. He experiences, furthermore, the historical continuum of art as a research source and cultural achievement. And finally he engages in critical exercise which is essential to achieving the vital balance between the perceptual and conceptual in the creative process. The aim of the program in the visual arts is to enable the student to apply himself creatively to any visual situation (studio, historical, critical) rather than to apply pre-learned techniques or a rigid intellectual pattern.

Nonmajors are welcome to participate in all aspects of the program, providing prerequisites are met. Courses without prerequisites particularly suited for the nonmajor include the basic studio course, *Visual Arts*; the elementary studio courses in life drawing, painting, sculpture, and graphic arts; the introductory course in principles of art and art criticism, *The Nature of Art: Structure and Style*; and all courses in the history of art.

■ *Dance*

The program in dance provides basic studio experiences in the fundamental knowledge and techniques of classical ballet and of contemporary dance movements. The classical academic approach to ballet adheres to those principles developed from Noverre through Petipa and Cecchetti, modified to accommodate our current understanding of those laws of physics and of the human anatomy applicable to the study of dance. The workshops in contemporary dance explore and extend the various approaches to modern dance and jazz, concentrating on physiological and rhythmic problems encountered in contemporary choreography. Studies in pre-classic dance forms and their musical structures provide additional workshop experiences as well as significant research materials for choreographic problems. Theoretical and historical courses complement the practical work in workshops, choreography, and performance. The program is designed for students preparing to continue professionally as dancers, as choreographers, and as teachers, as well as for students who, while not planning to make the study of dance their vocation, have a serious interest in the theory, practice, and history of dance.

The traditional technique of classical ballet constitutes a craft and style that serve not only as a physiological center for the logical training of the body, but also as a basic language of movement for the choreographer. Workshop experiences build progressively

on the basic techniques of ballet and extend through the contemporary idioms of jazz, modern, and free-style. The aim is to develop kinetic resources, precision, flexibility, and freedom in an eloquently coordinated and intelligently responsive body.

Nonmajors are welcome to participate in all aspects of the program, providing prerequisites are met. Courses without prerequisites particularly suited for the nonmajor include the basic workshops in ballet, free-style and jazz, and the course in the history of dance.

■ Drama

The program leading to the Bachelor of Arts in drama provides the professional training and the liberal study essential to attaining the highest standards in theatre. Each major in drama experiences exacting and rigorous training in the mutually interrelated areas of the theatre: performance, design, literature, history, and criticism. The curriculum constantly relates studio practice, technical resources, and productional techniques to the development of dramatic literature and current critical theory. The student specializes during the last two years of study in acting, directing, scene design, costume design, or criticism. Majors in drama are expected to undertake extensive studies in art, dance, and music.

The continuous production of plays, musicals, operettas, and operas constitutes the major activity of the department. Students are treated as members of a theatrical organization and they acquire experiences in all phases of theatrical production in a professionally disciplined atmosphere. Dramatic production centers on an exhaustive analysis of the script, and on the challenge of communicating the complexities of the play to an audience in a unified and meaningful production.

The program is designed for students preparing to continue professionally as actors, directors, designers, critics, and teachers, as well as for students who, while not planning to make the study of theatre their vocation, have a serious interest in the literature, theory, and practice of drama.

Nonmajors are welcome to participate in all aspects of the program providing prerequisites are met. Courses without prerequisites particularly suited for the nonmajor include the elementary studio course, *Acting*; the introductory course in criticism, *The Nature of Drama: Structure and Style*; and all courses in dramatic literature and history of theatre. Participation in all aspects of the production of plays, musicals, operettas, and operas is open to all qualified students.

■ Music

The program for the A.B. degree with a major in music is designed for two main classes of students: those who wish to obtain a sound

background in music leading to a terminal degree and those who wish to obtain a thorough preparation for undertaking graduate work in one or more of four broad fields, musicology, composition, music performance, and teaching. The program provides intensive training in three mutually dependent areas as related components of a total musical experience: performance and musicianship, the theory of music, and the history of music. A knowledge of all three of these areas is indispensable and minimal for a successful career in music.

Entering majors are expected to have competence in the practice of music—in reading and performing. Basic to the program for the graduating major is an effective command of the piano; the performance at sight of moderately difficult works. Students may demonstrate this skill by examination.

Performance requirements include a senior recital, instrumental or vocal, and participation in the chorus, orchestra, or in chamber music during each of his four years.

Beyond the specific goals outlined above and the requirements listed below, the student in music, through cooperative programs undertaken in conjunction with the other arts, achieves an awareness of the relationship of music to those other arts and of the various roles of music in society, both past and present.

Nonmajors are welcome to participate in all aspects of the program, providing prerequisites are met. Courses with prerequisites particularly suited for the nonmajor include the introductory course to musical process and constructive elements, *The Nature of Music: Structure and Style*, and all courses in the history of music. Qualified students are invited to participate in the chorus, orchestra, and chamber groups.

Courses of Study

■ Art

FRESHMAN-SOPHOMORE COURSES

20 *The Nature of Art: Structure and Style* (1)

30A-30B-30C *Visual Arts Fundamentals* (1-1-1)

 30A Fundamentals of drawing and pictorial structure.

 30B Theory of color and two-dimensional design.

 30C Three-dimensional design.

40A-40B-40C *History and Theory of Art* (1-1-1)

 45 *Problems in Design* (1) may be repeated for credit.

50A-50B-50C *Life Drawing* (1-1-1)

60A-60B-60C *Painting* (1-1-1)

70A-70B *Sculpture* (1-1)

 70A Exploration of three-dimensional forms.

 70B Materials and methods.

80A-80B-80C *Graphic Arts* (1-1-1)

80A Relief-block printing; and Serigraph—silk screen.

80B Planograph—lithography.

80C Intaglio—engraving.

JUNIOR-SENIOR COURSES

Courses in history of art (the sequence from 100 through 130) will be offered in alternate years, except for courses in 20th Century art which will be offered each year. The basic concern in most courses in the history of art will be with the problems of the artist in his time. All advanced problem and tutorial courses may be repeated for credit.

- 100 *Art of the Americas* (1)
- 102 *Primitive Art: Africa and the Pacific* (1)
- 104 *Ancient Art of the Near East* (1)
- 106 *Greek Art* (1)
- 108 *Roman Art* (1)
- 110A-110B *Medieval Art* (1)
 - 110A Early Christian to Romanesque.
 - 110B Romanesque to Gothic.
- 112 *Dürer and the Problems of the Artist in the Northern Renaissance* (1)
- 114 *Leonardo and the Problems of the Artist in the Italian Renaissance* (1)
- 116 *Rembrandt and the Problems of the Artist in the Baroque* (1)
- 118 *European Art in the 18th Century* (1)
- 120 *Impressionism and the Problems of the Artist in 19th Century Art* (1)
- 124 *Picasso and the Problems of the Artist in the 20th Century* (1)
- 126 *Frank Lloyd Wright and 20th Century Architecture* (1)
- 127 *History of Design* (1)
- 128 *Art and Technology* (1)
- 129 *The New American Painting* (1)
- 130A-130B-130C *History of Far Eastern Art* (1-1-1)
 - 130A India.
 - 130B China.
 - 130C Japan.
- 140 *Criticism of Art* (1)
- 145 *Advanced Problems in Design* (1)
- 150 *Advanced Problems in Life Drawing* (1)
- 160 *Advanced Problems in Painting* (1)
- 170 *Advanced Problems in Sculpture* (1)
- 180 *Advanced Problems in Graphic Arts* (1)
- 190 *Studio Tutorial in Design* (1)
- 191 *Studio Tutorial in Life Drawing* (1)
- 192 *Studio Tutorial in Painting* (1)
- 193 *Studio Tutorial in Sculpture* (1)

- 194 *Studio Tutorial in Graphics Arts* (1)
- 195 *Art Museum Problems* (1)
- 196 *Tutorial in Art History* (1)
- 197 *Tutorial in Criticism of Art* (1)

GRADUATE COURSES

A two-year graduate program leading to the M.F.A. degree in Art will be initiated in 1966-67.

■ Dance

FRESHMAN-SOPHOMORE COURSES

All studio workshops and performance courses may be repeated for credit.

- 20 *Theories of Dance* (1)
Open only to students enrolled in workshop courses. Required of dance majors.
- 30 *Studio Workshop in Ballet* ($\frac{1}{2}$)
- 40 *Studio Workshop in Free-Style* ($\frac{1}{2}$)
- 50 *Studio Workshop in Jazz* ($\frac{1}{2}$)
- 55 *Dance Notation* ($\frac{1}{2}$)
- 60 *Dance Performance* ($\frac{1}{2}$)

JUNIOR-SENIOR COURSES

All studio workshops and performance courses and offerings in choreography may be repeated for credit.

- 110A-110B *History of Dance* (1-1)
- 120A-120B-120C *Music for Dancers* (1-1-1)
- 125 *Criticism of Dance* (1)
- 130 *Advanced Studio Workshop in Ballet* ($\frac{1}{2}$)
- 140 *Advanced Studio Workshop in Free-Style* ($\frac{1}{2}$)
- 150 *Advanced Studio Workshop in Jazz* ($\frac{1}{2}$)
- 155 *Choreography I* (1)
- 160 *Advanced Dance Performance* ($\frac{1}{2}$)
- 170 *Ethnic Dance of Eastern Cultures* (1)
- 175 *Ethnic Dance of Western Cultures* (1)
- 180 *Choreography II* (1)
- 190 *Studio Tutorial in Ballet* ($\frac{1}{2}$)
- 191 *Studio Tutorial in Free-Style* ($\frac{1}{2}$)
- 192 *Studio Tutorial in Jazz* ($\frac{1}{2}$)
- 193 *Studio Tutorial in Choreography* (1)

GRADUATE COURSES

A two-year graduate program leading to the M.F.A. degree in Dance will be initiated in 1966-67.

■ Drama

FRESHMAN-SOPHOMORE COURSES

- 20 *The Nature of Drama: Structure and Style* (same as English 20) (1)
 22 *Shakespeare* (same as English 22) (1)
 25 *Principles of Speech* (1)
 30A-30B-30C *Acting* (1-1-1)
 30A Analysis of script and performance of scenes.
 30B Characterization.
 30C Styles of acting.
 40A-40B-40C *Development of Drama* (same as English 40) (1)
 40A Greek Drama through Shakespeare.
 40B Restoration Drama through Ibsen.
 40C Contemporary Drama.
 50A-50B-50C *Scene Design* (1-1-1)
 55A-55B-55C *Costume Design for Theatre* (1)
 60 *University Theatre* (½)
 May be repeated for credit.

JUNIOR-SENIOR COURSES

- 120A-120B *History of Design in Theatre* (1-1)
 125 *The Rhetoric of Speech* (1)
 130 *Advanced Acting* (1)
 May be repeated for credit.
 135 *Technical Production* (1)
 140 *Contemporary American Drama* (1)
 141 *Contemporary British Drama* (1)
 142 *Contemporary Continental Drama: Theatre of the Absurd* (1)
 143 *English Drama: 900-1642* (1)
 144 *English Comedy in the Restoration and 18th Century* (1)
 150 *Advanced Scene Design* (1) May be repeated for credit.
 152 *Advanced Lighting Design* (1) May be repeated for credit.
 155 *Advanced Costume Design for Theatre* (1) May be repeated for credit.
 160 *Advanced University Theatre* (½) May be repeated for credit.
 165 *Music Theatre Workshop* (½) May be repeated for credit.
 166 *History of Operetta and Musical Theatre* (1)
 170 *Directing* (1) May be repeated for credit.
 175 *Staging Shakespeare* (1)
 180 *Dramatic Criticism* (1)
 185 *Advanced Directing* (1) May be repeated for credit.
 The following tutorials may be repeated for credit.
 190 *Studio Tutorial in Acting* (1)
 191 *Studio Tutorial in Directing* (1)
 192 *Studio Tutorial in Scene Design* (1)
 193 *Studio Tutorial in Costume Design for Theatre* (1)

194 *Tutorial in Criticism* (1)

For Playwriting, see courses in the Creative Writing Program in English.

GRADUATE COURSES

A two-year graduate program leading to the M.F.A. degree in Drama will be initiated in 1966-67.

■ *Music*

FRESHMAN-SOPHOMORE COURSES

10 *Basic Piano* ($\frac{1}{2}$)

For Fine Arts majors only.

20 *The Nature of Music: Structure and Style* (1)30A-30B-30C *Theory I* (1-1-1)40A-40B-40C *History and Literature of Music* (1-1-1)50A-50B-50C *Composition* (1-1-1)

All courses in the 60 sequence may be repeated for credit.

60 *University Orchestra* ($\frac{1}{2}$)61 *Chamber Ensemble* ($\frac{1}{2}$)62 *University Chorus* ($\frac{1}{2}$)63 *Vocal Music for Small Chorus* ($\frac{1}{2}$)64 *Opera Workshop* ($\frac{1}{2}$)65 *Literature for Keyboard* ($\frac{1}{2}$)66 *Literature for String Instruments* ($\frac{1}{2}$)67 *Literature for Wind Instruments* ($\frac{1}{2}$)68 *Vocal Literature* ($\frac{1}{2}$)

JUNIOR-SENIOR COURSES

130A-130B-130C *Theory II* (1-1-1)135A-135B-135C *Counterpoint* (1-1-1)138A-138B-138C *Fugue* (1-1-1)

Courses in the following 140 sequence will include such topics as : The Motet in the 13th and 14th Centuries, Renaissance Keyboard Music, The Cantatas of Bach, The 18th Century Symphony, Early Romantic Opera, Schoenberg, Bartok, and Stravinsky. The topics will vary from quarter to quarter ; hence if the topic varies each course may be repeated for credit.

140 *Studies in Medieval Music*141 *Studies in Renaissance Music* (1)142 *Studies in Music of the Baroque Period* (1)143 *Studies in Music of the Classic Period* (1)144 *Studies in Music of the Romantic Period* (1)145 *Studies in Music of the 20th Century* (1)150 *Advanced Composition* (1)152 *History of Opera* (1)155 *Form and Analysis* (1)

All courses in the 160 sequence may be repeated for credit.

- 160 *Advanced University Orchestra* ($\frac{1}{2}$)
- 161 *Advanced Chamber Ensemble* ($\frac{1}{2}$)
- 162 *Advanced University Chorus* ($\frac{1}{2}$)
- 163 *Advanced Vocal Music for Small Chorus* ($\frac{1}{2}$)
- 164 *Advanced Opera Workshop* ($\frac{1}{2}$)
- 165 *Advanced Literature for Keyboard* ($\frac{1}{2}$)
- 166 *Advanced Literature for String Instruments* ($\frac{1}{2}$)
- 167 *Advanced Literature for Wind Instruments* ($\frac{1}{2}$)
- 168 *Advanced Vocal Literature* ($\frac{1}{2}$)
- 170 *Orchestration* (1)
- 180 *Music Criticism* (1)
- 190 *Studio Tutorials in Music* (piano, strings, winds, voice) ($\frac{1}{2}$)
May be repeated for credit.

GRADUATE COURSES

A two-year graduate program leading to the
M.F.A. degree in Music will be initiated in 1966-67.

■ *Fine Arts (Interdisciplinary Courses)*

FRESHMAN-SOPHOMORE COURSES

Art 20 *The Nature of Art: Structure and Style* (1)

Dance 20 *Theories of Dance* (1)

Drama 20 *The Nature of Drama: Structure and Style* (1)

Music 20 *The Nature of Music: Structure and Style* (1)

Fine Arts 30 *The Nature of Film* (1)

Fine Arts 40 *The Nature of Architecture: Problems, Structure and Style* (1)

JUNIOR-SENIOR COURSES

Fine Arts 100 *The Film as Art* (1)

Fine Arts 120 *Studies in the Theory and Practice of the Arts* (1) May be repeated
for credit.

Fine Arts 199 *Seminar in Interdisciplinary Studies in Fine Arts* (1) May be
repeated for credit.



THE FACULTY

ENGLISH

- 1 HAZARD ADAMS, *Professor of English and Chairman of the Department*
- 2 JOHN F. ADAMS, *Associate Professor of English*
- 3 HOWARD S. BABB, *Associate Professor of English*
- 4 PAUL FRIZLER, *Acting Assistant Professor of English*
- 5 HARVEY GROSS, *Associate Professor of English*
- 6 JAMES B. HALL, *Professor of English and Director of the Program in Creative Writing*
- 7 DONALD HEINEY, *Professor of English and Chairman, Interdepartmental Committee on Comparative Literature.*
- 8 JOHN HUDDLESTON, *Associate in English and Director of Subject A*
- 9 JAMES McMICHAEL, *Assistant Professor of English*
- 10 EDGAR T. SCHELL, *Acting Assistant Professor of English*
- 11 STEPHEN SHAPIRO, *Assistant Professor of English*
- 12 ALBERT O. WLECKE, *Instructor in English*

FOREIGN LANGUAGES AND LITERATURES

- 12 HOWARD A. APPEL, *Acting Assistant Professor of French*
- 13 RICHARD BARRUTIA, *Assistant Professor of Spanish and Director of the Language Laboratory*
- 14 RICHARD O. W. GOERTZ, *Acting Assistant Professor of Spanish*
- 15 ALICE M. LABORDE, *Assistant Professor of French*
- 16 JOHN D. LINDBERG, *Assistant Professor of German*
- 17 SEYMOUR MENTON, *Professor of Spanish and Portuguese and Chairman of the Department*
- 18 WILM PELTERS, *Assistant Professor of German*
- 19 VERA T. RECK, *Lecturer of Russian*
- 20 LUCIEN ANTOINE RICO, *Associate in French*
- 21 OTTO MAURICE SORENSEN, *Acting Assistant Professor of German*
- 22 JUAN VILLEGRAS, *Acting Associate Professor of Spanish*

HISTORY

- 23 JON S. JACOBSON, *Acting Assistant Professor of History*
- 24 R. ALAN LAWSON, *Acting Assistant Professor of History*
- 25 ARTHUR J. MARDER, *Professor of History*
- 26 SAMUEL C. McCULLOCH, *Professor of History and Dean of Humanities*
- 27 HENRY CORD MEYER, *Professor of History and Chairman of the Department*
- 28 KEITH L. NELSON, *Assistant Professor of History*
- 29 SPENCER C. OLIN, JR., *Assistant Professor of History and Coordinator of Academic Advising*

PHILOSOPHY

- 30 DANIEL C. DENNETT, *Acting Assistant Professor of Philosophy*
- 31 A. I. MELDEN, *Professor of Philosophy and Chairman of the Department*
- 32 STANLEY SODERSTROM, *Lecturer in Philosophy*

The humanities are concerned with fundamental problems of human thought and experience. They contribute both to understanding and to continued appraisal of the human condition. They introduce the student to those many broad and difficult problems of value not susceptible to statistical or quantitative judgment; therefore, humanistic study is of importance to students in all areas of specialization. The humanities provide a useful foundation for those who plan to work toward advanced degrees in medicine, business, law, journalism, and other professional disciplines. It is not always understood that many such professional schools encourage undergraduates to major in the humanities and, at the very least, to study extensively in the humanistic disciplines.

