UNIVERSITY OF CALIFORNIA, SAN DIEGO

SELF-STUDY

FOR

REAFFIRMATION OF ACCREDITATION

APRIL 1986

University of California, San Diego
La Jolla, California 92093
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FOREWORD

Over 175 members of the UCSD community contributed substantively to this Self-Study. We are appreciative of the support we received from the Vice Chancellors, who organized their staffs and unit heads to produce the basic materials from which the Self-Study has been constructed.

The study serves the immediate function of providing the Senior Accrediting Commission of the Western Association of Schools and Colleges (WASC) with the basis for reaffirming UCSD’s accreditation. It should also become a useful tool for planning and as an introduction to the campus for those who wish to know about it.

The study is not organized along the lines of the Handbook of Accreditation, which lists the standards in too generic a way to fit the needs of the campus. Rather, the book reflects the priorities and emphases of the UCSD community. The relevant standards are noted in the margins of the work, and an index to them has been provided.

Stanley Chodorow
Associate Vice Chancellor -
Academic Planning
Accreditation Liaison Officer
March 3, 1986

TO: Accrediting Commission for Senior Colleges and Universities, Western Association of Schools and Colleges

FROM: University of California, San Diego
La Jolla, California 92093

This Self-Study Report is submitted for the purpose of assisting in the determination as to whether or not this institution should have its accreditation reaffirmed by the Accrediting Commission.

I certify that there was broad participation by the campus community. We believe this Self-Study Report accurately reflects the nature and substance of the institution.

[Signature]
Richard C. Atkinson
Chancellor
CHAPTER I
INTRODUCTION

A. PURPOSES OF THE SELF-STUDY

The University of California at San Diego has conducted this study for three related purposes:

1. To fulfill the requirements for reaffirmation of accreditation by the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges;

2. To provide the campus with a thorough self-assessment as it plans for the next ten to twenty years; and

3. To produce a descriptive and critical document of lasting utility to UCSD faculty, administrators, and students.

B. HOW THE SELF-STUDY WAS ORGANIZED AND CARRIED OUT

The self-study was carried out under the direction of the Institutional Self-Study and Evaluation Committee (ISSE), a standing committee established in 1974 by Chancellor William McElroy. ISSE was created to prepare the self-study for the 1976 review of accreditation by the Accrediting Commission for Senior Colleges and Universities, but the Chancellor also intended that it become a permanent committee to supervise the continuous evaluation of a broad range of University programs and operations.

The Committee now has sixteen members: the Vice Chancellors of Business, Undergraduate Affairs, and Administration (formerly Resource Management and Planning); the Associate Vice Chancellor - Academic Planning (formerly Dean of Arts and Sciences: Chair); the Deans of Graduate Studies and Research and Engineering; the Chair of the Department of Scripps Institution of Oceanography; the Associate Dean for Planning from the School of Medicine; the Assistant University Librarian; a representative from the Committee on Education Policy of the Academic Senate; a representative from the Council of Provosts; the Chair of the Academic Senate; a representative of the Planning Office; and a graduate and an undergraduate student.

The work on the self-study began on June 6, 1983, when the ISSE met with Ralph Wolff, Associate Executive Director of the Western Association of Schools and Colleges (WASC). After that meeting, the Committee began planning for the next accreditation review, then scheduled for February 1986. R. E. Attiyeh, Dean of Graduate Studies and Research, was the chairman of the committee and the campus's Accreditation Liaison Officer. In November 1983, S. A. Chodorow, newly appointed Dean of Arts and Sciences, replaced Dr. Attiyeh in both capacities.
In December 1983, the Committee established a Steering Committee to oversee the writing of the self-study. The Steering Committee consisted of the Vice Chancellors - Undergraduate Affairs, Administration, and Business; the Associate Vice Chancellor - Academic Planning (formerly Dean of Arts and Sciences: Chair); the Dean of Graduate Studies and Research; a representative from the Council of Provosts; a representative of the Planning Office; and a graduate and an undergraduate student.

At the same meeting, the ISSE established a schedule for the self-study. The planned schedule was as follows:

1983
June  ISSE Committee meeting to initiate planning for self-study. Ralph Wolff, Associate Executive Director of WASC, presented an overview of the accreditation process.

Dec. ISSE Committee meeting to discuss format of self-study, scope of effort, and schedule. Appointment of Steering Committee to supervise writing of Self-Study and appointment of Liaison Officer Chodorow as writer.

1984
Feb. On behalf of the Chancellor, Vice Chancellor Harold Ticho sends instructions to Vice Chancellors, Deans, Librarian, Directors, Provosts, Departmental Chairs, Coordinators of Programs, and the Academic Senate. Departmental self-studies due May 1, 1984.

Mar. Self-study team sends detailed questionnaires to departments and programs.

Aug. ISSE Steering Committee reviews status of self-study and discusses instructions to be issued to administrative units.

Oct.-Nov. Self-study team meets with Vice Chancellors and staffs to discuss their sections of the Self-Study.

Nov. First draft of sections of Self-Study on departments and programs to be completed.

Dec. Materials from Vice Chancellors and others due.

1985
Feb. Consultation with WASC about the dates of visit to the campus.

1985
Apr.-May Draft sections of Self-Study distributed to concerned parties for review.
June       Corrected sections edited.
July       First Draft of Self-Study sent to WASC.
July-Aug.  Liaison Officer edits and rewrites Self-Study.
Sept.      Second Draft of Self-Study sent to Chair of WASC Visiting Committee.
Sept.      Preliminary visit by Chair and several members of the WASC Visiting Committee.
Sep.-Dec.  Final revision of Self-Study; addition of up-to-date statistical data.
1986       Self-Study sent to printers.
Feb.       Self-Study sent to WASC Visiting Committee.
Apr.       Visit by WASC Committee.

(ID1,3) Thereafter, Dr. Chodorow formed a team of three—a representative of the Planning Office, a senior writer, and himself—to write the report. The team participated in a WASC workshop on the accreditation of research universities and discussed with the WASC staff the possibility of organizing the Self-Study to reflect the mission and priorities of UCSD instead of the structure of the accreditation standards set out in the association’s Handbook of Accreditation. The association staff gave tentative approval to this plan, and UCSD agreed that its Self-Study would cover all the relevant standards and would contain an index showing where the report treated each standard.

During the next couple of months, the self-study team prepared a detailed questionnaire to serve as the basis for gathering information. In February 1984, Vice Chancellor - Academic Affairs H. K. Ticho, acting on behalf of the Chancellor, instructed Department Chairs, Program Directors, Deans, Provosts, Vice Chancellors, and Academic Senate Committees to engage in a thorough self-study, and in March, the self-study team sent out the questionnaire. A copy of the questionnaire is appended to this chapter. The departmental self-studies, based on responses to the questionnaire, served as the basis for the whole self-study. They were all in by the end of August 1984.

Between August and October 1984, the self-study team decided on the format of the Self-Study and created a detailed table of contents. It completed the detailed table of contents for the Self-Study in November 1984. After the ISSE Steering Committee approved the table of contents, the team met with each Vice Chancellor and his staff, with the leadership of the Academic Senate, with the Deans of Graduate Studies and Research, University Extension, the School of Medicine, and with the Director of Information Systems. At the meetings,
the Liaison Officer explained the self-study process, answered questions about the responsibilities of the individual units, and solicited comments on the table of contents.

The unit heads under each Vice Chancellor were asked to gather materials about their operations and to write a summary statement describing the work of their offices, noting any recent changes in the mission and structure of their units, and assessing the strengths and weaknesses of their organizations. Each Vice Chancellor reviewed the reports of his unit heads, provided an overall summary of his area, and forwarded both the reports and the summary to the self-study team. Throughout the process, unit heads talked to members of the team to clarify points and get guidance.

At the same time that it approved the tentative table of contents, the ISSE Steering Committee established eight special study groups composed of faculty, staff, and students to address concerns raised in the previous accreditation review. The reports of these committees are summarized in Chapter XIV of the Self-Study. The Liaison Officer also attended meetings of the UCSD Associated Students, the Graduate Student Association, and the Staff Association to explain the accreditation process and to give students and staff the opportunity to ask questions and make comments about the process in an open forum. He invited all of these organizations to submit written documents for the self-study. The Staff Association submitted materials, but the student associations preferred to work through their representatives on the ISSE Steering Committee. In several instances, the student representatives raised significant questions about sections of the report, which caused the team to review the materials used in those sections and to ask the affected units for clarifications or corrections.