The Division is composed of the Departments of English, Foreign Languages and Literatures, History, and Philosophy, and offers baccalaureate work in comparative literature, English, history, philosophy, and in foreign languages and their literatures, including classics. The Division encourages joint majors, majors with supporting work in related disciplines, and, wherever practicable, interdisciplinary programs and comparative studies. For students in other divisions on all levels, it offers a wide range of electives which are available without prerequisite. It is concerned as well with offering opportunity to improve the basic humanistic skills of writing, reading, and, of course, thinking.

Each Department provides the means by which outstanding undergraduate majors are offered unusual opportunities for advanced study and research. Each Department and the Interdepartmental Program in Comparative Literature plan work leading to the Master of Arts and Doctor of Philosophy degrees. The Department of English plans, as well, the Master of Fine Arts in Writing.

PRE-LAW STUDENTS. Students interested in entering law school upon completion of their baccalaureate can major in any of the humanities. Specific requirements imposed by specific law schools can be met by choosing the necessary electives.

TEACHER TRAINING. Students interested in preparing for secondary and junior college teaching in the humanities follow the regular program for majors in the humanities. With their advisors they plan a program with an appropriate teaching major and minor. In the senior year or after graduation they engage in teaching preinternships in cooperating schools.

THE DIVISION OF HUMANITIES



■ INTERDEPARTMENTAL PROGRAM IN COMPARATIVE LITERATURE

Undergraduate Program

The Program in Comparative Literature, administered by an interdepartmental committee, is based on the assumption that most important literary problems, indeed most problems, are not totally national but transcend national and linguistic boundaries, and that texts of the literature of other languages are often as much a part of the educated American's cultural background as are those of his own. The Department of English offers opportunity to study literature in translation in its freshman-sophomore courses, and in its junior-senior courses. The student majoring in comparative literature, however, has the opportunity to study literature written not only in English but also in foreign languages. After taking sophomore work in English and in at least one foreign language, the major in comparative literature continues with junior-senior work in both areas and in special interdepartmental courses.

Graduate Programs

THE MASTER OF ARTS IN COMPARATIVE LITERATURE

In the program now being planned, the candidate should complete course work for the equivalent of three quarters. He should take *Methods of Comparative Study* (C.L. 200) and *Comparative Studies* (C.L.210). The remainder of the work is in English, in related courses, and in the literature of foreign languages. The candidate is offered the option, as in the M.A. in English, of Plans I and II. A competent mastery of at least one foreign language, usually French or German, is required.

THE DOCTOR OF PHILOSOPHY IN COMPARATIVE LITERATURE

The program planned is similar to that in English, with examinations appropriate to the comparative literature specialist coming at similar times. In addition, the program requires continued study of foreign languages and literatures. If the candidate has not taken the M.A. in comparative literature, he must take the courses particularly required for that degree. A competent mastery of at least two foreign languages, usually French and German, is required, and the candidate must take *Problems in Translation* (C.L.220).

■ DEPARTMENT OF ENGLISH

Undergraduate Programs

Departments of English are concerned with a variety of subjects: English as a language, perhaps as a foreign language, perhaps from the point of view of descriptive linguistics; with literary history, literary criticism and theory, comparative literature, and

the history of ideas; with expository writing, rhetoric, the writing of poetry, prose fiction, and drama. These subjects are related to each other, but at the same time each is a somewhat different discipline. Nevertheless, the modern English Department's concern is, at center, always literary, and the best literary minds are concerned with the nature and value of literature, the approaches to literary works, and the relationship of literary criticism to other intellectual issues of the times. Though not alone in the task, a modern department of English recognizes a continuing obligation to help all students write the English language with clarity and grace.

The department offers to the undergraduate who intends to major in English three essential areas of study:

1. Criticism and Literary History: The study of literary criticism and the development of English and American literature.

2. The Art of Writing: The writing of poetry, prose fiction, and/or drama.

3. Comparative Literature (See Interdepartmental Program in Comparative Literature): The formal study of literature in courses not limited to the literature of one nation or language.

These areas are not discrete entities. Rather, the student is invited to take work in all three, with an emphasis on one. A student of literature should recognize the importance of understanding literary problems of a theoretical nature, of developing a broad literary experience which transcends national boundaries, and of experiencing the problems of literary creation at first hand. The student should form a coherent program of courses with the help of his advisor, including experience in special small classes in criticism, the senior seminar or the workshop in writing, and a comprehensive examination in literary history. The department offers opportunity to study with particular teachers, to be exposed to particular points of view, and to explore important problems, rather than simply to pass through a series of prescribed courses. By not stipulating a variety of prerequisites the Department invites students from all divisions and schools of the university to take work in English, for it assumes that the experience of literature, an understanding of the verbal culture and how it was developed, and the achievement of a high level of literacy are necessary to a liberal education.

Many of the courses offered, particularly those devoted to the historical periods of English or American literature, may vary in specific content from year to year depending upon the plans of individual teachers. It is a principle of departmental offerings in literary history that no course can possibly treat all of the major authors or important works of a given age, and that each teacher is charged with organizing classes and readings which, in recognition of this fact, provide basic understanding and point in proper directions.

Graduate Programs

On the assumption that there must be a vital intellectual relationship between professor and candidate, specific requirements for graduate degrees will be reached by consultation among members of the graduate faculty and the candidate himself. The candidate for the Master of Arts or Master of Fine Arts in Writing plans a program with his advisor; the candidate for the Ph.D. with his advisor and a small committee. Candidates for literary degrees are encouraged to study philosophy, history, foreign languages and literatures, and the fine arts.

The Department's three principal areas of work on the undergraduate level—criticism and literary history, comparative literature (see Comparative Literature), and the art of writing—are reflected in the graduate programs: the M.A. and Ph.D. in criticism and literary history and the M.F.A. in writing.

Candidates for graduate degrees must meet requirements set down by the University of California. Applications for admission to the programs in English are reviewed by the Department and the Dean of the Graduate Division.

THE MASTER OF ARTS IN ENGLISH

Each candidate for the M.A. will be assigned to a graduate advisor, who will supervise his program of work. Two plans are offered: *Plan 1*: The candidate completes course work as advised, a written essay, and an examination over areas related to the subject of the essay. *Plan 2*: The candidate completes course work, as advised, for three quarters or the equivalent and a final written examination upon a designated reading list.

Under both plans, the candidate must take at least one-half of his formal work in courses, seminars, or conferences limited to graduate students. He must pass a reading proficiency examination in a designated foreign language during the first quarter of course work.

THE MASTER OF FINE ARTS IN ENGLISH

The Master of Fine Arts (M.F.A.) in English is an interdisciplinary degree awarded for creative writing in poetry, short story, drama, or the novel. The M.F.A. programs are based on the assumptions that artistic creation of high quality is disciplinary in nature, and that the University has a continuing obligation to the emerging, new artist.

The M.F.A. is normally conferred at the completion of a two-year program. The candidate presents an integrated course of study which brings together three kinds of experience: courses at the graduate level in literary studies in the English Department, the focus being on contemporary literature and theory, hopefully in

the genre of the candidate's thesis; courses in at least one other field of art, such as music, art, art history, drama, aesthetics, with the possibility of studio courses in these fields; completion of a book-length piece of creative writing, in one genre, of publishable quality.

Having reached a higher degree of artistic and intellectual maturity, the candidate completes his work by the presentation of his thesis and is examined on a reading list of literary works which will illuminate the history of and the theory of the genre of the candidate's thesis. If, for example, the candidate's thesis is a novel the examination is on a reading list of novels, each list newly conceived in the light of the candidate's past experience and present needs. Humanely, there is no defense of the approved thesis: the candidate has examined himself each time he has sat down to write.

THE DOCTOR OF PHILOSOPHY IN ENGLISH

The program for the Ph.D. in English will normally include about eighteen courses of work beyond the B.A.; proficiency in the reading of two acceptable foreign languages, or demonstration of more than ordinary ability to read and to speak a single acceptable foreign language; the dissertation; and satisfactory performance on designated examinations.

The languages acceptable are dependent upon the nature of the student's program as determined by his advisors. Reading competence in one of these languages must be established in the first quarter of residence. Competence in the other language must be established well before the general examinations. Satisfactory work in courses in which literary translation is actually accomplished may fulfill the language requirements. The necessity of competence in languages such as Old English is determined by the advisory committee in the light of the student's total program.

Upon completion of course work the student will normally present himself for examination in two areas of English and/or American literary history, on one literary genre, on literary theory and criticism, and on the work of one major writer. The student's choice of examinations must enable him to demonstrate breadth of knowledge and literary understanding. The choice must be approved by his advisory committee. Certain alternatives to this series of examinations will be made, upon individual application and advisory consent.

As soon after completion of the general examination as is practicable, the student presents an essay to his advisory committee and is orally examined upon it and related subjects. Out of this essay should grow the dissertation. At this point the student is admitted to candidacy for the degree. Completion of the dissertation and an oral examination complete the work for the Ph.D.

■ DEPARTMENT OF FOREIGN LANGUAGES AND LITERATURES

The main objectives of the program in foreign languages and literatures are:

1. To develop competence in the ability to understand, speak, and write a foreign language and thereby to understand the problems of language itself.

2. To provide through the knowledge of foreign languages the valuable experience that is gained from deepened understanding and appreciation of the literature and culture of other peoples.

In the basic courses in modern languages, the use of language laboratory facilities allows for emphasis on the development of the oral-aural language skills. First-year courses will meet in the classroom five times a week, and in the language laboratory twice a week.

At the end of the first year, students will have attained mastery of the basic structure of the language and ability to converse on everyday topics. In the second year, with the continuation of audio-lingual study, students will develop ability to read and understand the foreign language. A third-year course of two quarters will stress composition as opposed to translation, with which it is often confused. Further, a course in phonetics will aim to perfect pronunciation as well as to introduce historical and dialectal variants. The introductory course in literature, also in the third year, will emphasize the analysis and appreciation of complete literary works rather than a survey with an anthology.

Initially, major programs will be offered in French, German, Spanish and Russian. Instruction in Latin and Greek is planned for 1966-67. As soon as practicable, instruction in other languages will be initiated.

Students are encouraged to participate in programs of study abroad during the summer and the junior year.

■ DEPARTMENT OF HISTORY

History studies all recorded expressions of human activity. It explains the political experiences of a nation at home and abroad. It surveys the social and economic aspects of life, artistic expressions, intellectual achievements, scientific progress, and religious beliefs.

Courses in history are open to all students in the University. During 1965-66, most freshmen and sophomores will find either *Western Traditions* or *American Thought and Culture* most suitable for their programs. In 1966-67, it is expected that *History of Science*, *East Asian Civilizations*, and *British Traditions and Institutions* will be added to the list of courses especially recommended for freshmen and sophomores. Normally, *Western Traditions*, its equivalent, or consent of the instructor is a prerequisite to advanced courses in history.

The baccalaureate program in history attempts to bring students abreast of contemporary national and world realities. Since candidates should be familiar with the intellectual and cultural history of western civilization as well as that of their own nation, the introductory courses are broadly conceived. The department favors interdisciplinary approaches within its own courses, and urges candidates to select related courses in the Humanities, Fine Arts, and Social Sciences.

Contemporary reality indicates that no one can restrict his understanding to that of a single nation or civilization. Candidates should become familiar with a nonwestern society early in their program. Study of a modern foreign language and culture should further diminish parochialism and help prepare students for junior-senior work.

History majors will begin advanced study with a detailed examination of the work of great historians and of historiography. They will proceed to a study of their own society in world perspective. Advanced courses will offer candidates the opportunity to use a foreign language. In the Senior Seminar, each major will write an essay demonstrating basic understanding of historical methodology and effective literary style. Independent reading is recommended as an important supplement to formal courses in preparing for the senior comprehensive examination, held in the Spring quarter of the senior year. Lists of suggested readings in various areas will be available in September.

■ DEPARTMENT OF PHILOSOPHY

Philosophy addresses itself to questions that arise insistently in every area of human experience and in every discipline within the University. Every discipline inevitably poses problems concerning the nature of the standards appropriate to it and the place of its subject matter within the total framework of human knowledge. If we are to understand science or art or literature, or such human practices as morality and religion, we are bound to address ourselves to philosophical issues relating to their nature, the uses of reason appropriate to them, and the contributions they make to our understanding and appreciation of ourselves and the world in which we live.

Instruction in Philosophy relies essentially upon discussion in which students are active participants and, wherever possible, is held in small classes in which sustained dialogues may be conducted.

Some of the courses offered are of general interest to all students. Others are designed to explore issues that arise in selected and special disciplines. Among these are courses in the philosophy of science and art. The staff should be consulted for advice about courses best suited to the specialized needs of particular students.

The program of course offerings is also designed for those majors in philosophy whose intention may be either to enter some professional school upon graduation (e.g., law) or to engage in graduate work in philosophy.

Courses of Study

■ Comparative Literature

JUNIOR-SENIOR COURSES

- 101 *Studies in Literary Genres* (1) fall
- 110 *Studies in Literary History and Relations* (1) winter
- 189 *Senior Seminar in Comparative Literature* (1)

GRADUATE COURSES

(All courses may be repeated when the topic varies)

- 200 *Methods of Comparative Study* (1)
- 210 *Comparative Studies* (1)
- 220 *Problems in Translation* (1) winter
- 290 *Reading and Conference* (1) fall, winter, spring
By permission. May be repeated.
- 298 *Master's Essay* (1) fall, winter, spring. May be repeated.
- 299 *Dissertation Research* (1) fall, winter, spring. May be repeated.

■ English

(Satisfaction of the Subject A requirement
is a prerequisite to all English courses)

FRESHMAN-SOPHOMORE COURSES

- 5 *Thought and Process in Writing* (1) fall, winter, spring
- 10 *Functions of Language* (1) winter, spring
Prerequisite: English 5
- 15 *Approaches to Literary Language* (1) spring
Prerequisite: English 10
- 20 *The Nature of Drama: Structure and Style* (1)
(same as Drama 20) winter
- 22 *Shakespeare* (1) fall. English 15 recommended.
- 23 *The Nature of Poetry* (1) spring. English 15 recommended.
- 24 *The Nature of Fiction* (1) English 15 recommended.
- 26 *Literature and Society* (1) English 15 recommended
- Wr 30 *The Art of Writing: Poetry* (1) winter
- Wr 31 *The Art of Writing: Prose Fiction* (1) fall
- Wr 32 *The Art of Writing: Drama* (1)
- 39 *Tutorial in Advanced Expository Writing* (1)
Prerequisite: English 10 or consent of instructor.
- 40A-40B-40C *Development of Drama* (1-1-1) fall, winter, spring
(same as Drama 40A-40B-40C)

JUNIOR-SENIOR COURSES

(see also Comparative Literature and Drama)

- 100 *Junior Studies in Theory and Practice* (1-1) fall, winter, spring. Junior majors, others by consent. May be taken twice.
- Wr 110 *Short Story Writing* (1) fall, spring. By consent.
- Wr 111 *Poetry Writing* (1) winter. By consent.
- Wr 112 *Playwriting* (1). By consent.
- Wr 113 *Novel Writing* (1). By consent.
- Wr 115 *Conference in Writing* (1) fall, winter, spring. May be repeated. Majors in the Art of Writing program, others by consent.
- Wr 125 *Senior Workshop in Writing* (1)
Majors in Art of Writing program.
- 150 *Medieval Literature* (1) fall
- 155 *Renaissance English Literature* (1)
- 157 *Shakespeare* (1)
- 160 *17th Century English Poetry and Prose* (1) fall
- 162 *18th Century English Poetry and Prose* (1)
- 165 *Early Nineteenth Century English Poetry and Prose* (1) spring
- 167 *Later Nineteenth Century English Poetry and Prose* (1) winter
- 169 *Early Twentieth Century English Literature* (1) winter
- 171 *Early Nineteenth Century American Literature* (1)
- 172 *Later Nineteenth Century American Literature* (1)
- 173 *Early Twentieth Century American Literature* (1)
- 175 *Writing since 1945* (1)
- 176 *The Literary Situation: The Sixties* (1) spring
- 180 *Studies in Poetry* (1)
- 181 *The Novel* (1)
- 182 *Studies in Criticism* (1)
- 186 *Modern English Grammar* (1)
- 188 *Reading and Conference* fall, winter, spring
May be repeated. By consent, by arrangement.
- 189 *Senior Seminar in Criticism and Literary History* (1)
English majors in Criticism and Literary History.

GRADUATE COURSES

(All graduate courses may be repeated when the topic varies)

- 200 *Studies in the English Language* (1)
- 210 *Studies in Literary History* (1) winter, spring
- 220 *Studies in Criticism* (1) fall
- 225 *Studies in Literary Genres* (1)
- 230 *Studies in Major Writers* (1)
- 235 *Methods of Literary Scholarship* (1)
- 240 *Rhetoric and Writing* (1) fall
- Wr 250 *Graduate Writers' Workshop* (1) fall, winter, spring. By consent.
- Wr 251 *Writing in Conference* ($\frac{1}{2}$ to $1\frac{1}{2}$) fall, winter, spring. By consent.
- 290 *Reading and Conference* ($\frac{1}{2}$ to $1\frac{1}{2}$) fall, winter, spring
By consent.

- Wr 297 *M.F.A. Thesis* (1) fall, winter, spring. May be repeated.
 298 *Master's Essay* (1) fall, winter, spring. May be repeated.
 299 *Dissertation Research* (1) fall, winter, spring. May be repeated.