From October 1984 through June 1985, the self-study team met once or twice a week to review the progress of the self-study and to make plans for facilitating its timely completion. On the team, the representative of the Planning Office was responsible for gathering all the necessary documentation; the Senior Writer wrote the preliminary drafts of the Self-Study and edited and synthesized the materials submitted by the academic departments and programs, administrative units, and special study groups; the Liaison Officer reviewed the preliminary drafts of the Self-Study, monitored the work of campus units engaged in work on parts of the study, and wrote the final drafts.

The team asked each of the individuals who contributed to the Self-Study to review the sections pertaining to him or her. The comments were then incorporated into the document. The ISSE Committee reviewed the official first draft of the Self-Study in late May 1985. The team then revised this version somewhat and sent it to WASC in early July.
During the summer of 1985, the Liaison Officer revised the entire Self-Study, and the revised version was distributed to the preliminary visiting committee at the beginning of September. During October, November, and December, the Liaison Officer made final revisions and inserted the latest statistical information about the faculty, staff, budget, and enrollments of the campus. The study was sent to the printer in early February 1986.

UCSD has emphasized four principles during the entire self-study process:

1. Accuracy—the need to describe accurately both the current status and the aspirations of the campus;

2. Frankness—the need to be frank in describing past, present, and potential problems facing the campus;

3. Honesty—the need to evaluate honestly the campus’s performance and its response to problems; and

4. Participation—the need to involve a significant number of faculty, students, and staff—over 170 individuals on the campus contributed to the Self-Study.
CHAPTER II
DESCRIPTION AND GENERAL HISTORY
OF THE CAMPUS

As part of the University of California system, UCSD is committed to excellence and integrity in teaching, research, and public service. UCSD has a history of uninterrupted growth in size and prestige. Now, as they look forward to ten to twenty years of continued rapid growth, the campus's leaders face the challenge of planning. How will the campus maintain the quality of its programs while assimilating thousands of new students and hundreds of new faculty members?

A. DESCRIPTION OF THE CAMPUS

(2A6) The University of California at San Diego, founded in 1960, has a campus of 2000 acres. The main campus and the Scripps Institution of Oceanography occupy 1,200 acres overlooking the Pacific in La Jolla, California. The UCSD Medical Center is located in downtown San Diego, on the site of the former county hospital. The University now owns the land and buildings at that site. The campus also holds 800 acres in San Diego County, used for research stations and natural preserves (Figures 1 and 2).

(2A,B) As part of the nine-campus system of the University of California, UCSD has a threefold mission: instruction, research, and public service. Under the Master Plan for Higher Education in California, the University has specific responsibilities and authority. As the President of the University recently stated to the Commission for the Review of the Master Plan, the University's mission includes:

1. The offering of a broad range of undergraduate programs;

2. Exclusive jurisdiction over professional programs in law, medicine, dentistry, and veterinary medicine;

3. Sole authority among public institutions to award the doctorate, excepting provision for joint programs with campuses of the California State University system; and

4. Research.

(4A1) Students who have completed a specified list of courses and graduate in the top 12.5% of their classes in California high schools are eligible for admission to the University of California. Students from other states and from foreign countries must meet a somewhat higher standard of performance in an equivalent series of courses.
From its foundation, UCSD's faculty and staff have striven for highest academic quality in fulfilling their mission. This commitment has produced an institution of national and international prominence within twenty-five years of the founding of the campus. Recent reports have ranked UCSD high among undergraduate institutions and among the top twenty graduate schools in the country. The campus has consistently been among the leading recipients of federal research grants and is seventh in the country in total expenditures for research. In 1982, it was elected to the Association of American Universities.

There are now approximately 14,000 students at UCSD: 12,000 undergraduates, 1,600 graduates, and 500 medical students. The campus has 845 faculty members, including 5 Nobel laureates, 47 members of the National Academy of Sciences, 50 fellows of the American Academy of Arts and Sciences, 12 members of the American Philosophical Society, 8 members of the National Academy of Engineering, and 6 members of the International Academy of Aeronautics. Two of its faculty won the National Medal of Science in 1984.

There are nineteen academic departments on the General Campus and two in the Division of Engineering offering undergraduate and graduate degrees. In addition, the General Campus has five interdisciplinary graduate degree programs, three joint doctoral programs with nearby San Diego State University, and twenty-four undergraduate interdisciplinary programs. Research is carried out by the departments and by eighteen organized research units (institutes and centers).

The campus operates four undergraduate colleges—Revelle, John Muir, Third, and Earl Warren—and has begun planning for a fifth. Each college enrolls between 2,500 and 3,000 undergraduates, so that the continued growth of undergraduate enrollments will necessitate the establishment of new colleges. Each college has its own facilities, faculty, and general education requirements, but the undergraduate curriculum is structured so that all majors are open to students from all colleges. The intent of this "college system" is to combine the intimacy and camaraderie of a small, residential liberal arts college with the intellectual breadth and resources of a large research university. The colleges can house a little over 30% of their students; preference is given to freshmen and new transfer students.

UCSD has one professional school, the School of Medicine, which admitted its first class in 1968. The School of Medicine has followed the rest of the campus in its rapid rise to national prominence in research. In keeping with a UCSD tradition of interdisciplinary teaching and research, the basic sciences at the School of Medicine are taught by members of the General Campus departments whose positions are supported by the School of Medicine. There are also many cooperative research programs among the faculties of the...
General Campus, School of Medicine, and the Scripps Institution of Oceanography.

(4A10) The campus has recently proposed a plan to found a new professional school, the Graduate School of International Relations and Pacific Studies. This school would focus on the cultures and affairs of the Pacific and would cooperate with relevant General Campus departments. It would give degrees in international relations and international finance and management. It would also offer certificate programs for professionals interested in the Pacific Basin. At present, the University Academic Senate and the Office of the President are reviewing the plan. If it is approved at all levels of the review process and funded by the State, the school could open in 1988.

(3B) The campus's intellectual life reflects larger trends in American higher education. Specifically, enrollments have declined in the humanities during the last decade while they have soared in engineering and computer science. Consequently, in 1981, the campus established a Division of Engineering under its own dean in order to manage the growth of this sector of the faculty and student body. A new engineering building will open in 1987.

(3B) To parallel the administrative changes in engineering, the campus established a Dean of Arts and Sciences in 1983, and in Fall 1985 it divided the responsibilities of this office among three divisional deans—Arts and Humanities, Social Sciences, and Natural Sciences. At the same time, the planning functions of the Dean of Arts and Sciences were assigned to a new Associate Vice Chancellor for Academic Planning.

(2A5) UCSD originated as a research institution and graduate school, and research interests remain a high priority. The promotion of faculty is based primarily, though not exclusively, on achievement in research and publication. This condition is natural to a research campus. Most members of the university community think that overall the research orientation of the campus enhances rather than detracts from the teaching and public service functions of the institution. One of the methods the campus has developed to mediate between the demands of research and teaching is the system of undergraduate colleges.

B. HISTORY

1. Origin of the Campus

The roots of the University of California, San Diego are in the Scripps Institution of Oceanography, which was founded in 1903 as a marine research station by zoologists from UC Berkeley. The Institution became part of the University of California in 1912, and, in recognition of the support of the Scripps family, the station was
called the Scripps Institution of Biological Research. It was renamed Scripps Institution of Oceanography (SIO) in 1925.

Until the foundation of UCSD, graduate students at SIO earned their Ph.D. degrees under the auspices of graduate programs at UCLA and UC Berkeley. By the 1950s, the Institution had become the largest center of oceanographic research in the world and had earned an outstanding international reputation for its interdisciplinary investigation of the oceans.

During the early 1950s a group of influential San Diegans began promoting the establishment of a local branch of the University of California. This effort produced its first result in March 1955, when the State Legislature passed House Resolution 112, requesting The Regents of the University of California to explore the “desirability and feasibility” of establishing a campus of the University in San Diego. The following August, Roger Revelle, Director of SIO, proposed the creation of a “publicly-supported Cal Tech,” using SIO as the cornerstone.

The plan to build the new campus gained momentum after these events. In December 1955, the San Diego City Council formally committed itself to aiding “in every way” the development of a local branch of the University of California. In a presentation to The Regents later that month, representatives of the city and local industry stressed San Diego’s need for professional, scientific, and technical education, especially on the graduate level. They pointed out that the availability of such educational opportunities would be an asset to industry in its attempts to recruit and retain the best people.

During the same year, the State Board of Education and The Regents approved the recommendations of a report entitled Restudy of the Needs of California Higher Education. The report recommended that the State formally differentiate among the three segments of state-supported higher education by assigning primary responsibility for vocational training to the Junior Colleges; occupational education to the State Colleges; and graduate education, professional training, and research to the University of California.

The importance of the Restudy for the expansion of state-supported higher education in San Diego lay in its recommendation that the State designate the UC system, instead of the State College system, as the sole public institution for doctoral and professional education, and the primary public research institution in California. San Diego already had a major campus of the State College system, but the Restudy recommended that it not be permitted to develop the kind of graduate and research programs that members of the community wanted.

The first discussions about the new campus emphasized science and engineering, and all early plans reflected this emphasis. In January 1956, Revelle sent a report to The Regents suggesting that the
University create a series of interdisciplinary scientific research and teaching institutes, modeled after the structure of SIO itself. Like those at SIO, the individual institutes—which would replace conventional departments—would focus on an object of study—such as the ocean—rather than on a particular discipline.

(2B4) This report became one of the bases for a special administrative committee set up by R. Gordon Sproul, President of the UC system, that completed its work in April 1956. The committee found that San Diego definitely needed additional first-class facilities for undergraduate and graduate education in science and engineering. It visualized an institution strong in mathematics, physics, chemistry, earth sciences, and biology, with teaching of the humanities "appropriate for the furnishing of a liberal education to the prospective scientists." In contrast to Revelle's plan, the committee suggested that the expansion of SIO be undertaken along traditional disciplinary and departmental lines.

(2B1) After receiving the special committee's report, President Sproul solicited opinions about the proposed campus from a number of other groups and individuals. Some argued that there was no clear present or future need for more extensive graduate training in San Diego than that already offered at SIO. Others thought that expansion of the University on both the graduate and undergraduate levels should be concentrated at UCLA and Berkeley. Still others contended that a campus based on SIO was needed, but that it should be a large, general campus of the University, instead of the small, specialized scientific and technical institute proposed by Revelle.

(3A10) In August 1956, the President reported the results of his consultations to The Regents, who decided to expand the program in La Jolla to "provide a graduate and undergraduate program emphasizing sciences and technology, with such undergraduate instruction as is essential to support the graduate program."

2. Planning the Scope of the New Campus

(3C1) (4G) In November 1956, the staff of SIO submitted the first comprehensive academic plan for the expanded program. Entitled A Proposed Policy and Program for Expansion of the La Jolla Campus, the plan provided for the enrollment of undergraduates only after the graduate programs had been established in the major disciplines. This strategy—of building a university from "the top down" rather than from "the bottom up"—had been used only one other time in the history of American higher education, with notable success, by the founders of The Johns Hopkins University in the late nineteenth century. The plan depicted a small campus, having a student body of 450 graduate and 500 upper-division undergraduate students by 1968 and a high faculty:student ratio.
The plan also proposed that responsibility for instruction be distributed among four Divisions of Instruction: Life Sciences, Astronomical and Earth Sciences, Physical Sciences, and Humanities. Research would be guided by a number of interdisciplinary institutes. All faculty and graduate students would belong to one Division and one Institute. The Regents adopted these proposals in January 1957.

In May, a report from the University Committee on Educational Policy (UCEP) of the Academic Senate reopened the question of the new campus's academic structure. UCEP was "strongly opposed to the narrow yet extravagant nature of the program for expansion of the La Jolla campus as proposed by the staff of SIO." The committee characterized the high faculty:student ratio as "sumptuous" and the proposed academic organization as "unsound." It also doubted that the San Diego area needed an intensive program of graduate education and worried about setting a precedent of "preferred treatment" for the new campus. In its conclusion, UCEP called for the development of a campus of the University of California in San Diego along conventional disciplinary lines.

Revelle and his colleagues responded to the UCEP report by agreeing that San Diego would eventually need a general campus of the University. Earlier in the year, in fact, Revelle had predicted in an interview that the University in La Jolla would probably number 12,000 to 15,000 students by 1985. Further, Revelle argued that, if the campus were not to be organized into instructional divisions and research institutes, its structure should still be innovative in order to take maximum advantage of the interdisciplinary heritage of SIO. For example, he proposed that the campus create multiple "vertical units"—such as "schools" of engineering, liberal arts, business, and medicine—to facilitate interdisciplinary teaching and research. These "vertical units" eventually evolved into UCSD's "college system."

3. The Foundation of UCSD

While debating the questions about the structure of the new campus, Revelle argued that the University should not delay the initial expansion of SIO into the Institute of Technology and Engineering. The Regents agreed, and during the summer of 1957 several important developments occurred.

In June, The Regents voted to name the new campus the University of California at La Jolla, and they received word from a local UC alumnus that the Marine Corps was going to abandon Camp Matthews, which occupied over 400 acres of land on the mesa above SIO. In July, the University made the first faculty appointment to the new campus, using part of a $1,000,000 gift from the General Dynamics Corporation.
Then, in August 1957, The Regents acted on the recommendations of UCEP and altered their earlier plans for a campus devoted primarily to research and graduate education. They authorized the development of a "large campus of the University of California in the La Jolla area to include undergraduate as well as graduate programs," provided the University could acquire at least 1,000 acres of land without cost. From that time on, the founding of the new campus got under way.

In August 1958, The Regents founded the Institute of Technology and Engineering and selected Roger Revelle to direct it. He retained his position as Director of SIO.

In November of that year, the citizens of San Diego voted to give the University over 500 acres of city-owned pueblo land near SIO with the stipulation that the land not be used for commercial development. At the same time, the University was seeking assurances from the federal government that the land vacated by Camp Matthews would also be added to the campus. This process took six years: President John F. Kennedy signed a bill transferring the land to the University in 1962; the transfer actually occurred in 1964.

In April 1959, The Regents changed the name of the Institute of Technology and Engineering to the School of Science and Engineering to reflect the newly conceived purpose of the campus in La Jolla. In making the change, The Regents stated that the faculty of the school should expect eventually to "carry a full teaching load." By the end of June, the new school had seven faculty FTEs, with thirty-six more appointments allotted for 1959-60.

In Fall 1960, the charter class--15 graduate students in physics--enrolled at the School of Science and Engineering. In November, The Regents authorized the campus to grant degrees, renamed it The University of California, San Diego, and decided that the Scripps Institution of Oceanography would continue as a separate academic and administrative entity within UCSD.

The future of the new campus was profoundly affected by the "The Master Plan for Higher Education in California," the major recommendations of which became part of the State Education Code in the Donahoe Act (1960). Largely inspired by Clark Kerr, who had become President of the University of California in 1958, the Master Plan went further than the 1955 Restudy in differentiating and coordinating the functions of the University, State Colleges, and Community Colleges.

Besides reaffirming that the University of California was to be the segment of public higher education primarily responsible for conducting research, granting doctorates, and training professionals, the Master Plan directed the UC system to select its freshmen principally from the top 12.5% of the state's high school graduates. In
addition, the Master Plan designated the community colleges not only as trade schools, but also as educational "staging areas" to prepare students to transfer as upper-division students either to the state college or university system.

4. Leadership

In its first twenty-five years the campus has had five Chancellors. In 1961, The Regents appointed Herbert York—a distinguished physicist who had served in the Eisenhower administration as the Director of Research and Engineering in the Department of Defense—as the first Chancellor of UC San Diego. York assumed leadership of UCSD as the campus entered its first period of rapid growth in accordance with the Master Plan.

York resigned in 1964 for health reasons and was succeeded by John Galbraith, former chairman of the Department of History at UCLA. Dr. Galbraith had served on several of the University committees engaged in planning the San Diego campus. He began his term as Chancellor in 1964-65, the year that the first undergraduate students enrolled at UCSD.

Chancellor Galbraith resigned in 1968 to accept a distinguished visiting fellowship at Cambridge University (England) and to return to teaching and research at UCLA afterward. He was succeeded by William J. McGill, one of the founding members of the Department of Psychology at UCSD.

During Chancellor McGill's tenure, UCSD, like campuses throughout the country, was disrupted by protests against the Vietnam War and social ills in American society. The disruptions at UCSD were rather mild, but they did strain relations between the campus and the community. Dr. McGill served for two years before accepting the presidency of Columbia University in New York.