■ Foreign Languages & Literatures

CLASSICS (to be offered 1966-67)

- Latin 1A-1B Fundamentals of Latin* (1-1)
Latin 12 Introduction to Roman Literature (1)
 Prerequisite: *Latin 1B* or two years of high school Latin.
Classics 20A Greek Literature in Translation (1)
Classics 20B Roman Literature in Translation (1)

FRENCH

- 1A-1B-1C Fundamentals of French* (1-1-1) fall, winter, spring
2A-2B-2C French Reading and Composition (1-1-1) fall,
 winter, spring
 Prerequisite: Two or preferably three years of high school
 French or one year of college French.
10A-10B French Composition and Grammar Review (1-1) fall, winter
 Prerequisite: four years of high school French or
 two years of college French.
11 French Phonetics (1) spring. Prerequisite: *French 10B*.
12A-12B-12C Introduction to French Literature (1-1-1) fall,
 winter, spring
 Prerequisite: Four years of high school French or two
 years of college French.
117A-117B-117C¹ Seventeenth Century French Literature (1-1-1)
 Prerequisite: *French 12A, 12B, 12C*.
118A-118B-118C¹ Eighteenth Century French Literature (1-1-1)
 Prerequisite: *French 12A, 12B, 12C*.
119A-119B-119C¹ Nineteenth Century French Literature (1-1-1)
 Prerequisite: *French 12A, 12B, 12C*.
120A-120B-120C¹ Twentieth Century French Literature (1-1-1)
 Prerequisite: *French 12A, 12B, 12C*.
199 Special Studies in French (1)
299 Research in French Language and Literature (1)

GERMAN

- 1A-1B-1C Fundamentals of German* (1-1-1) fall, winter, spring
2A-2B-2C German Reading and Composition (1-1-1) fall,
 winter, spring
 Prerequisite: Two or preferably three years of high school
 German or one year of college German.
10A-10B German Composition and Grammar Review (1-1)
 fall, winter
 Prerequisite: Four years of high school German or
 two years of college German.
11 German Phonetics (1) spring. Prerequisite: *German 10B*.

¹Courses in two of the four centuries will be offered in 1965-66.

12A-12B-12C *Introduction to German Literature* (1-1-1) fall,
winter, spring

Prerequisite: Four years of high school German or
two years of college German.

117A-117B-117C *Seventeenth Century German Literature* (1-1-1)
Prerequisite: German 12A, 12B, 12C.

118A-118B-118C *Eighteenth Century German Literature* (1-1-1)
Prerequisite: German 12A, 12B, 12C.

119A-119B-119C *Nineteenth Century German Literature* (1-1-1)
Prerequisite: German 12A, 12B, 12C.

120A-120B-120C *Twentieth Century German Literature* (1-1-1)
Prerequisite: German 12A, 12B, 12C.

199 *Special Studies in German* (1)

299 *Research in German Language and Literature* (1)

LINGUISTICS

100 *Introduction to Linguistics* (1)

Prerequisite: Two years of college English or foreign language.

PEDAGOGY

105 *Methods of Teaching Foreign Languages* (1)

Prerequisite: Linguistics 100 and senior standing as
a foreign language major.

RUSSIAN

1A-1B-1C *Fundamentals of Russian* (1-1-1) fall, winter, spring

20B-20C *Russian Literature in Translation* (1-1) winter, spring

SPANISH

1A-1B-1C *Fundamentals of Spanish* (1-1-1) fall, winter, spring

2A-2B-2C *Spanish Reading and Composition* (1-1-1) fall,
winter, spring

Prerequisite: Two or preferably three years of high school
Spanish or one year of college Spanish.

10A-10B *Spanish Composition and Grammar Review* (1-1)
fall, winter

Prerequisite: Four years of high school Spanish or
two years of college Spanish.

11 *Spanish Phonetics* (1) spring. Prerequisite: Spanish 10B

12A-12B-12C *Introduction to Hispanic Literature* (1-1-1)
fall, winter, spring

Prerequisite: Four years of high school Spanish or
two years of college Spanish.

117A-117B-117C² *Golden Age Literature* (1-1-1) fall, winter, spring
Prerequisite: Spanish 12A, 12B, 12C.

119A-119B-119C² *Nineteenth Century Literature* (1-1-1)
fall, winter, spring. Prerequisite: Spanish 12A, 12B, 12C.

120A-120B-120C² *Twentieth Century Spanish Literature* (1-1-1)
fall, winter, spring. Prerequisite: Spanish 12A, 12B, 12C.

²Courses in two of these three centuries will be offered in 1965-66.

- 130A-130B-130C *Spanish American Prose Fiction* (1-1-1)
 fall, winter, spring. Prerequisite: *Spanish 12A, 12B, 12C.*
- 131 *Spanish American Modernism* (1)
 Prerequisite: *Spanish 12A, 12B, 12C.*
- 132 *Spanish American Theatre* (1)
 Prerequisite: *Spanish 12A, 12B, 12C.*
- 199 *Special Studies in Spanish* (1)
- 299 *Research in Spanish Language and Literature* (1)

■ *History*

FRESHMAN-SOPHOMORE COURSES

- 10A-10B-10C *Western Traditions* (1-1-1) fall, winter, spring
 50A-50B-50C *American Thought and Culture* (1-1-1)
 fall, winter, spring

JUNIOR-SENIOR COURSES

- 100 *History and Historians* (1) fall
 120 *Europe in the Nineteenth Century* (1) fall
 121 *Europe in the Twentieth Century* (1) winter
 125A-125B *Constitutional and Legal History of England* (1-1)
 fall, winter
 127 *Great Britain in the Twentieth Century* (1) spring
 157B-157C *History of American Foreign Relations* (1-1)
 winter, spring
 (1) spring
 (1) fall, winter, spring

May be repeated. By consent.

GRADUATE COURSES

Limited opportunities for graduate study will be offered in 1965-66. Students may compile programs from a combination of upper division courses and graduate offerings.

- 200A *Seminar in American History* (1) fall
 200B *Seminar in American History* (1) spring
 240B *Seminar in Twentieth-Century British History* (1) winter
 290 *Graduate Colloquium* (1) fall, winter, spring
 May be repeated. By consent.

During the academic year 1966-67 the following courses, among others, will be offered:

- History of Science*
East Asian Civilizations
History of China or Japan
British Traditions and Institutions
Senior Seminar (American History)
Senior Seminar (European History)
America in World Perspectives

■ *Philosophy*

FRESHMAN-SOPHOMORE COURSES

- 5 *Problems of Philosophy* (1) fall, winter, spring
- 10 *Elements of Logic* (1) fall, winter
- 15 *Ethics* (1) spring
- 20 *History of Philosophy: From the Pre-Socratics through Aristotle* (1) fall. Prerequisite: *Philosophy 5* or consent.
- 21 *History of Philosophy: From the Stoics, Epicureans and Skeptics to the Middle Ages* (1) winter
Prerequisite: *Philosophy 5* or consent. *Philosophy 20* suggested.
- 22 *History of Philosophy: From the Renaissance through Kant* (1) spring
Prerequisite: *Philosophy 5* or consent. *Philosophy 21* suggested.

JUNIOR-SENIOR COURSES

Prerequisites: Unless otherwise specified, one course in philosophy from among the following: *History of Philosophy*, *Introduction to Philosophy*, *Introduction to Ethics*. In special cases this requirement may be waived by the instructor. Inquiries should be directed to the staff.

- 100 *Metaphysics* (1)
- 110 *Epistemology* (1)
- 115 *Ethical Theory* (1)
- 120 *Philosophy of Science* (1)
- 130 *Philosophy of Art* (1)
- 150 *The Theory of Logic* (1)
- 190 *Directed Special Studies* (1) fall, winter, spring

GRADUATE COURSES

- 200 *Seminar in the History of Philosophy* (1) winter
Prerequisite: Approval of the chairman.
- 215 *Seminar in Ethics* (1) fall
Prerequisite: Approval of the chairman. May be repeated.
- 280 *Seminar in Contemporary Analytic Philosophy* spring
Prerequisite: Approval of the chairman. May be repeated.
- 299 *Directed Research* (1) fall, winter, spring
Prerequisite: Approval of the chairman.

THE FACULTY

The Committee on Information and Communication Science:

J. FELDMAN, K. W. FORD, B. R. GELBAUM, R. W. GERARD,
J. G. MARCH, J. L. MCGAUGH, R. M. SAUNDERS, AND F. M. TONGE

The interdisciplinary program in Information and Communication Science is concerned with the theoretical understanding of information, its representation, transmission, and processing in natural and artificial systems. The program involves work in biology,

INTERDIVISIONAL
PROGRAM IN
INFORMATION
AND
COMMUNICATION
SCIENCE

computer science, economics, engineering, linguistics, mathematics, and psychology, and is jointly sponsored by the Schools of Administration and Engineering, the Division of Social Sciences, and the Departments of Mathematics and Psychobiology.

Although no formal programs in Information and Communication Science will be available in 1965-66, related work at the graduate level will be available in engineering, mathematics, psychobiology, psychology, and economics. Undergraduate students expecting to do graduate work in this area should consult with advisors conversant with the field.

Courses of Study

- 1 *Digital Computing* (1) fall, winter, spring

THE FACULTY

WAYNE H. CRAWFORD, *Associate Professor of Physical Education and Chairman of the Department.*

ALBERT M. IRWIN, *Associate Supervisor of Physical Education.*

DAN S. ROGERS, *Associate Supervisor of Physical Education.*

RAYMOND H. THORNTON, *Associate Supervisor of Physical Education.*

Classes in physical education are available but are not required for graduation. Courses will be counted toward a degree at the rate of one-sixth of a course per class up to a total of one course credit.

Emphasis is placed on activities having lifetime values and those of particular interest in southern California.

All sports facilities will be open for the recreational use of students and staff when not occupied by classes or athletic teams.

Courses

1A-1B-1C *Physical Education (1/6-1/6-1/6) fall, winter, spring*

May be repeated.

Sections in archery, badminton, body building, rowing, dance (social and folk), fencing, golf, gymnastics, handball, judo, life-saving, scuba diving, squash racquets, swimming, tennis, volleyball and water polo.

THE DEPARTMENT
OF PHYSICAL
EDUCATION

2

THE FACULTY

CHEMISTRY

DAVID A. BRANT, *Assistant Professor of Chemistry*
DON L. BUNKER, *Associate Professor of Chemistry*
MARJORIE C. CASERIO, *Assistant Professor of Chemistry*
EDWARD K. C. LEE, *Assistant Professor of Chemistry*
HAROLD W. MOORE, *Assistant Professor of Chemistry*
F. S. ROWLAND, *Professor of Chemistry and Chairman of the Department*

ROBERT W. TAFT, *Professor of Chemistry*

MATHEMATICS

BERNARD R. GELBAUM, *Professor of Mathematics and Chairman of the Department*
EINAR HILLE, *Senior Lecturer in Mathematics*
GERHARD K. KALISCH, *Professor of Mathematics*
ARNOLD LEBOW, *Assistant Professor of Mathematics*
ROBERT MALTZ, *Assistant Professor of Mathematics*
GEORGE S. McCARTY, *Assistant Professor of Mathematics*
BERNARD RUSSO, *Assistant Professor of Mathematics*
WILLIAM SMOKE, *Acting Assistant Professor of Mathematics*
EDWARD O. THORP, *Acting Associate Professor of Mathematics*
JAMES YEH, *Associate Professor of Mathematics*

PHYSICS

KENNETH W. FORD, *Professor of Physics and Chairman of the Department*
ALEXEI A. MARADUDIN, *Professor of Physics*
JOHN R. PELLAM, *Professor of Physics*
GORDON L. SHAW, *Associate Professor of Physics*
WILLIAM G. WAGNER, *Assistant Professor of Physics*

The Division of Physical Sciences offers both pre-professional training and general education in the Departments of Chemistry, Mathematics, and Physics. The faculty, active in research and graduate education, is at the same time vitally concerned with undergraduate teaching. Curricula of the Division are designed to meet the needs of a wide variety of students—from those with little technical background who seek insight into the activities and accomplishments of physical sciences to those seeking a comprehensive understanding that will prepare them for creative research in physical science.

Over the course of the past century and a half, physics, chemistry, and mathematics have evolved into interdependent but separate intellectual disciplines. This development is reflected in the well-defined departmental structure of the Division of Physical Sciences. In the same period, these fundamental disciplines have moved into domains of abstraction unimagined by early scientists, whose view of nature and of number was tied to direct sense-perception. This trend to abstraction provides the major challenge to the student of the physical sciences. At the same time, it is the key to the unparalleled modern power of these disciplines. Mathematics, physics, and chemistry, while providing the foundation of the technology that dominates contemporary civilization, underlie to an ever-increasing extent the new developments in the biological and social sciences.

**THE DIVISION OF
PHYSICAL
SCIENCES**

2

Undergraduate Programs

In the belief that both understanding and satisfaction follow more from depth than from breadth, the Division offers no general survey course. Instead, each Department offers courses that are of value both to nonmajors and majors in the sciences. In each Department, the program for majors is designed to meet the needs both of students planning careers in other fields and of students planning graduate work that continues their major interest.

The undergraduate student, in consultation with his advisor, will choose courses of study leading to a major in one department. In carrying out this major, the student will often concentrate very

heavily in a second department within the Division, and, less frequently, will complete a double major.

All initial courses of study for majors include mathematics through calculus, and calculus is a prerequisite to much of the junior-senior work in each major. A student interested in any of the physical sciences should continue his mathematical training. Similarly, the student interested in either physics or chemistry will usually include work in both of these subjects in his undergraduate career.

Much of the relevant scientific literature in each of these fields is printed in foreign languages, and comprehension of at least one of the languages, Russian, German, or French, is an integral part of the preparation for a major in physical sciences. Preparation for language competence should begin early in the course of study.

Students in the physical sciences are urged to acquire a working knowledge of computer programming at an early stage of their university careers. This can be done by taking *Information and Communication Sciences 1*, most often in the fall quarter prior to enrollment in *Physics 5A*.

Graduate Programs

A program of course work and research leading to the M.A. and Ph.D. degrees is offered in each of the three departments of the Division. The individual programs are described in the following announcements of each department.

■ DEPARTMENT OF CHEMISTRY

Undergraduate Program

The chemistry curriculum introduces scientists and nonscientists to modern chemistry, and includes both lecture and laboratory work. The course in general chemistry can stand by itself as a one-year sequence introducing modern chemistry and is also suitable for students in other divisions. It is followed by a comprehensive one-year course in organic chemistry and a third year devoted to the physical aspects of chemistry, which completes the sequence of lecture courses. In addition, chemistry majors will be expected to take the course in chemical instrumentation. Since the field of chemistry now ranges from close contact with the biological sciences (biochemistry) on the one hand to physics (chemical physics) on the other, the rest of the curriculum can be selected to suit individual interests. These choices include not only options in the senior year, but also the choice of other courses in other sciences which meet the requirements for the major.

An honors program in chemistry will emphasize close contact with research.

Graduate Program

The curriculum for graduate work in chemistry will emphasize an early introduction to research in chemistry, while assuring a reasonable coverage of the body of modern chemical knowledge. Students entering graduate work must pass area examinations in each of the three fields: inorganic, organic, and physical chemistry. These examinations are given in September, February, and May, and must be successfully completed by the end of the third examination period. Cumulative examinations begin in the second quarter of residence, and must be completed by the end of the fifth quarter of residence. An oral examination on original research propositions is given in the quarter following the completion of the cumulative examinations. A comprehensive program of graduate courses is also available. The graduate student will ordinarily begin a research problem during his first year of enrollment, and will concentrate more and more heavily on his thesis research during the second and subsequent years.

A Master's degree may be earned through the comprehensive examination plan, or, with special permission, through the thesis plan. A reading knowledge of Russian, German, or French is required for the Master's degree.

The Ph.D. degree is awarded, on the recommendation of the Doctoral Committee and the Dean of the Graduate Division, to students who have satisfactorily passed the comprehensive examinations, and who have also demonstrated ability in independent research. For research areas available in 1965-66, see *Chemistry* 280. Research programs in other areas will be added during 1966-67. A reading knowledge of two foreign languages is required from among Russian, German, and French.

■ DEPARTMENT OF MATHEMATICS

Undergraduate Program

The curriculum in mathematics—from lower division to graduate courses—is augmented by opportunities for supervised individual study and research, seminars, colloquia, and the mathematics programs at nearby branches of the University of California. It is designed to be compatible with curricular structures at other collegiate institutions in California. Students transferring to UCI will, therefore, not find it difficult to continue their programs of mathematics study.

Students at UCI are able to earn the degrees of Bachelor of Arts, Master of Arts and Doctor of Philosophy in Mathematics.

Freshman-sophomore courses are of two kinds: (a) courses preparatory to advanced work in the exact sciences and engineering: modern treatments of calculus and analytic geometry and algebra (vector spaces and matrices), (b) courses for students

whose major interests lie outside the exact sciences and engineering: a one-year liberal arts course in mathematics to be augmented by low-prerequisite courses in the areas adjacent to economics, statistics, biology, and psychology. There also are courses designed for students preparing for elementary and high school teaching.

For students who have deficiencies in their preparation for entrance to the beginning courses, there are no-credit intensive pre-college courses, successful completion of which removes deficiencies in preparation.

Junior-senior courses are also of two kinds: (a) Courses that form links in a chain connecting freshman-sophomore courses to graduate work in mathematics: advanced calculus, function-theory, elementary modern algebra, geometry and topology, probability and statistics and differential equations. (b) Courses for advanced students in physics, chemistry, engineering and statistics: applied mathematics, e.g., ordinary and partial differential equations, Fourier and Laplace transforms, calculus of variations, numerical analysis, computer science and advanced statistics.

Graduate Programs

Graduate courses are designed to meet the needs of students doing graduate work in mathematics and in such disciplines as require graduate-level mathematics for their study. Among the fields covered are analysis, algebra, functional analysis, geometry and topology, probability and statistics, ordinary and partial differential equations, logic and computers, advanced numerical analysis, etc.

The requirements for graduate degrees that are planned are as follows:

THE MASTER OF ARTS IN MATHEMATICS

An approved program of courses in mathematics; an overall grade average of B in mathematics courses offered in the program; a reading knowledge of French, German or Russian; preparation of a satisfactory thesis in mathematics; passage of written and/or oral examinations appropriate to the degree.

THE DOCTOR OF PHILOSOPHY IN MATHEMATICS

Graduate courses constituting an acceptable program of advanced and broad education in mathematics; an overall grade average of B in mathematics courses offered in the program; a reading knowledge of at least two languages from among French, German and Russian; passage of written and/or oral preliminary examinations appropriate to the degree as required by the Doctoral Committee; preparation of a satisfactory thesis representing original research in mathematics; passage of a final oral public examination appropriate to the degree.

In exceptional circumstances modifications of the requirements are admissible if they are approved by the Department of Mathematics and are consonant with the general requirements of the Graduate Division.

■ DEPARTMENT OF PHYSICS

Undergraduate Program

The department offers two beginning courses, *Physics 3* (three quarters) and *Physics 5* (five quarters). *Physics 5* assumes a knowledge of calculus; *Physics 3* does not. The calculus requirement for *Physics 5* may be met by concurrent enrollment in *Mathematics 2*. Associated with each of these courses is a laboratory, the *Physics 3 Laboratory* extending over two quarters, the *Physics 5 Laboratory* over four quarters. The laboratory work is not intended to verify and directly reinforce the lecture material. Rather, it is intended to teach those aspects of physics and physical measurement that are more appropriately studied in a laboratory than in a lecture.