During 1970-71, Herbert York served as Acting Chancellor, while the search for a new Chancellor proceeded. In July 1971, The Regents appointed William D. McElroy as the fourth Chancellor of UCSD. Dr. McElroy came to the campus from the post of Director of the National Science Foundation. He had formerly been chair of the Biology Department at The Johns Hopkins University and was renowned for his studies of bio-luminescence.

Chancellor McElroy guided the campus through a period of declining budgets. The difficulties of the period, experienced by campuses throughout the United States, were particularly severe at UCSD because the campus continued to grow. At the same time, Chancellor McElroy had to repair relations with the San Diego community.

The stresses caused by these problems led to a confrontation with the Academic Senate in 1979. The Chancellor sought to restruc-
ture the campus administration without adequate consultation, and the Senate censured him. In the aftermath of this crisis, Chancellor McElroy resigned and returned to teaching and research at UCSD.

He was succeeded by Richard C. Atkinson, former Professor of Psychology and Associate Dean at Stanford University, who, like McElroy, came to UCSD from the directorship of the National Science Foundation. Dr. Atkinson is now in his sixth year as Chancellor.

All of the former Chancellors of UCSD have remained at or returned to the campus. Roger Revelle has also returned and is active in campus affairs. The campus feels fortunate to be able to tap the collective wisdom and experience of its former leaders.

5. The College Plan

The first Chancellor, Herbert York, established the basic academic plan of the campus. The so-called "York Plan" was completed and published in 1963. The centerpiece of the plan was the proposal to develop an innovative system of autonomous liberal arts colleges within a campus of the University. This idea captured the essence of Roger Revelle's plan to organize the new campus as a series of interdisciplinary schools.

In York's plan, the colleges would not be devoted to particular disciplines--such as engineering or the arts--but would be multidisciplinary academic communities. The plan proposed that when the campus reached its full size--27,500 students--it would have twelve separate colleges, each with its own academic and social character.

The plan was modeled loosely after Oxford and Cambridge Universities in England. Each college would have its own comprehensive curriculum, faculty, buildings, residence halls, dining facilities, and administration. The members of academic departments would be distributed among the colleges--their membership in the collegiate faculty being as important as their membership in the departments. Each college would offer not only a broad, liberal education, but also an in-depth education in a certain cluster of disciplines and majors such as the natural sciences or the social sciences.

The York Plan proposed that graduate students also be members of colleges, but it recognized that study at that level--and sometimes at the advanced undergraduate level--required students to work with faculty of other colleges. All faculty in a discipline were to form campus-wide academic departments, which would direct graduate education. The idea that graduate students be attached to colleges was discarded very early in the history of the campus--the first of the many modifications that the faculty introduced into the original plan.
Planners intended the system to provide an undergraduate educational environment that combined the intimacy of a small college, the interdisciplinary tradition of SIO, and the resources of a large university. Under the University's standard student:teacher ratio, the number of faculty required to teach a comprehensive undergraduate program could teach between 2,000 and 2,500 students, and this became the planned size of each of the twelve colleges.

The founding faculty of UCSD were convinced that the atmosphere of the small colleges would benefit students, and a recent study appears to confirm that conviction. UCSD ranks tenth in the nation in the percentage of its undergraduates who go on to earn the Ph.D., one measure of the success of an institution's academic program. All the other schools in the top fifteen of this list are small, liberal arts colleges (Figure 3).

6. The Growth of the General Campus

At the rate of growth then expected, the York Plan proposed that a new college be founded every three years until 1996. As it happened, the growth slowed significantly during the 1970s, when the University revised its demographic expectations downward to account for the end of the post-war baby boom. Presently, there are four colleges, and a fifth is being planned. Revelle College opened in 1964; John Muir College accepted its first students in 1967; Third College began in 1972; and Earl Warren College accepted students in 1974. The fifth college will probably open in 1987 or 1988.

The experience of founding First College was codified in 1965, and the process has been used in the building of each successive college. The first step is the formation of a faculty/administration committee to determine the intellectual character of the program. This general approach is then approved by the Academic Senate and becomes the basis for the second step, the choosing of the first provost—as the head of the college is called.

Once appointed, the provost gathers a planning faculty from the various departments and with this group sets out the details of the college's general education program, graduation requirements, and physical facilities. (In recent years, capital planning has not been part of the college planning process because the State's ability to fund capital projects has been reduced.) When the planning faculty has completed its work, the provost presents the academic plan of the college to the Academic Senate, which must approve it. After the Senate approves the plan, the college begins admitting students. The whole process takes two to three years.

First College opened its first building in 1963 and completed its physical plant in 1967. In 1965, the college was renamed Revelle College in honor of Roger Revelle. The college has one of the
## FIGURE 3

### Ph.D. Productivity

**Ph.D.'s Conferred, 1951-1980/Bachelor's Degrees Conferred, 1946-1978**

**Top 15 Institutions: All Fields**

<table>
<thead>
<tr>
<th>Institution</th>
<th>All Ph.D.'s</th>
<th>Humanities Ph.D.'s</th>
<th>Science Ph.D.'s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvey Mudd (CA)</td>
<td>257</td>
<td>5</td>
<td>247</td>
</tr>
<tr>
<td>California Institute of Technology</td>
<td>1818</td>
<td>17</td>
<td>1781</td>
</tr>
<tr>
<td>Reed (OR)</td>
<td>968</td>
<td>154</td>
<td>766</td>
</tr>
<tr>
<td>Massachusetts Institute of Technology</td>
<td>5438</td>
<td>114</td>
<td>5141</td>
</tr>
<tr>
<td>Swarthmore (PA)</td>
<td>1418</td>
<td>350</td>
<td>975</td>
</tr>
<tr>
<td>Haverford (PA)</td>
<td>683</td>
<td>196</td>
<td>415</td>
</tr>
<tr>
<td>Oberlin (OH)</td>
<td>2321</td>
<td>666</td>
<td>1347</td>
</tr>
<tr>
<td>New College of the U. of South Florida</td>
<td>63</td>
<td>13</td>
<td>48</td>
</tr>
<tr>
<td>Chicago (IL)</td>
<td>3805</td>
<td>781</td>
<td>2592</td>
</tr>
<tr>
<td>UC-San Diego (CA)</td>
<td>362</td>
<td>28</td>
<td>325</td>
</tr>
<tr>
<td>Amherst (MA)</td>
<td>1118</td>
<td>363</td>
<td>642</td>
</tr>
<tr>
<td>Carleton (MN)</td>
<td>993</td>
<td>253</td>
<td>631</td>
</tr>
<tr>
<td>Cooper Union (NY)</td>
<td>802</td>
<td>3</td>
<td>588</td>
</tr>
<tr>
<td>Pomona (CA)</td>
<td>1086</td>
<td>224</td>
<td>713</td>
</tr>
<tr>
<td>Brandeis (MA)</td>
<td>893</td>
<td>218</td>
<td>573</td>
</tr>
</tbody>
</table>

**Source:** An Analysis of Leading Undergraduate Sources of Ph.D.s, Adjusted for Institutional Size, Carol Fuller, for the Great Lakes Colleges Association, 1985
country's most strenuous liberal arts programs. Its students spend a full two years in courses satisfying extensive requirements in humanities, social science, foreign language, mathematics, natural science, and fine arts.

The planning for the second college began in 1964, the year Revelle College accepted its first undergraduates. The new college was named for the naturalist John Muir and accepted its first students in 1967. Its program is more flexible than Revelle's. Students take 14-15 courses in the humanities, arts, social sciences, and sciences from lists of accepted departmental offerings. The college's curriculum board reviews the list of courses every year. Muir College also has laid great stress upon developing interdisciplinary programs open to all students.

During its first years, Muir was housed in the refurbished buildings of the old Marine base, and these facilities became the staging area for the colleges. Revelle faculty had been housed at SIO before the completion of the first building. Unlike Revelle, the Muir College campus was built as a single project. Construction began in 1970 and was completed in 1971. The completion of the new campus released the old Marine base, "Matthews Campus," to be used for another college.

Planning for the next college began immediately. A preliminary planning committee had outlined a program based on extensive study of history, and in Fall 1967, Armin Rappaport, Professor of History at Berkeley, became the founding provost.

The late 1960s were not a good time for the University of California. Locally, UCSD's relationship with the San Diego community was strained by protests against the Vietnam War and the civil rights movement, which challenged old assumptions both on and off campus. These protests and movements created a controversy over the planning of the third college.

In 1969, a group of students and faculty demanded that the college: (1) be named Lumumba-Zapata, after two Third World revolutionaries; (2) be formally dedicated not only to teaching about, but also to encouraging revolution; (3) be placed under the direct control of its students; (4) be composed primarily of Black and Chicano students; and (5) be committed to a policy of open admission.

To meet this challenge, Chancellor McGill formed a planning group chaired by physicist William Frazer. The group drafted a plan that reconciled traditional academic values with the legitimate concerns of the students. The plan granted students unprecedented involvement in college governance and explicitly dedicated the college to understanding social change, ameliorating social problems, and developing a multicultural and multiracial community of scholars and students. The committee rejected the name proposed for the college, which became known simply as Third College.
In 1971, Dr. Rappaport was succeeded as provost by Joseph Watson, a chemist at UCSD. Under Provost Watson, the college faculty developed a detailed academic plan and determined that the architecture of the college should be reminiscent of a Spanish hacienda. The college’s campus was completed in 1978, and it was officially named Third College in 1985.

Soon after the establishment of Third College, the University recognized that the functioning of the academic departments required them to be housed integrally. Up to that time, planners had intended that each college would house faculty from most of the departments. Since then, the campus has tried to consolidate each department in its own facility. This process has taken a long time and is not yet complete. The construction of each new building provides an opportunity to progress toward the goal. The collegiate associations of most members of the faculty have become independent of the location of their offices or laboratories.

Planning for a fourth college at UCSD began in 1973, and the charter class entered in 1974. Fourth College, renamed Earl Warren College in 1977, created a new approach to undergraduate education by extending general education to the upper-division level and requiring students to satisfy breadth requirements by taking a major and two minor fields. Lower-division work was aimed at enhancing students’ intellectual skills instead of the mastery of specific bodies of knowledge. The college also developed the Academic Internship Program to allow students to gain off-campus work experience in conjunction with their academic training.

Because the State has not been able to provide capital funds, Warren College still occupies buildings on the old Marine base. The recent improvement in California’s economy and the State government’s strong support for higher education will permit the construction of a Warren College campus in the near future.

Continued growth of enrollment and new predictions about future enrollment has led the campus to begin planning a fifth college. The preliminary planning committee commenced its work in Winter 1986, and the college should open in 1987 or 1988.

In keeping with the emphasis on interdisciplinary research and teaching, the earliest departments--such as Physics, Chemistry, and Literature--developed as comprehensive units, incorporating all fields within their disciplines. In contrast, departments established from the mid-1960s on--such as Anthropology, Psychology, and Sociology--tended to specialize in one aspect of their respective disciplines.

These disparate plans of development have produced a mixed academic culture on campus, which is viewed as healthy. In general, the
campus has permitted the founders of each department to exercise their judgment about how best to develop their field at UCSD, and the campus has been substantially satisfied with the result.

In the first decade of the campus's existence, the departments offered a great variety of courses to meet the general education requirements of different colleges. Since the late seventies, most departments have consolidated their lower-division course offerings, and with few exceptions, college requirements are now met by a selection of departmental courses rather than college-oriented courses.

(4A2) Students become attached to their colleges during their freshman and sophomore years, while fulfilling general education requirements. Since 1983, the campus has been able to guarantee on-campus housing to freshmen and new transfer students, so that the colleges can establish programs that integrate the students into the life of the University. At the upper-division level, students become identified with particular departments, as they take courses toward their majors. Nonetheless, for a great many students, the colleges have made an impression that lasts throughout their years at UCSD. The creation of that dual identity as a student of a college (and through it of the campus) and of a department is one of the principal goals of UCSD's program.

Some faculty think the tension between the departments and colleges disrupts the academic life of the campus, but most members of the campus community view it as dynamic and healthy. It keeps basic educational issues alive and helps to maintain the flexibility of both lower- and upper-division programs.

7. The Present Situation

(3B4) During the last decade, UCSD has been the fastest growing campus in the University of California. (See Figure 18, page 55.) Despite a shortage of resources to meet all the staff, program, and faculty needs stemming from its enrollment growth, the campus has continued to develop. It has become one of the leading research universities in the country--seventh in overall research expenditures--and was elected to the Association of American Universities in 1982.

(6A-D) The growth of UCSD's libraries is an example of both the success and difficulty of growth during the last fifteen years. The Central University Library reached 1,000,000 volumes in December 1973, with the addition to the collection of John Ogilby's America, a rare account of early American discoveries and expeditions. During the next decade, however, budget cutbacks began to take their toll, and the growth of the library's collection started falling behind its planned objectives. Today, the library has 100,000 fewer volumes in its collection than mandated by the 1977 systemwide Plan for Library Development. Because of financial constraints, the library continues
to fall behind at the rate of 17,000 volumes per year. The campus is
now trying to recover the lost momentum.

(7A-C)

Other aspects of the campus also suffered from budgetary con-
straints and the pain of rapid growth. While the stature of UCSD's
academic programs was steadily increasing during the 1970s, the
campus also began developing a reputation for having a particularly
inhospitable social environment for students. The combination of a
rigorous academic program with a generally unsupportive social
environment led to a drop in the campus's continuation rate during the
mid to late 1970s. At one point, UCSD had the lowest rate in the UC
system.

The campus administration took this problem seriously, and in
1981, shortly after he arrived on campus, Chancellor Richard Atkinson
appointed a Vice Chancellor - Undergraduate Affairs to develop and
administer programs relating to student life. The continuation rate
began improving during the late 1970s and since then UCSD's rate has
risen more rapidly than any other campus. Today, the campus ranks
fifth in the University.

The causes of this rise are difficult to determine. Certainly, the
improvement in the social atmosphere on campus and in support
services for academically disadvantaged students has contributed to it.
The extensive commercial development in the La Jolla area has also
contributed. The recruitment and support programs under the purview
of the VCUA will be described in Chapter III of the Self-Study.

Under Chancellor Atkinson, construction of new research,
teaching, and service facilities is taking place on a scale not seen
since the 1960s. The campus is planning five major buildings and
many more small- to medium-sized structures.

(3B)

In order to help guide this growth, Chancellor Atkinson began to
reorganize UCSD's administration in the early 1980s. He created two
new vice chancellors, Undergraduate Affairs and Resource Management
and Planning, in 1981. In the same year, he appointed a Dean of
Engineering to supervise the campus's burgeoning Engineering Division,
and, in 1983, he established the position of Dean of Arts and Sciences
to oversee the development of the departments and interdisciplinary
programs on the General Campus. The two deans report to the Vice
Chancellor - Academic Affairs (VCAA), and the Dean of Arts and
Sciences has become the Accreditation Liaison Officer and the
principal academic planner on campus. In Fall 1985, the VCAA
appointed two new deans, dividing the responsibilities of the Dean of
Arts and Sciences among Deans of Arts and Humanities, Natural
Sciences, Social Sciences, and an Associate Vice Chancellor - Academic
Planning. The Dean of Arts and Sciences, Stanley Chodorow, became
Dean of Arts and Humanities and Associate Vice Chancellor -
Academic Planning. He remains the Liaison Officer.
As the campus begins planning for significant growth during the 1990s, it is determined to maintain its high standard of research, teaching, and public service. It will, therefore, focus a great deal of attention on the requirements for the recruitment of the highest quality faculty.

8. Accreditation at UCSD

Before the first undergraduates enrolled, Chancellor York asked the Accrediting Commission for Senior Colleges and Universities to grant accreditation to UCSD. In 1963, the Commission gave the University a two-year accreditation, later extended for two years. The Commission conducted its first full review of the campus late in 1967 when the first four classes were in residence. Early in 1968, UCSD received a regular five-year accreditation.

After this beginning, the campus paid too little attention to the regular process of accreditation. When the Accrediting Commission carried out a normal five-year review in 1973, the campus was inadequately prepared, and the Commission granted only a two-year accreditation, scheduling another review for 1975. That review went well, and UCSD received a ten-year accreditation in early 1976. (Several years earlier the Commission had extended the normative length of accreditation from five to ten years.)

The Commission conducted an interim review in 1981. Once again, the campus did not prepare adequately. While the Commission took no action at that time, it requested that the campus address a list of concerns its visiting committee had raised. It also asked that the campus prepare a full and detailed self-study for the next review, in 1986.

Under Chancellor Atkinson, the campus is preparing a comprehensive self-study. In the process, it has become clear that the effort will provide the basis not only for the accreditation review, but also for the campus's regular planning process.

Since the creation of the Division of Engineering in 1981, two of its programs have been accredited by a specialized agency. Electrical Engineering was accredited in 1982; Chemical Engineering in 1985. The Accreditation Board for Engineering and Technology (ABET) accredited both programs. The Division was reviewed for accreditation of its Computer Science program by the Computing Sciences Accreditation Board in the fall of 1985.