Three different curricula will be available for the undergraduate study of physics. Physics majors preparing for professional careers in physics will take junior-senior lecture courses emphasizing the mathematical and theoretical foundations of physics. The normal program for these students, after completion of *Physics 5*, will be the six-quarter sequence, *Physics 111-116*, designed for physics majors preparing for graduate work, and for other qualified science and engineering students.

A second curriculum will be offered, intended primarily for students not majoring in the sciences who seek a coherent understanding of physics in one or two years. The first year (*Physics 3*) covers the fundamentals of classical physics and relativity theory. Junior-senior courses numbered from 100 to 109 will permit the student in a second year to investigate one aspect of physics without the requirement of advanced mathematics.

Beginning in 1966-67, a series of junior-senior courses will be offered, intended primarily for physics majors not planning to pursue the study of physics beyond the Bachelor's degree level. These courses will apply theory to a wide variety of phenomena, and will emphasize the unifying threads of modern physics. *Physics 5* will be a prerequisite for all of these courses.

These curricula are intended only as general guidelines; all courses are open to adequately prepared students. Students not majoring in the sciences who are strong in mathematics may take *Physics 5* with profit instead of *Physics 3*. A student who decides to major in physics after completing *Physics 3* with an honor grade may, with permission of the department, transfer into *Physics 5C*. The premedical physics requirements may be met with *Physics 3ABC*, or with *Physics 5ABC*.

An honors program in physics will be formulated during the academic year 1965-66.

Graduate Programs

A Master's degree may be earned according to Plan I, the thesis plan, or Plan II, the comprehensive examination plan. The normal route to a Master's degree in physics is via Plan II. Plan I will be approved only in special circumstances. A reading knowledge of Russian, German, or French is required for the Master's degree.

The Ph.D. degree is awarded to students who have adequately demonstrated a capacity for independent research. The standards for this degree, to be formulated during the academic year 1965-66, will be similar to those in effect at other University of California campuses.

For research areas available in 1965-66, see *Physics 295*, under "Courses of Study."

Courses of Study

■ *Chemistry*

UNDERGRADUATE COURSES

- 1A-1B-1C *General Chemistry* (1-1-1)
11A-11B-11C *Honors General Chemistry* (1-1-1) By permission of the department.
51A-51B-51C *Organic Chemistry* (1-1-1) Prerequisite: One year of general chemistry.
131A-131B-131C *Physical Chemistry* (1-1-1) Prerequisites: One year of general chemistry; one year of calculus; one year of physics.
151 *Instrumental Methods Laboratory* (1) Prerequisites: One year of organic chemistry and one year of physical chemistry.
180 *Undergraduate Research* (1) Prerequisites: One year of organic chemistry; one year of physical chemistry; and permission of the department.

GRADUATE COURSES

- 201 *Physical Organic Chemistry I* (1)
202 *Physical Organic Chemistry II* (1)
205 *Synthetic Organic Chemistry*
211 *Chemical Thermodynamics* (1)
213 *Chemical Kinetics* (1)
215 *Inorganic Chemistry I* (1)
216 *Inorganic Chemistry II* (1)
231 *Quantum Chemistry* (1)
232 *Statistical Mechanics* (1)
233 *Nuclear and Radiochemistry* (1)
234 *Advanced Chemical Kinetics* (1)
251 *Special Topics in Organic Chemistry* (1)

- 252 *Special Topics in Physical Chemistry* (1)
253 *Special Topics in Inorganic Chemistry* (1)
280 *Research: Organic Synthesis, Reaction Kinetics, Radiochemistry, Theoretical Chemistry, Physical Organic Chemistry, Physical Organic Chemistry, Physical Chemistry of Macromolecules* (½ to 1½)
290 *Seminar*

■ Mathematics

FRESHMAN-SOPHOMORE COURSES

- 1A *Introductory Mathematics* (1) fall, winter, spring. Prerequisite: One year high school algebra; one year high school geometry.
2A-2B-2C *Calculus* (1-1-1) Prerequisite: 1A or two years high school algebra; one year high school geometry; one-half year trigonometry.
3A-3B-3C *Calculus and Linear Algebra* (1-1-1) Prerequisite: 2A-2B-2C.
4A-4B-4C *Liberal Arts Mathematics* (1-1-1) Prerequisite: One year high school algebra, one year high school geometry.
5A-5B-5C *Special Course for Social Scientists* (1-1-1) Prerequisite: Approval of the Department of Mathematics and the Division of Social Sciences.

JUNIOR-SENIOR COURSES

- 100A-100B-100C *Ordinary and Partial Differential Equations* (1-1-1)
Prerequisite: 3A-3B-3C.
110A-110B-110C *Geometry and Topology* (1-1-1) Prerequisite: 3A-3B-3C.
120A-120B-120C *Algebra* (1-1-1) Prerequisite: 3A-3B-3C.
130A-130B-130C *Probability and Statistics* (1-1-1) Prerequisite: 3A-3B-3C.
134A-134B-134C *Accelerated Course for Social Scientists* (1-1-1) Prerequisite: Approval of the Department of Mathematics and the Division of Social Sciences.
135A-135B-135C *Applied Mathematics for Biologists and Social Scientists* (1-1-1) Prerequisite: 3A-3B-3C.
140A-140B-140C *Advanced Calculus and Elementary Analysis* (1-1-1)
Prerequisite: 100A-100B-100C.
143A-143B-143C *Applied Mathematics for Engineers and Physical Scientists* (1-1-1) Prerequisite: 3A-3B-3C.
145A-145B-145C *Numerical Analysis* (1-1-1) Prerequisite: 100A-100B-100C.
146A-146B-146C *Computer Science* (1-1-1) Prerequisite: 100A-100B-100C.
150A-150B-150C *Set Theory and Mathematical Logic* Prerequisite:
140A-140B-140C.
160A-160B-160C *Introductory Analytic Function Theory* Prerequisite:
140A-140B-140C.

GRADUATE COURSES

- 210A-210B-210C *Real Analysis* Prerequisite: 140A-140B-140C.
 220A-220B-220C *Analytic Function Theory* (1-1-1) Prerequisite: 140A-140B-140C.
 230A-230B-230C *Algebra* Prerequisite: 120A-120B-120C.
 235A-235B-235C *Homology and Categorical Algebra* (1-1-1) Prerequisite: 230A-230B-230C.
 240A-240B-240C *Differential Geometry* (1-1-1) Prerequisite: 110A-110B-110C.
 250A-250B-250C *Topology* (1-1-1) Prerequisite: 110A-110B-110C.
 260A-260B-260C *Functional Analysis* (1-1-1) Prerequisite: 210A-210B-210C, 230A-230B-230C.
 270A-270B-270C *Probability* Prerequisite: 130A-130B-130C, 210A-210B-210C.
 275A-275B-275C *Statistics* Prerequisite: 130A-130B-130C, 210A-210B-210C.
 290A-290B-290C *Ordinary Differential Equations* (1-1-1) Prerequisite: 100A-100B-100C, 210A-210B-210C, 220A-220B-220C.
 295A-295B-295C *Partial Differential Equations* (1-1-1) Prerequisite: 100A-100B-100C, 210A-210B-210C, 260A-260B-260C.
 299A-299B-299C *Supervised Reading and Research* (1-1-1) Prerequisite: Consent of instructor.

■ *Physics*

FRESHMAN-SOPHOMORE COURSES

- 3A *Basic Physics I: Matter and Motion* (1) Facility with algebra and elementary trigonometry is assumed. Students deficient in mathematics should attend *Physics 13* concurrently in the fall quarter.
 3B *Basic Physics II: Statistical Physics and Relativity* (1) Prerequisite: *Physics 3A*.
 3C *Basic Physics III: Electromagnetism* (1) Prerequisite: *Physics 3B*.
 5A *Fundamental Physics I: Matter and Mechanics* (1) Facility in calculus is assumed. *Mathematics 2* is corequisite.
 5B *Fundamental Physics II: Relativity and Wave Phenomena* (1) Corequisite: *Mathematics 2*. Prerequisite: *Physics 5A*.
 5C *Fundamental Physics III: Electromagnetism* (1) Prerequisites: *Mathematics 2, Physics 5B*.
 5D *Fundamental Physics IV: Quantum Physics* (1) Prerequisites: *Mathematics 2, Physics 5C*.
 5E *Fundamental Physics V: Statistical Physics* (1) Prerequisites: *Mathematics 2, Physics 5D*.
 13 *Elementary Mathematical Tools of Physics* (no credit) May be taken concurrently with *Physics 3A* by students deficient in algebra and trigonometry.

JUNIOR-SENIOR COURSES

- 103 *Microphysics* (1)
- 104 *Cosmic Physics* (1)
- 105 *The Structure of Matter* (1)
- 111 *Classical Mechanics* (1) Prerequisite: *Physics 5.*
- 112 *Statistical Mechanics* (1) Prerequisite: *Physics 5.*
- 113 *Thermodynamics* (1) Prerequisite: *Physics 112.*
- 114 *Electromagnetic Theory* (1) Prerequisite: *Physics 112.*
- 115 *Optics* (1) Prerequisite: *Physics 5.*
- 116 *Quantum Mechanics* (1) Prerequisite: *Physics 111.*
- 151-152-153 *Advanced Physics Laboratory I-II-III* (1-1-1) Prerequisite: *Physics 5.* Each quarter is independent of the others.
- 195 *Undergraduate Research* (1) Open to seniors and occasionally to juniors with permission of the department.
- 199 *Reading on Special Topics* (1) With permission of the department.

GRADUATE COURSES

- 211A-211B *Theoretical Mechanics* (1-1)
- 212A-212B-212C *Mathematical Physics* (1-1-1)
- 213A-213B-213C *Electromagnetic Theory* (1-1-1)
- 214A-214B-214C *Thermodynamics and Statistical Mechanics* (1-1-1)
- 215A-215B-215C *Quantum Mechanics* (1-1-1)

Additional courses will be offered in 1966-67 in the areas of advanced quantum mechanics, nuclear physics, elementary particle physics and solid-state physics.

- 295 *Research* ($\frac{1}{2}$ to $1\frac{1}{2}$) Research areas available in 1965-66 will include elementary particle theory and experiment and theory in solid-state physics, low-temperature physics, and plasma physics.
- 299 *Reading on Special Topics* (1) With special permission, a student may elect to investigate some area of physics through individual study, supervised by a faculty member.

THE FACULTY

- KATHLEEN A. ARCHIBALD, *Acting Assistant Professor of Sociology.*
- DURAN BELL, *Assistant Professor of Economics.*
- INGEBORG P. BELL, *Assistant Professor of Sociology.*
- ISABEL M. BIRNBAUM, *Assistant Professor of Psychology.*
- JOHN P. BOYD, *Acting Assistant Professor of Anthropology.*
- MYRON L. BRAUNSTEIN, *Assistant Professor of Psychology.*
- JULIAN FELDMAN, *Associate Professor of Psychology and Information and Communication Science and Associate Dean of the Social Sciences.*
- GORDON J. FIELDING, *Assistant Professor of Geography.*
- BARBARA K. FOLEY, *Acting Assistant Professor of Sociology.*
- LEWIS A. FROMAN, JR., *Associate Professor of Political Science.*
- JOE TRUMAN HART, *Acting Assistant Professor of Psychology.*
- SHEEN T. KASSOUF, *Assistant Professor of Economics.*
- JAMES G. MARCH, *Professor of Psychology and Sociology and Dean of the Social Sciences.*
- ALAN J. MILLER, *Acting Assistant Professor of Psychology.*
- DEANE E. NEUBAUER, *Acting Assistant Professor of Political Science.*
- J. W. PELTASON, *Professor of Political Science and Vice Chancellor for Academic Affairs.*
- KARL B. RADOV, *Acting Assistant Professor of Economics.*
- HOWARD L. ROSENTHAL, *Assistant Professor of Political Science.*
- MARTIN M. SHAPIRO, *Associate Professor of Political Science.*
- RICHARD C. SNYDER, *Professor of Political Science and Administration and Dean of the Graduate School of Administration.*
- FRED M. TONGE, *Associate Professor of Administration and Information and Communication Science and Director of Computer Facilities.*
- JOHN C. WEICHER, *Acting Assistant Professor of Economics.*

The educational programs in the Division of Social Sciences have a double emphasis: First, they are built upon systematic empirical observation and quantitative analysis of human behavior. The availability of high-speed electronic computers; the development of mathematics oriented toward the problems of the social sciences; and the refinement of techniques for sampling, observing, and modifying human behavior have contributed major new elements to anthropology, economics, geography, political science, psychology, and sociology.

Second, important new problems confront society; and social scientists have a responsibility to assist in the development of solutions to these problems. A rapidly changing technology, the pathologies of a population explosion and urban concentration, the thrust of once underdeveloped societies, the creeping mastery of disease, the strains of race relations, the tempestuous marriage of men and machines in problem-solving, endemic crises in international affairs, lagging or explosive economic growth, political instability, and explorations of space provide social scientists with an extraordinary list of unsolved problems and opportunities. A modern program in the social sciences develops skills in the use of social science techniques and knowledge in order to confront these and other contemporary problems. In a world in which knowledge of human behavior is increasing rapidly, training in the social sciences must emphasize the basic analytical tools and the processes by which knowledge is gained. Moreover, in an age in which social problems and our understanding of man violate traditional academic boundaries, training in the social sciences must emphasize the exploration of boundaries among the social sciences and between the social sciences and other disciplines.

At UCI, education in the social sciences is built upon the assumption that students play an active role in the entire educational process. To facilitate education, various resources are provided—students, faculty, courses, programmed instruction, library, community, lectures, seminars, laboratories, research aids, reading lists, discussion groups, and examinations. The administration provides routine housekeeping services. The faculty provides succor,

THE DIVISION OF
SOCIAL
SCIENCES



advice, and occasional wisdom. Students, individually and collectively, make major contributions to the learning process—by participating in regular seminars, proposing new educational materials, developing new programs, and by systematic self-directed study. The programs described here represent a careful effort on the part of the faculty to define a modern approach to social science. They are sanctified neither by tradition, nor by high authority, nor by pride. The faculty expects to propose modifications in the programs continuously. It welcomes similar proposals from students, both to meet the individual educational needs of individual students and to improve the quality and relevance of the general program.

Undergraduate Programs

The Division of Social Sciences offers undergraduate degree programs in anthropology, economics, geography, political science, psychology, and sociology. The programs are designed to provide terminal training in the social sciences; preparation for graduate work in one of the disciplines; preparation for professional training in administration, education, law, planning, or social work; or preparation for secondary and junior college teaching in the social sciences (in conjunction with the Program in Teacher Education).

Educational Goals

The program in the Division is designed to help the student achieve six basic goals:

1. An understanding of the structure, limits, and uses of major techniques of analysis in the study of human behavior. For example, the student should be able to use intelligently basic theories of exchange, adaptation, diffusion, and social structure.
2. Familiarity with the mathematical, computational, and statistical tools underlying modern social science. The student should be able to deal effectively with the fundamentals of calculus, differential equations, linear algebra, computer sciences, and statistics.
3. A basic knowledge of three different social science disciplines, including the discipline offered as the field of concentration. The candidate may choose any three of the six basic disciplines offered by the Division.
4. An extended knowledge of the institutions, data, concepts, methods, and analytic techniques of the discipline in which the degree is sought. The candidate should have a thorough grounding in the fundamentals of the discipline.
5. The ability to use knowledge in the field of concentration and the social sciences generally to analyze a significant policy problem involving human behavior and to propose and justify a detailed approach to a solution.

6. The ability to participate in significant research in the discipline of concentration and to evaluate published research.

Students are assumed to have the ability to write with lucidity and grace and to read rapidly and with comprehension. Students who lack these abilities should plan (and will be required) to take the formal or informal instruction necessary to overcome these handicaps.

The General Seminar

The central focus for training in the social sciences is the General Seminar. Students concentrating in one of the social science disciplines will participate in a General Seminar during each quarter they are in residence. Each General Seminar meets once a week under the leadership of a faculty member. It provides an opportunity for students in the social sciences to engage in close intellectual exchange within a small group without the pressures of specific course content. At the same time, the seminar leader is responsible for evaluating the general progress of each student toward a social science education. He evaluates performance in the seminar and performance in meeting the basic intradivisional requirements for the degree. He serves as the faculty advisor for each member of the seminar.

The Four-Year Program

The normal four-year program follows a regular sequence in each of the social science disciplines. In each year the student has certain specific requirements he normally meets in the social sciences. During the freshman year, he is expected to acquire the basic analytic tools of the social sciences and mathematics. During the sophomore year, he continues mathematics and also learns the fundamental of three specific disciplines within the Division.

During the junior year, he learns the more advanced material in his field of concentration and statistics. During the senior year, he completes two substantial projects. The program is supplemented each year by courses and other activities designed to satisfy outside requirements and the individual needs of the student.

A TYPICAL PROGRAM :

	FALL QUARTER	WINTER QUARTER	SPRING QUARTER
FRESHMAN	Intro. to Analysis Mathematics Humanities English	Intro. to Analysis Mathematics Humanities English	Intro. to Analysis Mathematics Humanities Computer Science
SOPHOMORE	Anthropology or Economics Mathematics Natural Science Elective	Political Science or Psychology Mathematics Natural Science Elective	Geography or Sociology Mathematics Natural Science Elective
JUNIOR	Major Field Statistics Outside Field Elective	Major Field Statistics Outside Field Elective	Major Field Statistics Outside Field Elective
SENIOR	Major Project Fine Arts Outside Field Elective	Major Project Fine Arts Outside Field Elective	Major Project Fine Arts Outside Field Elective

The Two-Year Program

Junior transfers with a good record at other accredited colleges and universities will normally be presumed to have satisfied the freshman and sophomore requirements for the social science curriculum. Students anticipating transfer to UCI in their junior year, however, should attempt to plan their program so as to anticipate the special requirements of the program. Every effort will be made to accommodate individual variation in background, provided the student is prepared to commit himself to intensive work in areas of deficiency.

Normally, the typical two-year program is simply the last two years of the regular four-year program. Students who have not completed at least one full year of calculus are enrolled in a special program involving an intensive double course in mathematics during the junior year.

Nonmajors

As a general rule, students from outside the Division interested in an integrated introduction to analysis in the social sciences should enroll in *Social Science 1A, 1B, 1C, Introduction to Analysis*. Those interested in a narrower introduction to a specific field may want to consider the introductory courses in the specific disciplines —*Anthropology 1, Economics 1, Geography 1, Political Science 1, Psychology 1, and Sociology 1*.

Special Programs

- PRE-GRADUATE TRAINING / Students planning to pursue graduate work in the social sciences enroll in the regular social science program in one of the disciplines. In addition, they should supplement their program by anticipating language requirements at major graduate schools and by intensive work in areas outside the Division that are of special relevance to their intended graduate work.
- INFORMATION AND COMMUNICATION SCIENCE / A special interdivisional program in information and communication science will be available to freshmen entering in 1965. The program will combine the regular undergraduate work in one of the social science disciplines with additional junior-senior work in computer science, mathematics, and engineering.
- PRE-LAW / Students interested in entering law school upon completion of their baccalaureate can major in any of the social sciences. Specific requirements imposed by specific law schools can be met through electives.
- TEACHER TRAINING / Students interested in preparing for secondary and junior college teaching in the social sciences follow the regular program for majors in the social science. They complete their program by electing courses that will satisfy the requirements for teacher certification.
- ADMINISTRATION / Undergraduate degree programs in business and public administration are not offered at UCI. Students preparing for a career in business or government can major in one of the social science disciplines. Students particularly interested in business administration are usually advised to major in economics. Students interested in public administration are usually advised to major in economics or political science.

Graduate Programs

Programs leading to the M.A., M.S., and Ph.D. degrees in the various social sciences will be announced during the 1965-66 academic year. The requirements and standards for these degrees will be similar to those in effect at other University of California campuses. A few students will be admitted for graduate work during the 1965-66 year. Students interested in further information about graduate programs in anthropology, economics, political

science, psychology, or sociology should write to the Dean of the Division of Social Sciences.

Courses of Study

A student may obtain credit through examination for any course in the Division for which he is otherwise eligible.

■ Social Science

UNDERGRADUATE COURSES

1A-1B-1C *Introduction to Analysis I-II-III* (1-1-1) fall, winter, spring

100A-100B-100C *Advanced Analysis I-II-III* (1-1-1) fall, winter, spring

180 *Special Topics* (1) fall, winter, spring

May be taken more than once with consent of instructor.

190A-190B-190C *Senior Project I-II-III* (1-1-1) fall, winter, spring

199 *Individual Study* (1) fall, winter, spring

■ Anthropology

Anthropology provides an historical and comparative framework for the study of the biological and cultural aspects of man and society. This includes an understanding of the basic concepts, techniques, and data of the usual branches of anthropology—physical anthropology, ethnology, social anthropology, archaeology and linguistics. Emphasis is placed on the analysis and comparison of social and cultural systems and their various aspects: norm, status, and role; structure and function; polity, economy, ecology, and kinship; types of society; social change; values, knowledge, art, and religion; cultural differentiation and cultural history language.

UNDERGRADUATE COURSES

1 *Introduction to Anthropology* (1) fall

100A-100B-100C *Advanced Anthropological Analysis I-II-III* (1) fall, winter, spring

180 *Special Topics* (1) fall, winter, spring

May be taken more than once with consent of instructor.

190A-190B-190C *Senior Project I-II-III* (1-1-1) fall, winter, spring

199 *Individual Study* (1) fall, winter, spring

GRADUATE COURSES

200A-200B-200C *Proseminar in Anthropology* (1-1-1) fall, winter, spring

280 *Special Topics* (1) fall, winter, spring

299 *Individual Research* (1) fall, winter, spring

■ Economics

Economics is the study of resource allocation by individuals, organizations, and nations. Descriptive economics includes the study of the manner in which these decisions are made and of the

interactions among them. Normative economics considers how decisions should be made in order to achieve certain objectives. Some of the major topics considered are consumer behavior, business behavior, pricing, markets and market equilibrium, problems of optimization, business fluctuations, national income, economic growth and development, fiscal and monetary policy, inflation, welfare economics, economics of the public sector, industrial organization, labor economics, forecasting, and the quantitative analysis of economic data.

UNDERGRADUATE COURSES

- 1 *Introduction to Economics* (1) fall
100A-100B-100C *Advanced Economic Analysis I-II-III* (1-1-1) fall winter, spring
180 *Special Topics in Economics* (1) fall, winter, spring
May be taken more than once with consent of instructor.
190A-190B-190C *Senior Project I-II-III* (1-1-1) fall, winter, spring
199 *Individual Study* (1) fall, winter, spring

GRADUATE COURSES

- 200A-200B-200C *Proseminar in Economics* (1-1-1) fall, winter, spring
280 *Special Topics* (1) fall, winter, spring
299 *Individual Research* (1) fall, winter, spring

■ Geography

Geography is primarily concerned with the relation of man to his environment including its physical, cultural, biological, edaphic, mineral, hydrographic, spatial, and meteorological aspects. Emphasis is given to problems in urban and regional planning and to major social problems involving the integration of the techniques and knowledge of geography with other social and natural sciences.

UNDERGRADUATE COURSES

- 1 *Introduction to Geography* (1) spring
100A-100B-100C *Advanced Geographical Analysis I-II-III* (1-1-1) fall, winter, spring
180 *Special Topics* (1) fall, winter, spring
May be taken more than once with consent of instructor.
190A-190B-190C *Senior Project I-II-III* (1-1-1) fall, winter, spring
199 *Individual Study* (1) fall, winter, spring

■ Political Science

Political Science involves study of the problems of politics and the institutions which have evolved in response to those problems. The primary focus is (1) on the behavior of major participants in the political process: voters, parties, political leaders, legislatures, courts, public opinion, pressure groups, administrators; and (2) on the way in which politics resolves conflict, organizes social

action, and mediates social change. The interactions between politics and the economic system (political economy) and between politics and the social system (political sociology) are emphasized. Empirical studies of political behavior are used as the basis both for analysis of political institutions and for the investigation of current political problems.

UNDERGRADUATE COURSES

- 1 *Introduction to Political Science* (1) winter
 100A-100B-100C *Advanced Political Analysis I-II-III* (1-1-1)
 fall, winter, spring
 180 *Special Topics* (1) fall, winter, spring
 May be taken more than once with consent of instructor.
 190A-190B-190C *Senior Project I-II-III* (1-1-1) fall, winter, spring
 199 *Individual Study* (1) fall, winter, spring

GRADUATE COURSES

- 200A-200B-200C *Proseminar in Political Science* (1-1-1)
 fall, winter, spring
 280 *Special Topics* fall, winter, spring
 299 *Individual Research* (1) fall, winter, spring

■ *Psychology*

Psychology is the study of behavior, including psychophysics, sensation, perception, learning, decision making, problem solving, concept formation, verbal behavior, individual development, motivation, personality, abnormal behavior, emotion, language, influence, attitudes, and social behavior. Particular emphasis is placed on quantitative analyses of behavior, and students are encouraged to explore the interdisciplinary boundaries of psychology by taking courses in such fields as engineering, psychobiology, and sociology. Student projects include experimental studies, investigation of mathematical and computer models of behavior, and quantitative analysis of psychological data.

UNDERGRADUATE COURSES

- 1 *Introduction to Psychology* (1) winter
 100A-100B-100C *Advanced Psychological Analysis I-II-III* (1)
 fall, winter, spring
 180 *Special Topics* (1) fall, winter, spring
 May be taken more than once with consent of instructor.
 190A-190B-190C *Senior Project I-II-III* (1) fall, winter, spring
 199 *Individual Study* (1) fall, winter, spring

GRADUATE COURSES

- 200A-200B-200C *Proseminar in Psychology* (1) fall, winter, spring
 280 *Special Topics* (1) fall, winter, spring
 299 *Individual Research* (1) fall, winter, spring

■ Sociology

Sociology includes the study of the basic elements of sociological analysis — social interaction, values, roles, social structure; the fundamental human groupings of primary relationships (e.g., the family), organizations (e.g., bureaucracies), communities (e.g., megalopolis), institutions (e.g., religion), masses (e.g., mobs), and stratified groups (e.g., social classes); and the basic problems of social change, social control, and social tension. Sociological analysis utilizes both sociological theory and the data obtained by such empirical techniques as sample surveys, laboratory experiments, social statistics, and field observations. Students are encouraged to engage in projects involving the application of sociology to other areas—for example, sociological history, sociology of the arts, sociology of science.

UNDERGRADUATE COURSES

1 *Introduction to Sociology* (1) spring

100A-100B-100C *Advanced Sociological Analysis I-II-III* (1)
fall, winter, spring

180 *Special Topics* (1) fall, winter, spring

May be taken more than once with consent of instructor.

190A-190B-190C *Senior Project I-II-III* (1) fall, winter, spring

199 *Individual Study* (1) fall, winter, spring

GRADUATE COURSES

200A-200B-200C *Proseminar in Sociology* (1) fall, winter, spring

280 *Special Topics* (1) fall, winter, spring

299 *Individual Research* (1) fall, winter, spring

Subject A, a remedial course taken for no credit in the fundamentals of writing, is required of all students who, upon entrance, do

not satisfy the Subject A requirement by examination. The course includes the writing of papers in addition to drill in sentence and

SUBJECT A

paragraph construction, diction, punctuation, grammar, and spelling. Satisfaction of the Subject A requirement is prerequisite to graduation and to all courses in English. The fee for taking the course is \$35.

Subject A (0) fall, winter, spring

THE FACULTY

**ROBERT MALLOUGH SAUNDERS, Professor of Electrical Engineering
and Assistant to the Chancellor for Engineering**

DAVID ISAACS, Assistant Professor of Electrical Engineering

The School of Engineering offers junior-senior programs of study intended to provide graduates with the tools requisite to the practice of engineering in industry and government after a short internship. The various programs emphasize the fundamentals underlying engineering so as to make easy future maintenance of engineering competence by either formal or informal study. Thus programs of study in the School of Engineering will equip UCI graduates with adequate intellectual tools to provide for the continued updating of their technological knowledge in the presence of a very rapidly expanding technology and the changing needs of society. It is expected that the programs, which include work in the humanities, social sciences, and fine arts, will contribute to each student's awareness of the world around him.

At the outset a single program of study emphasizing electrical engineering will be offered. In the future several other programs will be added in fields such as civil, mechanical, chemical, and materials engineering. While much of the curriculum will be common to all fields of engineering, opportunity will be afforded students to do elective work in the areas of their special interest. Thus, in the junior year students will be able to elect courses in addition

to those required. Individual programs are to be worked out with individual advisors upon admission to Irvine either at the freshman or sophomore levels or for transfer students at the junior level. It is expected that each student will devote approximately

2 THE SCHOOL OF ENGINEERING

40% of his time over the four years to the scientific and mathematical backgrounds pertaining to the particular engineering discipline under study; the purpose of this intense study of the sciences and mathematics is to make sure that graduates are extremely well

grounded in the laws and constraints of logic and nature. Another 20% of the program will be assigned to the study of the arts, humanities, and the social sciences. The remaining 40% will comprise engineering subjects.

Admission

High school students wishing to begin their engineering programs at the University of California, Irvine, should seek admission to the College of Arts, Letters, and Science, whose admission requirements are stated elsewhere in this catalogue. Upon registering in the College of Arts, Letters, and Science, students will be assigned engineering advisors who will assist them in developing a satisfactory program of study and provide the requisite advice during their freshman and sophomore years.

Junior students are admitted to the School of Engineering upon completion of a freshman-sophomore program either in the College of Arts, Letters, and Science at Irvine, at another campus of the University of California, or at one of California's junior or state colleges. Students seeking admission to the School of Engineering must satisfy the University requirements for admission to advanced standing. Students must also achieve a satisfactory combined average based on the score in the Upper Division Engineering Examination and grades in sciences, mathematics, and other subjects undertaken in the lower division. Students seeking admission to the School of Engineering must have completed the specific requirements for the junior courses to be undertaken in the School of Engineering. This means completion of the equivalent of UCI *Physics 5E* and *Mathematics 3C*.

Undergraduate Programs

Since Irvine freshmen and sophomores will be enrolled in the College of Arts, Letters, and Science, they will be expected to follow a program in one of the divisions of that College. Students should follow any of the programs they feel are meaningful to them, but they should be sure to complete the requisite physics and mathematics for admission to junior courses in engineering. The programs in the social sciences and in the physical sciences meet the physics and mathematics requirements for the junior courses in engineering. It would be well for students expecting to proceed to graduate study for the M.S. or Ph.D. degrees to elect a foreign language, preferably German or Russian, in the freshman or sophomore years. Students in junior colleges may wish to elect engineering courses in the freshman and sophomore years, and these are highly recommended if there is some doubt about their transfer to the Irvine campus. *Since UCI elects not to offer freshman and sophomore courses in engineering subjects and since other campuses do, students majoring in one of the divisions at Irvine will*

be in general ineligible for transfer to another campus of the University for upper division work in engineering. For transfer to Irvine there are no prerequisites for junior work in the School of Engineering other than the requisite mathematics and physics courses.

The junior year in the School of Engineering includes two courses in engineering and one in mathematics running throughout the year. Since some students will be entering their junior year without having had a course in digital computer programming, there is an opportunity in the beginning of the junior year to make up this or some other deficiency. Beginning with the second quarter, an elective program provides students an opportunity to do more work in the particular field of engineering appealing to them.

In the senior year additional electives will be available to follow the programs begun in the junior year. A single required engineering course in the senior year is *Optimization Theory*. Students will be expected to make a choice between a mathematics and a physics course in the senior year. There is also a two-course opening in the program so that students may elect any two courses in the University if they so desire. Students in the School of Engineering should bear in mind the general campus policy which permits them to take courses in noncontiguous areas on a "pass-fail" basis. Noncontiguous areas with respect to engineering are those in the Divisions of Humanities and Fine Arts.

It should be emphasized that the programs of study in the School of Engineering are tailor-made to the desires and objectives of individual students. Students will work out programs of study with their faculty advisor so as to maximize the educational experience offered by the Irvine campus. It should be emphasized that students are responsible for planning their own programs and for satisfactory completion of the graduation requirements; the faculty stand ready to give every assistance and the necessary advice.

Table 1 and Figure 1 summarize two suggested programs of study for engineering students; others are equally acceptable so long as they meet the graduation requirements for the School of Engineering.

TABLE 1 / Typical Programs of Study

<i>Physical Sciences</i>	<i>Social Sciences</i>
FRESHMAN YEAR (COLLEGE OF ARTS, LETTERS, & SCIENCE)	
<i>Math 2A, 2B, 2C</i>	3 courses
<i>Physics 5A, 5B</i>	2 courses
<i>Information & Communi-</i>	
<i>cation Sciences 1</i>	1 course
<i>Chemistry 1A, 1B, 1C</i>	3 courses
<i>Electives*</i>	3 courses
	<hr/>
	12 courses
SOPHOMORE YEAR (COLLEGE OF ARTS, LETTERS, & SCIENCE)	
<i>Math 3A, 3B, 3C</i>	3 courses
<i>Physics 5C, 5D, 5E</i>	3 courses
<i>Anthropolgy 1, Economics 1,</i>	
<i>Political Science 1, Psychology 1,</i>	
<i>Geography 1, Sociology 1</i>	
<i>Electives*</i>	6 courses
	<hr/>
	12 courses
JUNIOR YEAR (SCHOOL OF ENGINEERING)‡	
<i>Engineering 100A, 100B, 101, 102A, 102B, 103</i>	6 courses
<i>Engineering Electives</i>	2 courses
<i>Math 150A, 150B, 150C</i>	3 courses
	<hr/>
	11 courses
SENIOR YEAR (SCHOOL OF ENGINEERING)‡‡	
<i>Engineering 104A, 104B, 104C</i>	3 courses
<i>Engineering Electives</i>	4 courses
<i>Math or Physics Electives</i>	3 courses
	<hr/>
	10 courses
	TOTAL 45 courses

*In social sciences, humanities, or fine arts.

**In humanities, or fine arts.

‡First offered in 1966-67.

‡‡First offered in 1967-68.

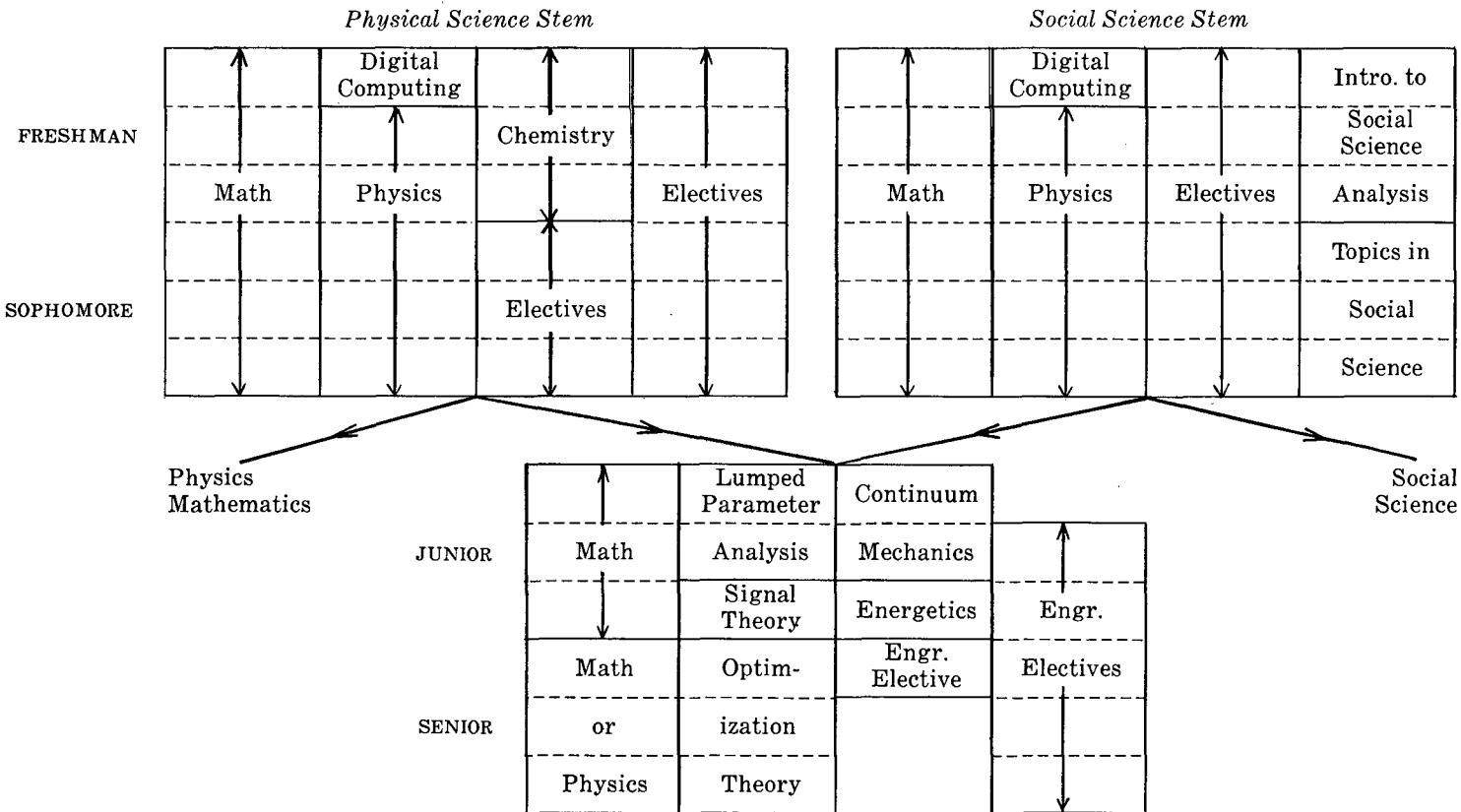


FIGURE 1. Typical programs of study for students majoring in engineering
UC IRVINE - 1965-1966

Graduation Requirements:

The faculty expects each student to meet the requirements of the University* and of the School of Engineering as follows:

1. Three courses in each of two divisions and six courses in a third division of the College other than the Divisions of Biological Sciences and Physical Sciences.
2. Credit for 45 courses as follows:
 - a. Engineering : 100A, 100B, 101A, 101B, 102, 103, 104A, 104B, 104C, plus 6 electives.
 - b. Mathematics : Nine courses.
 - c. Physics and Chemistry : Eight courses.
 - d. Fine Arts, Humanities, and Social Science : Nine courses.
3. A grade average of at least C.
4. Credit for the final nine courses must be earned in residence on the Irvine campus.