The School of Medicine is accredited separately by the Liaison Committee on Medical Education. This accreditation will be treated below.
9. The School of Medicine

a. Historical Background and Description

Planning for a School of Medicine began under Chancellor Herbert York, and the first dean of the UCSD School of Medicine (SOM) was appointed in 1964. SOM began teaching activities in 1966, when it took over operation of the San Diego County Hospital and assumed responsibility for the 45 interns and residents in training at the hospital.

The charter class of 47 medical students enrolled in Fall 1968. The plan for the School visualized steady-state enrollment of just under 400; the entering class was to be 96. Under that plan, the first full-sized class enrolled in 1974. In 1978, in response to state and federal incentives, the School increased the size of its entering class to 128. In 1982, however, state and federal budgets—particularly the elimination of the federal capitation grant program—forced a reduction to 122.

The graduate medical program has grown more slowly than the M.D. program. The School has developed the graduate medical programs with a concern to balance the need for faculty in various fields, to take advantage of the special ability of the faculty, and to serve the needs of patients in San Diego. Presently, there are 414 UCSD trainees in 29 programs.

The School’s research program has grown steadily since it was founded and has attracted support and trainees. Despite its small size, the School is now one of the most prominent post-graduate training institutions in the country. It enrolls over 60 clinical fellows (exclusive of residents) and 175 research trainees.

For a number of years, the Association of American Medical Colleges has ranked the School as one of the top 4 institutions in the amount of research support per full-time faculty member.

The School has eleven departments: Anesthesia, Community and Family Medicine, Medicine, Neurosciences, Ophthalmology, Pathology, Pediatrics, Psychiatry, Radiology, Reproductive Medicine, and Surgery. Notably missing are the basic science departments traditionally found in medical schools. Instead, the School supports twenty-three faculty FTEs in General Campus departments (called “participating departments”) such as Biology, Chemistry, Sociology, AMES, Mathematics, as well as in the Scripps Institution of Oceanography. Conversely, members of the School of Medicine departments participate in a broad range of undergraduate and graduate courses on the General Campus.

These connections have affected the research program of the School by creating important links to other parts of the campus. Medical faculty also have links to the Salk Institute and the Scripps
Clinic and Research Foundation, as well as with other scientific institutes in San Diego and with faculty from other campuses of the University.

The School of Medicine contributes to the local community in a number of ways. It founded the San Ysidro Health Care Center in the predominantly Mexican-American community near the border and has assisted in the establishment of other community clinics. The San Ysidro center became independent in 1974, but the School still uses it as a training site. The School instituted the County Paramedic Training Program and initiated programs for the care of special populations (e.g. disadvantaged adolescents, Indochinese refugees, and low-income pregnant women). Faculty members serve on boards of nearly all local health agencies and organizations and provide valuable consultant services to the city schools, the County Health Department, and planning agencies.

b. Accreditation of the School of Medicine

The School received a ten-year accreditation of its M.D. program in February 1979. The Liaison Committee on Medical Education, the accrediting body for medical schools, will review the accreditation during the 1988-1989 academic year.

As part of the institutional self-study conducted for the accreditation site visit, the School of Medicine examined its strengths and weaknesses and developed recommendations for action. The site visitors generally concurred with the self-evaluation. Many of the action items have since been accomplished, while conditions have changed in some areas so that action is no longer necessary. Some issues seem to defy solution.

Examples of actions taken on the basis of the self-study include:

- Formation of a Committee on Committees to assure proper representation of various faculty constituencies on important committees;

- Development of several organized research units, most notably in cancer and aging;

- Establishment of a School of Medicine Advisory Committee to the Office of Animal Resources;

- Replacement of the Medical Center Library;

- Development of adequate clinical resources for an annual class size of 128 students;
- Participation in a modest loan program established by the Regents to help new faculty;

- Development of internship advisory committees within several major departments to provide consultation for individual students as they consider their postgraduate training; and

- Consideration of ways to adjust the pass/fail system to allow faculty formally to reward student excellence.

Some problems as yet unresolved are:

- The School of Medicine continues to encounter difficulties in obtaining promotions for outstanding teacher-clinicians who do not have strong research interests. A number of attempts have been made to improve the situation with only a little success.

- Space is still too limited in the Biomedical Library. Plans for future expansion need to be implemented as soon as possible.

c. The Future

An overriding concern in the 1980s is the survival of the health sciences professional schools, and particularly of health care programs operated by medical schools, especially in California, where the environment for health care has become extremely competitive. This concern is very great because health care programs form the primary context in which medical students gain experience, faculty conduct clinical research, and the latest advances resulting from research are introduced.

Together with all medical schools, the UCSD School of Medicine is concerned about the degree to which third party payers and groups contracting for medical care will continue to recognize the legitimacy not only of the costs of instruction, but also of the costs of developing and testing new medical technologies.

Like other medical schools, UCSD has trouble attracting an adequate number and the right type of patients to ensure the fiscal health of its medical center, and to provide the diversity of medical conditions necessary to the educational process. The UCSD Medical Center has several special problems: it is located in the most overbedded area of San Diego; the Center is small in relation to the scope of the services it offers; and the physical plant is unattractive.

The School seeks to meet these challenges by developing plans to establish more extensive clinical facilities on the main campus. Such facilities would include out-patient clinics and a new hospital and
could, therefore, provide a number of levels of care while also addressing each of the aforementioned problems. The School is also considering expanding its role in other areas of the community.

While state funds account for less than 25% of the School's annual revenue, they nonetheless represent necessary basic support. There have already been small cutbacks in the state-supported portion of the School of Medicine budget, and more cuts are scheduled for 1985-86. Because the School is young and its budget is taut, any further cutbacks of the number of students could be very harmful.

Space is becoming a limiting factor in the further growth of the School's research effort. Since it is very unlikely that the State will fund new health science facilities during the 1980s, the School has launched vigorous efforts to seek gifts and to explore innovative ways of expanding its research space. These efforts have thus far resulted in funds for building the Institute of Molecular Genetics.

10. University Extension

Unlike universities in Europe and Asia, American higher education has always made great efforts to strike a balance between mass and elite education. The democratic and egalitarian features of American society have encouraged the building of colleges and universities that not only promulgate "high culture" and generate new knowledge, but also provide access for all qualified students and disseminate knowledge to the public. The development of university extension is one result of these social and intellectual aims.

Extension services were early features of the universities founded under the Morrill Act of 1862, and like the universities themselves these services were devoted to agricultural and mechanical arts. By the end of the nineteenth century, extension had expanded to include the humanities and teaching arts through "distance learning" (correspondence) and off-campus programs established by Harvard and the Universities of Wisconsin, Chicago, and California.

The University of California actually founded two separate extension services. University Extension—founded in 1891—focused on making the liberal arts available off-campus in order to provide college training for students who were employed or who lived far from Berkeley. Agricultural Extension—founded in 1913—focused on research, dissemination of knowledge, and practical training for the state's enormously important agricultural industry. Over the years, these two parallel programs grew and prospered along with the University. University Extension in particular became an important resource both for part-time students and for professionals, such as teachers, who needed convenient opportunities for continuing education.
In the early twentieth century, University Extension expanded throughout the state. It first offered programs in San Diego in 1917, and by 1923, gave over fifty classes in the city. In the mid-1940s, UCLA took over the administration of Extension in San Diego, offering large programs in the liberal arts and professional education. Many of the professional courses counted for credit in UCLA degree programs. Until the early 1960s, UCLA maintained a staff of three in San Diego.

During the 1950s and 1960s, the development of community colleges changed the role of University Extension. These colleges provided a great deal of adult education and became the favorite route for adults seeking to re-enter higher education. The Master Plan for Higher Education (1960) confirmed this role for the colleges. Consequently, and without any conscious change in University policy, Extension’s role in providing access for re-entry adults and access for young, part-time students became less significant than its role in providing post-baccalaureate continuing education for adults.

Until the mid-1960s, the University Extension programs were administered primarily out of central offices at UC Berkeley, despite the existence of nine relatively separate campuses. There was a systemwide Dean of University Extension in Berkeley who hired local Extension Deans, and the local Divisions of the Academic Senate had almost no influence on extension programs.