*These are listed under the College of Arts, Letters, and Science and are the same for the School of Engineering.

Proficiency Examinations:

A student who thinks himself sufficiently proficient in the subject matter underlying a specific course in the School of Engineering to receive credit without formal enrollment in that course may consult with the instructor of that course to explore what he must do to demonstrate his proficiency and gain credit. Normally, his ability will be demonstrated by a written or oral examination, but if a portion of his capability involves laboratory exercises, he may be required to perform experiments as well as to take a written examination. Normally, these examinations—written, oral or laboratory—will be given at the opening of each quarter in which the specific course is offered. All courses are available for such proficiency demonstrations.

Graduate Programs

Programs leading to the M.S. and Ph.D. degrees are planned for an early date; students seeking admission at the graduate level should request detailed information from the Dean of the Graduate Division. The general requirement for regular graduate status is a B.S. degree in engineering or science with an acceptable level of scholarship from an institution of recognized standing. At the graduate level the programs of study in general are expected to reflect the research interests of the faculty, and the graduate courses and seminars will be very closely allied to faculty research interests.

The School expects to offer the M.S. with either Plan I (with

thesis) or Plan II (without thesis). As is common in other schools and colleges, the doctoral program in engineering leading to the Ph.D. will be tailored to the individual needs and background of the student. There will be no course requirements but rather several milestones to be passed: (1) admission to the Ph.D. program by the faculty of the School; (2) passage of the preliminary examination assessing the student's background and his potential for success in the doctoral program; (3) satisfaction of the teaching requirement required of all doctoral students; (4) research preparation; and (5) completion of a significant research investigation. The degree is granted upon the recommendation of the Doctoral Committee and the Dean of the Graduate Division. Throughout the doctoral program it is expected that the student will be resident in the School.

Some financial aids such as research and teaching assistantships will be available so that each doctoral student, after he has passed the preliminary examination, will have a staff appointment in the School of Engineering.

Engineers wishing to enroll in part-time M.S. programs should apply for admission to graduate standing so as to be assigned a graduate advisor. To accommodate students employed in local industry, courses may be offered in the late afternoon or early morning. Laboratory, library, and computer facilities will be available to such student in the evening.

Special Programs

- TEACHER TRAINING / Students interested in preparing for a secondary and junior college teaching credential in engineering may follow the regular program for engineering majors. They complete their total program by electing courses that will satisfy the requirements for a secondary or junior college credential.
- ADMINISTRATION / Undergraduate degree programs in business and public administration are not offered at UCI. Engineering students wishing to prepare for a career in business or government can major in engineering and elect those specific courses required for the program of study in the School of Administration. Students interested in engineering administration are usually advised to choose junior-senior courses in economics or political science as engineering electives.

Students in engineering who, at the completion of their junior year, satisfy all of the requirements for admission to the Graduate School of Administration except the Bachelor's degree, can apply for admission to the joint program in administration and engineering. This program permits superior students to earn a Master's degree in administration after five years rather than the usual six. This program will be available to freshmen and sophomores entering in 1965, and for juniors entering in 1966.

Courses of Study

- *100A-100B *Lumped Parameter Systems* (1) fall, winter. Prerequisites: *Physics 5E, Math 3C, & ICS 1* (may be taken concurrently).
- *101A-101B *Continuum Mechanics* (1) fall, winter. Prerequisites: *Physics 5E, Math 3C, ICS 1* (may be taken concurrently).
- *102 *Signal Theory* (1) spring. Prerequisite: *Eng 101B*.
- *103 *Energetics* (1) spring. Prerequisite: *Eng 101B*.
- *104A-104B-104C *Optimization Theory* (1) Prerequisites: *Eng 101A, 101B.*
Physical Electronics (1) winter, spring. Prerequisite: *Eng 100A.* Corequisite: *Eng 100B.*
- *110A-110B *Physical Electronics* (1) winter, spring. Prerequisite: *Eng 100A.* Corequisite: *Eng 100B.*
- *111A-111B *Network Analysis and Synthesis* (1)
- *112A-112B-112C *Electronic Circuits* (1)
- *120A-120B *Digital Computers* (1) winter, spring. Prerequisite: *Eng 100A, ICS 1.*
Corequisite: *Eng 100B.*
- *125A-125B-125C *Information and Communication Theory* (1)
- *130A-130B-130C *Materials and Fields* (1)
- *140A-140B *Feedback Control Systems* (1) winter, spring. Prerequisites: *Eng 100A.*
Corequisite: *Eng 100B.*

GRADUATE COURSES

- 200 (VT) *Techniques of Linear System Theory* (1) fall
- *210A-210B-210C *Active Linear and Nonlinear Circuits* (1)
- *240A-240B-240C *Random Processes and Advanced Theory in Automatic Control Systems*
- 299 *Individual Study or Research* (1)

*To be offered for the first time, fall 1966.

R. W. GERARD
Dean of the Graduate Division

Graduate study is a major aspect of the academic activity of the University of California, Irvine. Appropriate graduate degrees at the Master's and Doctor's levels, both those emphasizing the creative arts and creative scholarship and those emphasizing technical proficiency, will be offered. The graduate student will be given full opportunity to further his development in a chosen discipline, by course and seminar work and by research and other creative work; to achieve excellence in such disciplines as English, foreign languages, mathematics, bibliography, and computer techniques; to develop some knowledge of the history of his broad area of interest; and to acquire some understanding of higher education in this country and some guided experience in teaching.

Admission to the Graduate Division is by the Graduate Dean on the advice of the Department and the Graduate Council. Completion of work towards a Bachelor's degree, with adequate coverage and academic excellence, is a normal prerequisite. Students are invited to consult the Department of interest for details on necessary background; deficiencies can sometimes be overcome by taking further specified undergraduate work. Requirements for good standing and for the award of a higher degree are those of the University of California as a whole, supplemented by specific requirements of the Graduate Division, the Division, and the Department of specialization.

- THE MASTER'S DEGREE/The M.A. or M.S. is normally attained by one of two routes: Plan 1, a thesis; and Plan 2, a comprehensive examination. Both require normally one year of residence on the campus, a foreign language as specified by the department, a certain number of courses maintained at a B average, and an appropriate

demonstration of achievement. Plan 1 includes course work, a certain number of which must be at the graduate level, a thesis, and, usually, general examination in the particular field of study. Under Plan 2, further course work replaces the thesis, and a more searching examination is administered. Opportunities for special pre-

2 THE GRADUATE DIVISION

paration in teaching, as well as guided experience in actual teaching, will be offered by most departments. Other Master's degrees, awarded for professional competence and often requiring more extended work, will also be offered. Divisional and departmental statements should be examined for details.

- **THE DOCTOR OF PHILOSOPHY** / This degree is awarded on the basis of evidence that the recipient possesses knowledge of a broad field of learning and expert mastery of a particular sector of it. It is not a reward for diligence but an indication of critical judgment, synthetic understanding, and imaginative creativity. The thesis is expected to demonstrate such abilities. Other Doctor's degrees, marking professional attainment, and with correspondingly different emphasis, will be offered after 1965-66.

The candidate for the doctorate is expected to be in full-time residence on the campus for two years. Three to five years of full-time academic work beyond the baccalaureate is normally required to complete the degree. During the first year or two of graduate work, the student is normally guided by a departmental advisor. When judged ready by the department, often aided by preparatory examinations, the student is encouraged to qualify for candidacy for the Doctor's degree. At this time, a committee is appointed by the Graduate Dean, which henceforth supervises his graduate program.

- **FOREIGN LANGUAGE TRAINING** / Research and field work overseas may be facilitated by oral proficiency training in any of twenty-eight languages taught at the Defense Language Institute at the Presidio of Monterey. This unique program is available on a limited basis to University graduate students and faculty. For additional information, the campus Language Training Advisor may be consulted. Application forms may be obtained from the Secretary, University of California Language Training Advisory Committee, University of California, Santa Cruz, Santa Cruz, California 95060.

RICHARD C. SNYDER, *Professor of Political Science and Administration and Dean of the Graduate School of Administration*

FRED M. TONGE, *Associate Professor of Administration and Director of Computer Facilities*

- GOALS/The Graduate School of Administration strives to contribute to the practice of administration in our society through professional training of students, with emphasis on the core disciplines and techniques underlying that practice and on their application to problems of administration; training of students for careers in teaching and research in administration; and research activities, often in cooperation with elements in the surrounding community, and always attuned to the long-term needs and problems of administration.

Graduate Programs

The Graduate School of Administration will offer two degree programs. The master's program will be a two-year professional program providing a common curriculum in the core disciplines and techniques underlying the practice of administration, followed by specialized work in the areas of business, public, and educational administration and management science. The doctoral program will provide training for a career in teaching and research in administration.

- THE MASTER'S PROGRAM/The program leading to the M.S. degree in administration will normally be of two years' duration. The first year, common to all areas of specialization, will include courses in the core disciplines and techniques basic to administration. The second year will involve courses in the areas of specialization, stressing basic institutional knowledge of the area, advanced courses in the area, and general electives. A major feature of the second year will be a continuing seminar in the area of specialization.

In addition to the two-year program for students who have received a Bachelor's degree, outstanding undergraduate students may enter a cooperative "three-two" program with the Division

of Social Sciences. Students in such a program will spend their first three years in Social Sciences, followed by two years in the



Graduate School of Administration. Successful completion of requirements in this program leads to a Bachelor's degree in the cooperating field after the fourth year and a Master's degree in administration after five years.

- CORE COURSES / Because UCI is not bound by adherence to a prescribed course length, the various subjects of study are not viewed in terms of quarter courses of equal duration and weight, but rather as topics to which time and effort appropriate to their content will be allocated. It is expected that most students will have had previous academic work in some topics, for which credit will be granted as appropriate. The common first year program will include work in the following topics :

CORE DISCIPLINES

Economics Of The Firm. An analysis of market behavior, production policies, and the functioning of the price system in a private enterprise economy.

Economic Fluctuations And Growth. The impact of economic fluctuations and growth on markets and firms, including the effects of governmental policies and actions.

Individual Behavior. A study of the characteristics and determinants of individual behavior, drawing upon all the social sciences.

Group Behavior. A study of the characteristics and determinants of behavior of groups, particularly formal and informal groups existing among members of structured organizations, drawing upon all the social sciences.

Governmental Processes. An analysis of the modern American political process, stressing interactions between the formal participants in government, political parties, and special interest groups.

Mathematical Foundations. Logic, sets and partitions, probability, linear algebra.

Statistics. Stochastic processes, statistical inference.

CORE TECHNIQUES AND PROBLEMS

Quantitative Controls. Accounting and budgeting as management tools, emphasizing both the acquisition of appropriate data and the interpretation of results.

Computer Programming. Training in use of the computer as a tool for data analysis, problem-solving, and system simulation.

Optimization Techniques. Search techniques, linear programming, dynamic programming, choice of decision criteria, role of heuristic methods.

Analysis of Operations. Study of the organization as an operating entity producing goods and/or services, with emphasis both on individual components and characteristics of the organization as a system of interrelated components.

Constituency Analysis. Study of the relationship between the organization and those it serves, including distribution, demand and market analysis, and methods of influencing the organization's constituency.

Analysis of Internal Financial Decisions. Analysis of the decision-making process involved in the management of available funds and their internal allocation.

Analysis of Historical Materials and Developments. A parallel study of developments in economic, political, and social thinking and of changes in the structure and behavior of organized groups.

Human Relations. The dynamics of interpersonal interaction in an administrative setting, with special projects designed to give students realistic organizational experiences.

Administrative Processes. A study of decision-making in administrative organizations and of the interests and contributions of various participants.

- **SECOND YEAR COURSES**/The second year will be devoted primarily to courses in the student's area of specialization—business, public, or educational administration or management science. Each student's program will include the continuing seminar in his area of specialization and appropriate courses selected from those devoted to institutional knowledge in the areas of specialization, advanced work in the areas of specialization, and general electives. Many of these courses are drawn from the offerings of other schools, divisions, and institutes of the University.
- **CONTINUING SEMINAR IN THE AREA OF SPECIALIZATION**/One-third of the student's course load during the second year is spent in a continuing seminar in his area of specialization. The seminar will focus on integration of material introduced in the core and other courses and application of that knowledge to current and enduring problems in the area of specialization. The seminar will include satisfactory completion of an independent research project in the area of specialization.
- **INSTITUTIONAL KNOWLEDGE IN THE AREAS OF SPECIALIZATION**/A number of courses are offered to supply more detailed institutional knowledge of the areas of specialization. The particular courses offered each year will depend to some extent on the interests and programs of students in the school. In general, these courses are not bound to a standard unit of length and content, but will be allotted the time and effort appropriate to their content. Some examples of courses in institutional knowledge follow.

Labor Relations. The role of labor unions in society, with special attention to the structure and aims of union, management, and governmental policies relating to labor-management relations.

Financial Institutions. Sources of capital, the structure of financial markets and institutions and their relation to the economy as a whole.

Principles of Curriculum Development.

Public Finance and Accounting.

Business Law.

International Relations and Realpolitik.

City and Regional Planning.

History of Public Administration.

History of Education.

Philosophy of Education.

Civil Service.

Economics and Administration of the Defense Establishment.

- ADVANCED COURSES IN THE AREAS OF SPECIALIZATION / A number of courses will be offered in advanced techniques and problems in the several areas of specialization. It is expected that at least one-fourth of the student's second year program will be devoted to such courses. The exact course offering each year will vary to reflect the interests of students and faculty involved. Examples of such courses are given below :

Production Management. An advanced seminar in the application of management science and operations research techniques to problems of production planning and control.

Marketing Management.

Financial Management.

Operations Research Techniques.

International Economics and Management.

Politics and Administration of Emerging Nations.

Components of the Urban Environment.

Science, Technology, and Public Policy.

Operations of International Organizations.

Advanced Accounting.

Business Policy.

Current Problems in Foreign Policy.

Welfare Economics and Resource Allocation.

- GENERAL ELECTIVES / A number of courses of general interest across areas of specialization will be offered. Some examples of general electives follow :

Management Information Systems. The role of information flows in organizations and the use of electronic data processing devices in integrated information processing systems.

Advanced Organization Theory.

Advanced Economics.

Advanced Statistics.

Information Processing Systems.

Mathematical Analysis in Behavioral Science.

Security Analysis and Investment.

Biological and Economic Feedback Systems.

Ethics and Responsibilities of Administration.

- THE DOCTORAL PROGRAM / The course of study for the doctoral degree in administration involves two stages, a period of preparation for the qualifying examinations, successful completion of which will advance the student to candidacy for the degree, and a period spent in preparation of a dissertation in which the candidate makes a contribution to knowledge of his field of study. A more detailed statement of the requirements in each stage may be obtained by contacting the Dean of the Graduate School of Administration.

The faculty assumes as one of its responsibilities the education of teachers for elementary and secondary schools and junior colleges. Those responsibilities are to be met through curricula combining subject matter concentration in teaching fields, studies seeking to relate theory and practice, and supervised internships designed to test educational theory in teaching and to develop professional attitudes.

Faculty members in every division of the College and the School of Engineering will participate in teacher education, appraising themselves of the needs of elementary and secondary schools, planning curricula, and lending support to young men and women interested in teaching careers. They will offer no "special content" courses for teachers. Consequently, future teachers will be part of the entire intellectual climate of UCI, studying side by side with colleagues of like academic bent who may or may not be planning to become teachers.

Students who intend to teach in elementary or secondary schools will plan appropriate teaching majors and minors with their subject matter advisors. In their senior year, or following graduation, they will enroll in studies combining educational theory with observation and preinternship in selected cooperating schools.

The University is fortunate to be surrounded by excellent schools that can provide an array of opportunities for students to observe and participate in educational affairs and gifted personnel who will work side by side with University personnel. Master teachers in these schools will provide a clinical orientation through their supervision of interns and participation in accompanying lectures, seminars, field trips, and workshops.

After graduating and completing preinternship work, prospective teachers will be employed as paid, part-time teaching interns in cooperating public schools. Lectures, seminars, and clinics designed to relate theory and practice accompany internships. The student will be recommended for a teaching credential when he has demonstrated a satisfactory level of insight into educational problems and issues, the ability to apply pertinent knowledge in the analysis of learning, and the ability to guide the learning of others.

THE EDUCATION OF TEACHERS



Students planning to teach in junior colleges will complete a Master's degree, concentrating in appropriate teaching fields. They may combine professional studies and a paid teaching internship in the year following attainment of the Master's degree.

GRADUATE STUDIES IN EDUCATION

There will be no graduate course offerings in education for the 1965-66 academic year. Beginning in 1966-67, however, graduate students may begin programs of specialization in selected fields of education, especially those drawing substantially from other disciplines such as psychology, philosophy, history, and sociology. Fields of specialization available in 1966-67 will be announced in 1965-66. In time, a full range of programs in the social, psychological, and philosophical foundations of education and in administration (in cooperation with the Graduate School of Administration) and in curriculum studies will be available.

Courses and seminars in education and internships for prospective elementary and secondary school teachers will be offered in subsequent years. They will not be offered in 1965-66; consequently, it is not possible to satisfy requirements for teaching credentials during that year.

Normally, undergraduates planning to teach should anticipate from one to three quarters of post-baccalaureate studies, depending on their care in planning and their academic competence. Graduate students may complete their preparation in a post-baccalaureate year.

The programs to be established normally will satisfy the requirements for certification in most states.

EDUCATION ABROAD PROGRAM

The Education Abroad Program offers opportunities to undergraduate students of the University of California to study in universities overseas. It is administered for the entire University by the Santa Barbara campus and serves also as a focal point of information on all types of educational exchange experiences. A bulletin entitled *University of California Abroad* is published periodically and is distributed to all of the campuses of the University.

In 1965-66 the University will continue the operation of its study centers in France, Germany, Italy, Japan, and Spain and will open new centers in Colombia, Hong Kong, and the United Kingdom.

Eligibility requirements are: junior standing in the University, two years of university-level work in the language of the country with a B average (or the equivalent thereof), an overall B average, seriousness of purpose, and an indication of ability to adapt to a new environment. Transfer students are eligible if they meet the language requirement and have completed at least one language course in the University of California. (The language requirement is not applicable to the centers in Hong Kong, Japan, and the United Kingdom).

The participants will spend from nine to eleven months abroad, including a special orientation program, six or seven weeks of intensive language preparation, a full academic year in the university of their choice, and some vacation travel.

All will be concurrently enrolled as students at the University of California and in the host university and will receive full academic credit for courses satisfactorily completed.

The Regents endeavor to bring this year abroad within the reach of all students, regardless of their financial resources.

Applications for 1966-67 will be accepted on or after October 15, 1965.

INSTRUCTIONAL
& RESEARCH
SERVICES

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THE LIBRARY

JOHN E. SMITH, *University Librarian*

A library to support the teaching and research programs has been in the process of selection and organization since 1962. In September 1965, about 90,000 volumes will be ready for use. Plans are in motion to expand the collection to 250,000 volumes by 1971.

The collection will be "open-stack," accessible to all, with a service-minded staff on hand to assist students in its use.

The Library will be strong in bibliographical works, so that book resources beyond those immediately available at Irvine can be tapped. The catalogs of the great scholarly collections at the Berkeley and UCLA campuses, as well as the Library of Congress, will be available to faculty and students.

A daily shuttle service to UCLA will be provided for graduate students who may need direct access to the UCLA libraries. Graduate students at UCI will have the same library privileges as do UCLA graduate students.

THE COMPUTER FACILITY

FRED M. TONGE, *Associate Professor of Administration
and Director of Computer Facilities*

The Computer Facility provides computational service for instructional and research purposes to members of the University community. The computer system is designed for easy access by faculty and students through use of remote on-line stations and appropriate programming languages. Computer Facility staff provide consulting service to users on difficult programming problems and offer short, non-credit courses on the available services.

INTRAMURAL SPORTS AND INTERCOLLEGIATE ATHLETICS

The intramural sports program will provide opportunities for all men and women students to participate in a wide variety of individual and team sports. Competition will be organized on the basis of individuals and teams representing various campus student organizations and residence hall units. Awards will be given for outstanding individual and team performance.

In 1965-66 UCI will have representative teams in basketball, golf, tennis, swimming, water polo, sailing, and crew. The inter-collegiate athletics program will be expanded as rapidly as facilities and finances permit. When sufficient student interest is demonstrated, a program of intercollegiate athletics for women will be promoted in such sports as golf, tennis, and swimming.

UNIVERSITY EXTENSION

By a variety of methods the University of California Extension makes the resources of the University available to individuals and organizations throughout the state. Its aims are the intellectual and cultural development of adults, the dissemination of new knowledge resulting from teaching and research within the University; continuing professional, scientific, and technical training; development of special educational programs for public and private organizations; and education in public affairs.

For detailed information, write or telephone the Extension office on any campus of the University or at the following additional locations:

1100 South Grand Avenue, Los Angeles 90015
Tel: (213) 747-4321

1221 Fourth Avenue, San Diego 92101
Tel: (714) 232-7321

San Francisco Extension Center
55 Laguna Street, San Francisco 94102
Tel: (415) 861-6833

3620B West 182nd Street, Torrance 90504
Tel: (213) 323-4773

SUMMER SESSIONS

Summer Sessions are held each year on the campuses at Berkeley, Los Angeles, Santa Barbara, and Davis. Admission to the exercises of the Summer Sessions is limited to students who are currently in good standing on any campus of the University of California or at another college or university, to applicants under twenty-one years of age who are graduates of high schools or other secondary schools, and to qualified applicants over twenty-one years of age. Courses of instruction leading to baccalaureate and advanced degrees are offered.



■ APPLICATION FOR ADMISSION

Applications for admission as an undergraduate should be filed, together with a nonrefundable fee of \$5, with the Office of Admissions, 1210 Library Building, University of California, Irvine, California 92650. An application form will be supplied by the Office of Admissions upon request. The application must be filed from October 1 through March 1 for the fall quarter, from May 1 through November 1 for the winter quarter, and from August 1 through February 1 for the spring quarter. Applicants are urged to file early in the application period.

Admission requirements are uniform on all campuses of the University. Admission to the University entitles the student to attend the campus of his choice if the required facilities are available. Since applications will be processed and acted upon in only one Office of Admissions, applications should not be directed to more than one campus.

If after an applicant has filed for admission his plans change and he prefers to register on a different campus, he must write to the Director of Admissions, 570 University Hall, University of California, Berkeley, California 94720, indicating the campus where he now wishes to register and the reason for his change. His records will be transferred to the campus he wishes to attend provided facilities are available there. Such requests must be received at least three weeks before registration.

■ TRANSCRIPTS OF RECORD

Each applicant is responsible for requesting the graduating high school and each college attended to send official transcripts of record directly to the Office of Admissions. Those applying as entering freshmen should ask the high school to submit preliminary transcripts showing their complete record through the sixth semester and listing courses in progress. In every case, a final transcript including a statement of graduation will be necessary. Transcripts from the last college attended should include a statement of good standing or honorable dismissal. A preliminary transcript should show work in progress.

ADMISSION
TO THE
UNIVERSITY

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■ UCI TRANSCRIPTS

Upon application, the Registrar will provide official transcripts of work undertaken at Irvine. The charge for each transcript of every undergraduate record and/or graduate record is \$1.00 and the total amount due must accompany the application.

■ NOTIFICATION OF ADMISSION

So that students may be informed as early as possible about eligibility, they are urged to apply early in the application period and request to have transcripts of record sent to the Office of Admissions.

Students may expect notification about four weeks after final transcripts have been received by the Office of Admissions. Since the receipt of preliminary transcripts may shorten this interval, applicants should arrange for the submission of preliminary transcripts showing work in progress.

Approximate dates of notification:

Fall quarter: April 15
Winter quarter: December 1
Spring quarter: February 1

■ PREPARATION FOR UNIVERSITY CURRICULA

In addition to the high school subjects required for admission to the University, certain preparatory subjects are recommended to give the student an adequate background for his chosen field of study. Lack of a recommended high school course may delay graduation from the University. Details of these recommendations will be found in the bulletin, *Prerequisites and Recommended Subjects*, which is customarily in the hands of high school and junior college counselors and which may be obtained from the Office of Admissions or the University Dean of Educational Relations, University Hall, University of California, Berkeley, California 94720.

All students should pursue a full program of academic subjects during their senior year in high school.

Applicants not eligible for admission to the University are usually advised to attend one of the California junior colleges and take courses applicable to the requirements of the college or school in which they wish to enroll.

■ SUBJECT A : ENGLISH COMPOSITION

The University requires every accepted student to pass an examination in English composition (the Subject A Examination) or to complete in college an acceptable course of at least 3 units in English composition with a satisfactory grade. Students who enter the University with credentials showing the completion elsewhere of acceptable college-level training in composition or a score of at least 600 in the College Entrance Examination Board Achievement

Test in English Composition taken after they have completed the eleventh grade are considered to have met the Subject A requirement. All other students are required to take the examination given by the University. Although it is not required for admission, the test must be taken at the opening of the first quarter in attendance, if not taken previously. Students who neither pass the examination nor meet the requirements in one of the above ways will be required to take the noncredit course in English composition, for which a fee of \$35.00 is charged.

■ ADMISSION TO FRESHMAN STANDING

An applicant for admission to freshman standing must not have been registered in regular session in any college-level institution since graduation from high school.

If, at the time of high school graduation, the applicant does not meet the requirements given below for admission to freshman standing or does not qualify by examination, he must meet the requirements for admission to advanced standing. An exception to this regulation will be made only if the student's deficiency has been the result of his not having studied one or more required high school subjects. Such a student can sometimes remove the deficiency during the summer; he should consult the Office of Admissions in advance.

■ REQUIREMENTS FOR ADMISSION TO FRESHMAN STANDING

An applicant for admission to freshman standing must meet the requirements listed below. Special requirements for nonresident applicants will be found on page 98.

GRADUATION FROM HIGH SCHOOL

An applicant who has been graduated from a high school listed in *Public and Private High Schools in California with College Preparatory Programs Accredited by the University of California* will be admitted to the University upon the completion, with the required scholarship average, of prescribed courses. An applicant who has been graduated from a California school not appearing in the above publication will, upon request to the Office of Admissions on the campus where he wishes to register, be instructed as to the procedure to follow. When a resident of California has been graduated from a high school outside of California, the acceptability of the record is determined by the Office of Admissions.

SUBJECT REQUIREMENTS (the "a to f pattern")

a. *History*, 1 unit

This must consist of 1 unit of United States history, or $\frac{1}{2}$ unit of United States history and $\frac{1}{2}$ unit of civics or American government.

b. English, 3 units

These must consist of six semesters of English composition, literature, and oral expression.

c. Mathematics, 2 units

These must consist of two semesters of algebra and two semesters of plane geometry or an integrated two-year course covering the same material. Advanced algebra and trigonometry may be substituted for algebra, and trigonometry and solid geometry for plane geometry.

d. Laboratory Science, 1 unit

This must consist of an eleventh- or twelfth-grade year course in one laboratory science. Both semesters must be in the same subject field.

e. Foreign Language, 2 units

These must be in one language. Any foreign language with a written literature is acceptable.

f. Advanced Course, 1 (or 2) units

This must be chosen from the following :

Mathematics, a total of 1 unit of second-year algebra, solid geometry, trigonometry. Foreign language, either 1 additional unit in the same foreign language offered under "e" or 2 units of another foreign language. Science, 1 unit of either chemistry or physics in addition to the science offered under "d."

ELECTIVES

Additional elective units to complete the minimum of 15 standard entrance units are also required.

SCHOLARSHIP REQUIREMENTS

At least a B average is required in courses taken after the ninth year used to meet the subject requirements. Grades received in elective courses or in courses taken in the ninth year or earlier are not used in computing this average. Subject requirements are satisfied by courses in which a grade of C or higher has been assigned. Grades are considered on a semester basis except from schools that give only year grades.

In determining the B average, a grade of A in one course will be used to balance a C in another, but an A may not be used to compensate for D, E, or F grades.

Courses taken in the ninth year or earlier in which a grade of D or lower is received may be repeated to establish subject credit.

Courses taken after the ninth year in which a grade of C or lower is received may be repeated to establish subject credit or to improve scholarship. Grades earned in the first repetition may be used to satisfy scholarship; grades of C or higher in additional repetitions will satisfy the subject requirements, but will not be counted higher than a C in scholarship computation.

Courses may be repeated in an amount not to exceed 2 units of the "a to f" pattern.

ADMISSION BY EXAMINATION

An applicant who is ineligible for admission to freshman standing and who has not attempted college work subsequent to high school (except during the summer session immediately following high school graduation) may qualify for admission by examination.

The University does not offer entrance examinations but accepts the results of examinations given by the Educational Testing Service for the College Entrance Examination Board.

To qualify by examination, the applicant must present scores in the Scholastic Aptitude Test (S.A.T.) and three Achievement Tests. The three Achievement Tests are to include English composition and one from each of the following two groups:

1. Social Studies and Foreign Languages
2. Mathematics and Sciences

The tests must be taken after completion of the first half of the eleventh grade. The first repetition of a test will be accepted, but the verbal and mathematics scores on the Scholastic Aptitude Test must be from the same sitting. The total score on the Scholastic Aptitude Test must be at least 1000; the scores on the three Achievement Tests must total at least 1650, and the score on any one Achievement Test must not be less than 500.

An applicant who has graduated from an unaccredited high school may qualify by examination under the foregoing rules. For admission of nonresident applicants by examination see page 98.

Arrangements to take the tests should be made with the Educational Testing Service, P.O. Box 1025, Berkeley, California 94701, or P.O. Box 592, Princeton, New Jersey 08540. The fees are to be paid to the Educational Testing Service. Scores will be regarded as official only if they are received by the Office of Admissions directly from the Educational Testing Service.

TEST DATES	APPLICATION DEADLINES
Wednesday, July 14, 1965	June 16, 1965
Saturday, November 6, 1965 (S.A.T. given in California only)	October 9, 1965
Saturday, December 4, 1965	November 6, 1965
Saturday, January 8, 1966	December 11, 1965
Saturday, March 5, 1966	February 5, 1966
Saturday, May 7, 1966	April 9, 1966
Saturday, July 9, 1966	June 11, 1966

Applicants should arrange to take the tests as early as possible. The scores of an applicant who takes the tests in March may be reported too late for consideration for admission in

the fall; similarly, the scores of an applicant who takes the tests in November may be reported too late for consideration for admission in the spring.

ADMISSION TO ADVANCED STANDING

An applicant who has registered in a junior college, a four-year college, a university, extension classes of college level, or any comparable institution since graduation from high school is subject to regulations governing admission to advanced standing. The applicant may not disregard his college record and apply for admission to freshman standing.

REQUIREMENTS FOR ADMISSION TO ADVANCED STANDING

An applicant for advanced standing must meet the requirements listed below.

The requirements for admission to advanced standing vary in accordance with the high school record of the applicant. Each applicant, however, must present from the last accredited college or university attended a statement of good standing and an academic record with a grade point average* of C (2.0) or better. If the record established in any one accredited institution is below a C (2.0) average, an additional unit and scholarship requirement may be imposed on subsequent credit completed to offset the deficit incurred. In addition, the applicant must meet one of the following conditions:

1. An applicant who was eligible for admission to the University in freshman standing (see page 93), may be admitted at any time he has established an overall grade point average of C (2.0) or better.
2. An applicant who was ineligible for admission to the University in freshman standing, but whose only deficiency arose from not having studied one or more of the required high school subjects, may be admitted when the following conditions are met:
 - a. He has established an overall grade point average of C (2.0) or better.
 - b. He has satisfied, by appropriate courses, the subject requirements for admission to freshman standing (see page 93).

*The grade point average is determined by dividing the total number of acceptable units attempted into the number of grade points earned on those units. Courses completed with a grade lower than C may be repeated, but the units and grade points count each time the course is taken. Scholarship standard is expressed by a system of grade points and grade point averages in courses acceptable for advanced standing credit in the University of California. Grade points are assigned as follows: for each unit of A, 4 points; B, 3 points; C, 2 points; D, 1 point; P, E, and F, no points.

Exception: Deficiencies in subject requirements will be waived in an amount not exceeding 2 high school units if the applicant has established a minimum of 56 units passed with a grade point average of 2.4 or better. Subject deficiencies in excess of 2 units must be satisfied.

3. An applicant who was ineligible for admission to the University in freshman standing because of low scholarship or a combination of low scholarship and incomplete subject preparation (omission, or by grades of D or lower) may be admitted when the following conditions are met:
 - a. He has established a minimum of 56 units passed with a grade point average of 2.4 or better.
 - b. He has satisfied, by appropriate courses, subject requirements for admission to freshman standing (see page 93) except that subject deficiencies will be waived in an amount not exceeding 2 high school units.

DEFICIENCIES

In the case of a student who is technically ineligible for admission to the University, the Admissions Officer has authority to consider other evidence of ability to pursue University work.

INTERCAMPUS TRANSFER

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 at another institution, may apply for transfer to another campus of the University by filing the proper forms on the campus where he was last registered in regular session. The intercampus transfer application form and application for transcript of record form may be obtained from the Office of the Registrar and must be filed with that office within the filing periods listed on page 91 under "Application for Admission."

CREDIT FOR WORK TAKEN IN OTHER COLLEGES

The University grants unit credit for courses consistent with its curriculum that have been completed in colleges and universities accredited by appropriate accrediting agencies.

As an integral part of the system of public education of California, the University accepts, at full unit value, approved transfer courses completed with satisfactory grades in the public junior colleges of the state. Frequently, students who intend to complete their advanced studies at the University will find it to their advantage to complete the first two years of their college course in one of the many excellent California public junior colleges. After a student has earned 70 semester units acceptable toward a degree, no further credit will be

granted for courses completed at a junior college.

The decision regarding the acceptability of extension courses taken at an institution other than the University rests with the Office of Admissions. The decision regarding the applicability of such course work in satisfaction of degree requirements rests with the Office of Admissions. The decision regarding the applicability of such course work in satisfaction of degree requirements rests with the faculty of the particular school or college in which the student plans to enroll.

■ NONRESIDENT ADMISSION

GRADUATION FROM HIGH SCHOOL

The acceptability of records from high schools outside California will be determined by the Office of Admissions.

SUBJECT REQUIREMENTS

The same subject pattern as for a California resident is required (see page 93).

SCHOLARSHIP REQUIREMENTS

The scholarship requirements for a resident applicant apply to a nonresident applicant except that the scholarship average must be 3.4 or higher on the required high school subjects.

ADMISSION BY EXAMINATION

A nonresident applicant who is ineligible for admission to freshman standing and who has not attempted college work subsequent to high school (except during the summer session immediately following high school graduation) may qualify for admission by examination. The requirements for a resident applicant apply to a nonresident applicant except that the total score on the Scholastic Aptitude Test must be at least 1100 and the scores on the three Achievement Tests must total at least 1725.

REQUIREMENTS FOR ADMISSION OF NONRESIDENTS

TO ADVANCED STANDING

In addition to the regular admission requirements (see page 96), a nonresident applicant for admission to advanced standing must have maintained a grade point average of 2.8 or higher in college subjects attempted and acceptable for transfer credit. If the applicant did not have at the time of high school graduation an average of 3.4 or higher in courses satisfying the required subject matter, he must present a minimum of 56 units passed with a grade point average 2.8 or higher.