University Extension formally established a branch at UCSD in January 1966, when it hired Martin Chamberlain as Dean. In July 1966, the University decentralized the administration of extension programs. Each local Dean became responsible to the local campus administration, and all academic matters came under the jurisdiction of the local Division of the Academic Senate. At UCSD, Extension came under the administrative purview of the Vice Chancellor - Academic Affairs and grew to function like an autonomous college within the campus.

When they were decentralized in 1966, University Extension programs ceased receiving any kind of tax support. Until then, state funds had covered as much as 25% of Extension’s operating budgets. The programs now became completely self-supporting and, therefore, even more dependent on the marketplace than before.

UCSD Extension flourished in spite of the newness of the campus, the absence of a clear mandate from the University to emphasize adult and continuing education, and the severe financial constraints. Recently, because of the growth of UCSD, the diversification of its curriculum, and growing community interest in career advancement and the application of research methods and findings to social and economic issues, UCSD Extension has been able to develop a broad program of continuing and professional education for adults that not only meets community needs, but also harmonizes well with the research orientation of the campus.
CHAPTER III
DEMOGRAPHY AND ENROLLMENTS

A. DEMOGRAPHY

1. The Numbers of Potential Students

UCSD was founded when higher education was beginning to feel the full effects of the baby boom of the 1940s. The State and the Office of the President were convinced that the population would continue to climb rapidly, and it planned the expansion of the University to meet the expected demand.

The census of 1970 made it clear that the expectations were not well founded. Studies based on the census and other data showed that population growth had slowed, which led demographers to revise their predictions of future enrollments substantially downward. During the same period, economic recession reduced the fiscal resources available to universities and slowed or even reversed growth in many schools.

At UCSD, the effect of the new studies and of the budgetary malaise was dramatic. The York Plan of 1963 foresaw that the campus would reach a steady-state enrollment of 27,500 about the end of the century. It contained plans to establish a new college every three years until 1996. In contrast, the academic plan of 1975 visualized a campus that would grow, in the same period, to only 14,000 students and six colleges. In an enrollment plan drawn up in 1981, the enrollment target was raised modestly, to 15,000. This plan rested on a revision of the demographic projections published by the National Center for Education Statistics (Figure 4).

The pessimism implied in these changes turned out to be unwarranted. Since 1981, pressure for admission to the University has grown steadily, because the UC system is benefiting from trends that earlier studies had not recognized:

1. Demographic trends vary considerably among the different geographic areas of the United States (Figure 5). Moreover, the population of the "Sun Belt" continues to increase, partly at the expense of the industrial northeast.

2. The proportion of high school graduates participating in public higher education in California is increasing. Consequently, enrollment in the University of California continues to climb even while the number of high school graduates in the state is beginning to decrease (Figure 6).
FIGURE 6

Number of California High School Graduates Enrolling in UC Compared with the Total Number of California High School Graduates the Same Year, 1974 to 1984, Indexed to 1974

Source: California College-Going Rates 1984 Update, CPSC
3. The continuation rate is improving, which means that total enrollments are growing even faster than the rate of new admissions would seem to imply.

UCSD has been in an especially advantageous position. San Diego County is one of the fastest growing areas in the country, and in-migration has counteracted the effects of the end of the baby boom. Current projections by the State Department of Finance indicate that in 1991 San Diego County will experience a modest 2.7% decrease in high school graduates, but that it will experience substantial growth throughout the 1990s (Figure 7). Nonetheless, UCSD proposes to grow more than the demographic predictions indicate it will because several campuses of the University are already fully developed, and students will have to come to UCSD and a few other campuses.

The new studies became the basis of a new enrollment plan for UCSD and the University. This plan will be described below.

2. Ethnic Distribution in Pool of Future Students

Recent studies also show that the ethnic mix of the population in California is changing rapidly. In particular, the proportion of people of Hispanic and Asian heritage is rising steadily (Figure 8). In Los Angeles, the city schools already have more non-White than White students.

These facts raise important issues for the University of California. The different ethnic groups have different rates of eligibility for the University. Asian students qualify at a high rate; Hispanics and Blacks have low rates of eligibility, and those rates may have fallen recently. A recent study of eligibility rates in 1983 conducted by the California Postsecondary Education Commission (CPEC) seems to show that the eligibility rates for nearly all groups have fallen, but the comparison with CPEC's 1975 study is difficult because the commission used different sampling techniques in the two studies.
Fifteen to Twenty-Four Year Old Age Group
in Selected California Counties, 1970 to 2000,
Indexed to 1985

FIGURE 9
PERCENTAGE OF HIGH SCHOOL GRADUATES ELIGIBLE FOR UC ADMISSION

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<th></th>
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<th>Black</th>
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<th>Asian</th>
<th>White</th>
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<td>1983</td>
<td>13.2</td>
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If the University is to meet its affirmative action goals, it must become more involved than it has been in the effort to increase the percentage of Hispanics and Blacks eligible for admission.

B. ENROLLMENTS

1. History

Since its founding in 1960, UCSD has revised its enrollment plan three times. The original Academic Master Plan for UCSD, approved in principle by The Regents in February 1963, outlined a general campus with an enrollment of 27,500 students—17,050 undergraduate and 10,450 graduate students. The plan proposed that students be distributed among twelve colleges, which were to have full authority over undergraduate education. Graduate students were also to be members of the colleges, although graduate education was to be a function of academic departments organized on disciplinary principles and cutting across the college faculties. The 1963 plan envisaged that graduate students would make up 38% of the total enrollment.

By 1976-77, the General Campus had founded four colleges and its enrollment had reached 8,916, of which 13.7% were graduate students (excluding medical students). The plan had been modified, so that graduate students were not members of a college, and academic authority over undergraduate education was distributed between the colleges and the departments. In the late 1970s, the University revised its demographic predictions downward, and the President asked the campuses to review their academic plans in the light of the new projections. Subsequently, the Office of the President coordinated a university-wide enrollment plan.

UCSD initiated a new undergraduate enrollment plan in 1981 (incorporated into a comprehensive UC plan published in 1984). Despite the expectation that the college-aged population of the State would decline during the 1980s, the 1981 plan projected modest, but steady growth, based on UCSD's history of consistent increases in enrollment. Under the plan, which was revised slightly in 1982, the campus expected to grow to 12,000 undergraduates in 1990 and 15,000 in 2000.
FIGURE 10
GROWTH OF ENROLLMENTS: PLANNED & ACTUAL
(3 QTR. AVERAGE)

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<td>% Growth</td>
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<tr>
<td>% Growth</td>
<td>4.1%</td>
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*Estimated

Sources: UCSD Planning Office; UCSD Office of the Registrar

The 1981 enrollment plan projected a growth of undergraduate enrollment of about 3% per year. In actuality, new admissions have climbed at an average rate of 4.1%, while total undergraduate enrollment has grown at a rate of 7.3% (Figure 11). Although new admissions increased faster than planned, the principal cause of the unexpected rise of UCSD's enrollment was a substantial increase in the continuation rate of students (Figure 12).

In contrast to the rapid increase in undergraduate enrollment, graduate enrollment has grown slowly, so that the percentage of graduate students on the campus has fallen to 11.5%. The campus views this ratio of graduate to undergraduate students with some concern because it affects the research environment and hinders UCSD's efforts to recruit top quality faculty, who are attracted by a vigorous graduate program.
FIGURE 11

UCSD Total Fall Undergraduate Headcount Enrollment
Compared with Total New Fall Undergraduate Enrollment,
Fall 1973 to Fall 1985

Source: Campus Planning Office
FIGURE 12

UCSD Fall-to-Fall Continuation Rates
1975-76 to 1984-85

Source: Campus Planning Office
2. The Undergraduate Enrollment Plan of 1985

Beginning January 1985, the UCSD Enrollment Projection Review Committee (EPRC)--composed of student, faculty, and administrative representatives appointed by and advisory to Chancellor Richard C. Atkinson--reviewed the enrollment plan of the General Campus. In creating a new enrollment plan, the committee considered:

1. The recent history of the enrollment at UCSD;
2. The new demographic projections (especially for San Diego, from which 40% of our students come);
3. The academic quality of the institution (including the prospects for faculty recruitment and the increase in the number and percentage of graduate students on campus);
4. The adequacy of physical facilities and the pace of construction of new buildings needed to match new enrollment goals; and
5. The likelihood that a significant proportion of the enrollment growth in the University as a whole would be directed to UCSD, which has an ability to grow.