ADMISSION OF APPLICANTS WITH BACHELORS' DEGREES

Ordinarily, an applicant with a Bachelor's degree substantially

equivalent to the Bachelor's degree granted by the University of California should apply for admission to graduate status. An applicant with a superior record may occasionally qualify as a student in limited status or, after a complete change of objective, as an undergraduate seeking a second baccalaureate. In either case, the previous scholarship record must be such as to indicate very strong probability of academic success. Admission is subject to the approval of the Admissions Officer and of the dean of the division or school in which the applicant plans to enroll.

ADMISSION OF APPLICANTS FROM OTHER COUNTRIES

The credentials of an applicant for admission from another country in either undergraduate or graduate standing are evaluated in accordance with the general regulations governing admission. An application, official certificates, and detailed transcripts of record should be submitted to the Office of Admissions several months in advance of the opening of the quarter in which the applicant hopes to gain admittance. Doing so will allow time for exchange of necessary correspondence and, if the applicant is admitted, will help him in obtaining the necessary passport visa.

An applicant from another country whose native language is not English may be admitted only after demonstrating that his command of English is sufficient to permit him to profit by instruction in the University. An applicant's knowledge of English is tested by an examination given by the University. Admission of an applicant who fails to pass this examination will be deferred until he has acquired the necessary proficiency in the use of English.

A student from a country where the language is not English is given college credit in his own language and literature only for courses satisfactorily completed in his country at institutions of college level, or for upper division or graduate courses taken in the University of California or in another English-speaking institution of approved standing.

All features of the Student Health Service are available to foreign students upon payment of the incidental fee of \$219 per academic year.

■ ADMISSION TO SPECIAL STATUS

Students over age 21 who have not had the opportunity to complete a high school program or who have not completed a substantial amount of college work and who by reason of special attainments may be prepared to undertake certain courses in the University toward a definite and limited objective, may be admitted for a specified time. A personal interview is usually required and the applicant must submit transcripts of record

from all schools attended beyond the eighth grade. A special student will seldom be able to undertake the work of the engineering and professional colleges or schools. He will not be admitted to special status for the purpose of making up requirements for admission to the University as a regular student.

■ ADMISSION TO LIMITED STATUS

Students in limited status are those with a Bachelor's degree who are not candidates for an advanced degree or those without a Bachelor's degree who have completed a substantial amount of college work and who by reason of special attainments may be prepared to undertake certain courses in the University toward a definite and limited objective. Transcripts of record from all schools attended beyond the eighth grade must ordinarily be submitted. Admission is for a definite period, and a prescribed scholarship average must be maintained. An applicant will not be admitted to limited status for the purpose of raising a low scholarship average.

■ ENGINEERING EXAMINATIONS

Since prospective engineering students are enrolled in their freshman and sophomore years in the College of Arts, Letters, and Science, the Lower Division Engineering Examination is not required by the School of Engineering at Irvine. A \$5.00 fee is charged for the Upper Division Engineering Examination if taken at regularly scheduled times and locations; otherwise the fee is \$10.00.

The Upper Division Engineering Examination is an achievement test that includes sections on English, mathematics, chemistry, physics, and lower division engineering subjects. The School will not, however, consider the engineering section in making its evaluation. It is required of all students who seek junior-senior status in the School of Engineering. The score on this examination is used in conjunction with the student's college record to determine the eligibility of the student planning to enroll in the junior-senior engineering program offered by the University. Upper Division Examinations are given on announced dates at various test sites throughout the State.

The appropriate examination should be taken well in advance of the quarter in which the applicant plans to register. Formal application for admission to the University as well as the application to take the test must be filed before the date scheduled for the examination.

■ ADMISSION TO GRADUATE STATUS

Students seeking admission to graduate status on the Irvine campus must hold a Bachelor's degree or its equivalent from an

institution of acceptable standing. The Dean of the Graduate Division and the department of specialization evaluate applications for admission in terms of scholastic qualifications and formal preparation for the graduate field of study.

Students who do not desire to become candidates for higher degrees must meet the same admission requirements as those who are prospective candidates for degrees.

■ FAILURE TO REGISTER

An applicant who is not eligible for admission or one who has been admitted but does not register in the quarter for which he applied, and who thereafter desires to attend the University, must submit a new application for admission.

■ MEDICAL EXAMINATION AND VACCINATION CERTIFICATE

To safeguard the health of the student and of the University community, every new student (including transfers) must submit to the Student Health Service a physical examination questionnaire completed and signed by his personal physician. Every new student and every student returning to the University after an absence of one or more quarters must present with the medical examination form a certificate of successful vaccination against smallpox within the last three years. The forms for these reports are routinely sent to all new students.

■ RULES GOVERNING RESIDENCE

Each student is responsible for making sure he is at all times properly classified as resident or nonresident of California. If he is in doubt about his resident status he should consult the student handbook or communicate with the Attorney in Residence Matters, 590 University Hall, University of California, Berkeley, California 94720.

■ STUDENT EXPENSES AND FEES

It is not possible to give exact figures for student expenses on the Irvine campus of the University of California; costs will vary according to personal tastes and the financial resources of the individual. Certain expenses are common to all students, other expenditures are optional and may vary considerably.

Although each student must determine his own budget in keeping with his needs and resources, the University can provide the following as a guide in computing average annual expenses (three quarters of attendance) :

Incidental fee	\$ 219
Associated Students fee per year (to be determined early in the first quarter), estimated	9
Room and board (20 meals per week) in University residence halls	900
Books and supplies per year may average	100
Personal expenses, including laundry, clothing, recreation, transportation and miscellaneous ..	482
Average annual total	\$1710

Students classified as nonresidents of the State pay an additional \$800 a year as tuition. Board and room costs for students making alternative housing arrangements will, of course, vary.

■ INCIDENTAL FEE

The incidental fee is \$73 each quarter for both graduate and undergraduate students. This

fee, which must be paid at time of registration, covers certain expenses of students for use of athletic and gymnasium facilities and equipment, for registration and graduation, for all laboratory fees, and for such consultation, medical advice, and hospital care or dispensary treatment as can be provided by the Student Health Service. No part of this fee is remitted to students who may not desire to make use of all or any of these privileges.

■ ASSOCIATED STUDENTS FEE

This fee will be determined by the members of the Associated Stu-

dents early in the Fall 1965 quarter and after approval by the Regents of the University it will be assessed and collected for that quarter. Therefore, it, together with the incidental fee, will be assessed as registration fees at the beginning of each quarter. An estimated figure of \$3 per quarter has been suggested.

■ PARKING FEES

A fee of \$18 per year has been levied for parking of cars on campus.

■ TUITION

Tuition is free to every student who has been a legal resident of the State for a period of one year immediately preceding the opening day of the quarter during which he wishes to enroll. Every student who has not been a legal resident of the State for said period is classified as nonresident and is subject to payment of a nonresident tuition fee of \$267 per quarter, payable at registration.

■ MISCELLANEOUS FEES AND REFUNDS

A schedule of miscellaneous fees and other information on this subject, *Student Fees and Deposits*, may be obtained from the Cashier, University of California, Irvine. All fees are subject to revision by The Regents of the University of California.

■ UNDERGRADUATE SCHOLARSHIPS

A limited number of scholarships are available for both entering and continuing students on the Irvine campus from funds donated by individuals, organizations, and by the Regents of the University.

Awards will be made on a competitive basis with consideration given to the applicant's scholastic achievement, financial need, and character. In most instances the award will not meet the annual expenses of a full-time student. It is expected that each applicant will be able to draw upon other financial sources, such as savings, assistance from parents, loans, and part-time employment.

Application forms and a descriptive circular may be obtained from the Office of Financial Aids, 1423 Library Building, University of California, Irvine, California 92650. Applications must be filed during the period December 1 to February 15. These dates pertain to the year prior to the academic year for which the awards are to be made.

■ REGENTS' SCHOLARSHIPS

A number of four-year and two-year scholarships are made available to outstanding entering freshmen and to continuing and transfer students beginning their junior year in the University. Recipients will be chosen for demonstrated academic excellence and exceptional promise. Each will receive \$100 honorarium at the beginning of each academic year. Additional stipends to cover the

full cost of required fees, board and room, books and supplies, and incidental expenses will be awarded, the amount to be based on individual financial need. Application requirements are the same as for other scholarships.

■ LOANS

The Regents of the University, various organizations, and philanthropic individuals have contributed funds toward the creation of several student loan funds. The money for this purpose is administered by the University in accordance with conditions stipulated by the donors and administrative regulations of the Board of Regents. Loans from these funds are generally of a short-term nature and ordinarily do not bear interest.

In addition, long-term student loans from the Regents' Loan Fund and National Defense Education Act funds are available to qualified undergraduate and graduate students. Regularly enrolled students in good standing or applicants for admission to regular status are eligible to apply. Applicants must demonstrate clear evidence of financial need by submission of the Parents' Confidential Statement of the College Scholarship Service. (This form may be obtained from the high school or junior college counselor). Loan applications should be submitted by June 15 for funds to be available for the fall and winter quarters, and by December 15 for funds to be available for the spring quarter.

Further information concerning loan funds may be obtained from the Office of Financial Aids.

■ STUDENT EMPLOYMENT

Work opportunities will be available for students who wish to supplement their existing financial resources. Assistance will be offered to students who are interested in part-time employment.

■ LIVING ACCOMMODATIONS

The University maintains on-campus residences for 500 undergraduate single students. Each residence houses fifty students and a resident assistant, and provides an excellent opportunity for small-group living, self-government, and leadership experience. Each residence is divided into suites of four double rooms, living room, and bath; students eat in the campus commons. Rooms are furnished except for bedspreads, blankets, and study lamps. The residences close during the Christmas and spring recesses, but special arrangements may be made for housing during these periods.

The University anticipates building a number of one- and two-bedroom apartments on campus during the academic year 1965-66.

Off-campus room and apartment listings are available to students who desire to call in person at the Housing Office. Since the listings change from day to day, arrangements cannot be made by mail.

The University is not prepared to inspect accommodations; transactions must be made individually and directly with landlords. A clear understanding of occupancy terms and conditions, preferably in writing, is recommended.

Students who live in campus residences must have a signed housing contract on file with the Housing Office.

■ STUDENT HEALTH SERVICE

Among the services available to all regularly enrolled students on the UCI campus is a Health Service under the direction of a physician.

A dispensary staffed by a registered nurse and by local physicians will provide out-patient type care including treatment, diagnosis, and immunization. Clinical laboratory procedures are also available at the dispensary, and at the local hospital whose services and facilities are convenient to the UCI community. Appointments with medical specialists may be arranged as required. The University arranges hospitalization for students who become ill and require observation and isolation. Doctors are on call at all times for emergency care.

Additional health protection is provided students in an insurance program covering hospitalization and surgery in illness and accidents. Coverage under the program extends to all times and all places while the student is enrolled at UCI.

All students who pay the incidental fee will receive the above benefits.

As part of the regular admission procedure a health statement is required of all new students. Prior to registration a form is furnished each student for use by his private physician in recording the results of the examination. During registration the student must bring to the office of the Student Health Service the physical examination form properly completed and signed, together with a certificate of smallpox vaccination dated within the past three years, and a report of a tuberculosis skin test. Students with contagious disease or physical or mental impairment which would prevent them from completing their studies will be excluded.

The Student Health Service encourages preventive medicine. It supplements but does not supplant the family doctor. Full and mutual cooperation between the student, the Health Service, and the family doctor is encouraged.

■ STUDENT SERVICES AND STUDENT GOVERNMENT

RICHARD L. BALCH / *Vice-Chancellor for Student Affairs*

LYLE C. GAINSLEY / *Registrar and Admissions Officer*

MRS. BETTE ABS / *Scholarships and Student Financial Aids*

MRS. ELLENE J. SUMNER / *Director of Housing and Food Services*

GERALD B. SINYKIN, M.D. / *Director of Student Health Services*

The office of Vice-Chancellor Student Affairs at Irvine has been established for the purpose of coordinating all student services provided by the University. These include the functions of registration and admissions, housing and food services, financial aids, student health, and personal counseling.

It is assumed that students admitted to the Irvine campus are here to acquire an education, much of which will grow out of their personal contact with professors. It is a function of the office of Vice-Chancellor Student Affairs to facilitate, wherever possible, this professor-student relationship, and to conserve the student's time to pursue productively the academic and extracurricular experiences associated with his University life.

In essence, the function of the Student Affairs' Office is to assist students in planning their individual and collective activities. The early years at Irvine offer the opportunity of establishing organizations, traditions, and a responsible student government. The entire staff looks forward to working with faculty and students in promoting the creative uses of whatever time each student may spend in the community of scholars which is the University of California, Irvine.

The University Administration

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

The President of the University is the executive head of the University in all its departments and all its campuses. He is appointed by The Regents and is directly responsible to them. The President and his staff, with headquarters in University Hall at Berkeley, direct the development of major policy for the University.

The Chancellor is the chief administrative officer on the campus and administers the organization and operation of the campus.

To participate in the administration of academic matters, The Regents have established an Academic Senate, consisting of the faculty and certain of the administrative officers. The Senate, subject to the approval of The Regents, determines conditions for admission of students and for granting certificates and degrees. It authorizes and supervises all courses of instruction in the academic and professional schools and colleges and exercises general supervision of the discipline of students.

Graduate Divisions, each administered by a Graduate Dean responsible to the Chancellor, are established on the Berkeley (including Mt. Hamilton), Davis, Irvine, Los Angeles, Riverside, San Diego, San Francisco Medical Center, and Santa Barbara campuses. These Graduate Divisions have curricula leading to the degrees of Master of Arts, Master of Science, Doctor of Philosophy, and such other graduate degrees as from time to time may be approved.

THE UNIVERSITY

5

A Brief History

Three separate movements resulted in the establishment of the University—one originating in state action, one in private initiative, and one in federal legislation.

State action had its inception in the Constitutional Convention of 1849, which incorporated into the Constitution recognition of the need and provision for a state university.

Private action began when a group of Congregationalists and Presbyterians, led by the Reverend Henry Durant, opened the Contra Costa Academy in Oakland in 1853, and two years later incorporated the College of California. In 1857 the College began negotiations for land north of Oakland, and ten years later the name of Berkeley was given to the townsite near this tract.

Federal action began in 1853 when Congress bestowed upon the state 46,000 acres of public lands, proceeds of the sale of which were to be used for a "seminary of learning." In 1862, the Morrill Act offered a grant of 150,000 acres of public lands to each of those states that would establish a college teaching agriculture and the mechanic arts. Taking advantage of these grants, the California Legislature in March 1866 established an "Agricultural, Mining, and Mechanic Arts College."

The new college had funds, but no campus. The College of California had an adequate site, but limited funds. Accordingly, the College of California offered to give the state its buildings and lands, provided that a "complete university" would be established that would teach the humanities as well as agriculture and mechanics. The offer was accepted by the Legislature, the act of March 1866 was repealed, and a new act passed that created the University of California. This act was signed by Governor H. H. Haight on March 23, 1868, a date celebrated each year as Charter Day.

The University opened its doors in September 1869 at the College of California site in Oakland, while buildings were being erected on the permanent campus at Berkeley. Instruction began on the Berkeley campus in September 1873.

Other campuses were added to the University in the following order:

- 1873 / The San Francisco Medical Center : founded as the Tolland Medical College in 1864, combined in 1898 with the Colleges of Dentistry and Pharmacy; School of Nursing established in 1939.
- 1905 / The Davis Campus : established as the University Farm; organized as a branch of the College of Agriculture, 1922; School of Veterinary Medicine opened, 1948; College of Letters and Science opened, 1951; authorized as general campus, 1959.
- 1907 / The Riverside Campus : established as the Citrus Experiment Station; College of Letters and Science added, 1954; authorized as a general campus, 1959.

- 1912/The San Diego Campus (formerly the La Jolla Campus) : founded as the Scripps Institution of Oceanography; School of Science and Engineering established in 1958; currently being expanded into a general campus.
- 1919/The Los Angeles Campus: originally the Los Angeles State Normal School, became part of the University as the Southern Branch; designated as the University of California at Los Angeles, 1927; School of Medicine opened, 1951.
- 1944/The Santa Barbara Campus: originally Santa Barbara State College, became part of the University as Santa Barbara College; authorized as a general campus in 1958.
- 1961/Santa Cruz and Irvine Campuses: authorized by Regents' action in 1957 and sites acquired in 1961; scheduled for opening to students in 1965.

The major research laboratories of the University are Lick Observatory at Mt. Hamilton, the Ernest O. Lawrence Radiation Laboratory at Berkeley and Livermore; the Los Alamos Scientific Laboratory at Los Alamos, New Mexico; the White Mountain Research Station in Mono County; and the Richmond Field Station. Additionally, the California Agricultural Experiment Station conducts research at four campuses and at a number of field stations located throughout the state.

About the University

Established on March 23, 1868, as a land-grant institution and state university, the University of California in less than a century has grown into an institution comprising nine campuses, six major research stations, agricultural field stations, fifty-three agricultural extension offices, and a number of other components located throughout the state. The University itself is part of a coordinated system for public higher education that embraces the state's more than sixty junior colleges and sixteen state colleges.

Approximately 62,000 students are enrolled on the large campuses at Berkeley and UCLA, and at Davis, Riverside, the San Francisco Medical Center, San Diego and Santa Barbara.

Faced with enrollments expected to double by 1970, the University is carrying out plans to make the smaller campuses large and to develop the three new general campuses, San Diego, Santa Cruz and Irvine.

The University performs many services in addition to its regular program of instruction. It is the primary state-supported academic agency for research. It provides many public services including medical and dental clinics, informational services for agriculture, a program of adult education, public lectures, educational motion pictures, and a broad program of business and professional conferences and institutes.

*Members of the President's Cabinet and
Council of Chancellors*

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PRESIDENT OF THE UNIVERSITY, EMERITUS

Robert Gordon Sproul

VICE-PRESIDENT OF THE UNIVERSITY

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VICE-PRESIDENT OF THE UNIVERSITY, EMERITUS,

AND DEAN OF THE COLLEGE OF AGRICULTURE, EMERITUS

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Franklin D. Murphy

CHANCELLOR AT RIVERSIDE

Ivan H. Hinderaker

CHANCELLOR AT SAN DIEGO
John S. Galbraith

CHANCELLOR AT SAN FRANCISCO
John B. deC. M. Saunders

CHANCELLOR AT SANTA BARBARA
Vernon I. Cheadle

CHANCELLOR AT SANTA CRUZ
Dean E. McHenry

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Chairman of the Regents

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OWSLEY B. HAMMOND
Treasurer of the Regents

**Ex Officio*

This book offers the first full description of the academic program of the University of California, Irvine. It has, therefore, not only its obvious present use but also an eventual historical interest. As a result, the photographs in the book have been chosen to provide a record of the feeling of the terrain on and around the campus site before the momentous changes of this and the coming years have taken place.



UC IRVINE - 1965-1966