The new enrollment plan is presented in Figure 13. In comparison with the plan of 1981, its most prominent features are an increase of the 1990 target enrollment of undergraduates from 12,000 (3-quarter average) to 13,500 and an increase of the 2000 target from 15,000 to 17,500 undergraduates. The plan also sets a goal of increasing graduate enrollments by approximately 100 per year through the end of the century, so that graduate students constitute 15% of total enrollments by 2000.

The plan foresees a regular growth over the next fifteen years, so that increments of new faculty and other resources can be absorbed without undermining the quality of the existing undergraduate, graduate, and research programs. As part of this regulated growth, the plan recommends that increases in the number of newly admitted undergraduate students be kept small until 1988, when Engineering Unit I will have opened. (Even with the limiting of new admissions, the campus expects enrollments to continue to grow substantially during the 1980s because of the effect of high continuation rates.)

3. Graduate Enrollment Planning

The Dean of Graduate Studies and Research has responsibility for planning the future of graduate education. Such planning is a continuous process, carried out in consultation primarily with departments and campus administrators, but also with graduate students and the Office of the President. It is based upon analysis of national and
## UCSO Enrollment Projections
### Three-Quarter-Average Headcount

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<td>20,400</td>
<td>20,925</td>
<td>21,500</td>
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*Graduate School of International Relations and Pacific Studies

Source: UCSD Campus Planning Office, August 23, 1985
international trends, the programs and needs of the University of California and the State of California, and extensive data about the needs of universities, industry, and government for people trained in particular disciplines.

As noted above, the Undergraduate Enrollment Plan of 1985 sketches a graduate enrollment plan through the year 2000. The Office of Graduate Studies and Research (OGSR) is presently working on the details of the graduate portion of the plan. The goal is to increase graduate student enrollment significantly in order to achieve a better balance between the numbers of graduate and undergraduate students, to increase the graduate student:faculty ratio, to meet demonstrated and projected societal needs for highly educated individuals in specialized fields and from under-represented groups, to encourage the maturation of graduate programs in relatively young departments, and to permit the development of new programs.

The development of the detailed plan will depend on negotiations between UCSD and the Office of the President and between the University and the State. Ultimately, UCSD's plan must conform to a graduate enrollment plan for the whole UC system. At present, OGSR has proposed a tentative growth plan for the major disciplinary areas; it is summarized in Figure 14.

4. Ethnic Distribution in the Student Body

The distribution of ethnic groups in UCSD's student body has changed significantly during the last fifteen years, but the trend of these changes has not been consistent. In 1970, 77.5% of the undergraduate student body was White and 13% non-White (9.5% unknown). In 1973, the percentage of Whites had dropped to 68%; non-Whites were up to 16.5% (15.5% unknown). Then the percentage of non-Whites held steady until 1976, when it began to climb again. (The percentage of students of unknown ethnic background dropped dramatically, raising the percentage of students known to be White.) In 1984, 69% of the students were White, 25.5% were non-White, and 5.5% were of unknown background. In 1985, 67.6% were White, 28% were non-White, and 4.4% were of unknown background (Figures 15 and 16).

C. ADMISSION, RECRUITMENT, AND CONTINUATION

Recruitment, admission, and retention programs are under the purview of the Vice Chancellor - Undergraduate Affairs (VCUA), and, as noted above, success in retention programs has contributed significantly to the growth of enrollment in the 1980s. Before treating the interrelated programs in recruitment, admission, and retention, we need to clear up a possible source of confusion.
FIGURE 14

Actual and Projected Graduate Enrollment Growth,
Three-Quarter Average Headcount, 1964-65 to 2000-01

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<th>Discipline</th>
<th>Actual 84-85</th>
<th>Est. 85-86</th>
<th>Projected 86-87</th>
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Discipline projections have not been reviewed by campus committees.

Source: Office of Graduate Studies and Research
### FIGURE 15

**Ethnic Distribution of UCSD**

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*Note: Numbers may not add to 100% due to rounding.*

*Source: UCSD Planning Office, from data compiled by the UCSD Registrar's Office*
### Ethnic Distribution of UCSD Undergraduate Domestic Students

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</tr>
</tbody>
</table>

Source: UCSD Planning Office, from data compiled by the UCSD Registrar's Office
Properly used, the term "retention" refers to the persistence of students to graduation. The rate of retention is the percentage of students who remain at a campus throughout their undergraduate careers. At present, the campus does not have the means for determining that rate, although a new computer system to handle students' records—to be installed in 1986-87—will permit it to do so. The rate normally called the retention rate is actually the "continuation rate." Roughly, this rate measures the percentage of students enrolled in one Fall Quarter who enroll in the next. The formula is provided in Figure 19, page 56.

1. Admissions

The admission standards and policies for the University are established by the Board of Admissions and Relations with Schools (BOARS) of the University Academic Senate. On each campus, the local Senate's Committee on Admissions monitors the work of the Office of Admissions and makes policy within the guidelines established by BOARS. At UCSD, the Office of Admissions is part of the Office of the Registrar.

To be eligible for admission, prospective students must complete prescribed subjects and standardized tests at specified levels of performance. The University also makes provision for the acceptance of students who do not qualify according to its regular criteria. Campuses may not admit more than 4% of their students under this provision. (For details of admission requirements, see General Catalog, pp. 49-54.)

The campus provides full, accurate, and timely information for prospective and continuing students about the procedures and standards for application, admission, enrollment, fee refunds, integrity of scholarship, and graduation through various publications, including the General Catalog, UCSD "Dimensions," and the quarterly "Schedule of Classes." The San Diego Division of the Academic Senate monitors all such publications to ensure their accuracy and compliance with Senate regulations.

The Office of the President also produces numerous informational publications which the campus makes available to potential and continuing students. These include:

"Answers for Transfers"

"University of California 1984-85 Student Fees and Deposits"

"Pre-Requisites and Recommended Subjects"

"Introducing the University of California--Information for Prospective Students"
"The Undergraduate Application Packet"

"Challenges and Opportunities"

"Preparing for 1986: A Comparison of Current and New Admissions Requirements for Freshmen at the University of California"

The procedural rules governing admissions are essentially uniform throughout the University (General Catalog, pp. 54-56), but UCSD has added two significant features. First, students must choose a college, and the campus publishes brochures to help them do so. Second, unlike other UC campuses, students are not admitted directly to the Engineering Program. The Engineering Division admits students at the junior level, after they have completed the general education programs of their colleges and one of the pre-engineering majors.

For Fall 1986, the University will change its admission procedures; the special UCSD components will remain unchanged. Till now, students have applied to one campus of the University. If the campus received more applications than it could handle, it redirected qualified applicants to another campus, where there was room. The applicant had a right to appeal for reconsideration at the campus to which he or she had applied. "Impacted" campuses generally held 10% of their slots to accommodate appeals.

The choice of which applicants to redirect depended on a combination of University and campus policy. The University required that half of the applications accepted by the campus be judged on purely academic grounds, but the exact formula for determining which applicants were in the top half was determined by the local Senate's Committee on Admissions. For the remainder of the applicants, the campus could create other formulæ for determining admission. In practice, campuses used academic criteria for judging nearly all the applications. In 1984, UCSD redirected over 1,000 applications.

The very strong demand for admission to the University has made this system unworkable. In recent years, only one or two campuses have had any space for redirected applicants, and students have ended up, therefore, at campuses to which they did not want to go. The University even feared that it would soon be unable to accommodate all qualified applicants. It has tried to solve these two problems—the failure of the old redirect system and the growing enrollment pressure—by planning an expansion of its total enrollment (discussed on pp. 40-42) and by instituting a new admissions system.

The new admissions system is a multiple application procedure. It is supposed to ensure that nearly all students are admitted to a campus of their choice. It will also permit campuses with more applicants than places to choose their students. It will take several years to assess the effectiveness of the new system.
2. Recruitment: The Educational Opportunity Program/
Office of Relations with Schools

(1A3) The Educational Opportunity Program/Office of Relations with Schools (EOP/ORS) directs all undergraduate recruitment efforts for the campus and works closely with the Admissions Office and the Scholarship Committee of the Academic Senate in processing Special Action applications. EOP/ORS also administers the Student Affirmative Action Program (SAA).

Until 1985, EOP, which began in 1968, and SAA, which began in 1975, were run by independent offices. Now, the VCUA has combined EOP and SAA with ORS in order to improve the efficiency of the campus's recruitment efforts, particularly of prospective students in under-represented ethnic groups and those with outstanding academic ability.

EOP/ORS offers a number of pre-application services to prospective students. These services include:

1. Giving recruitment presentations at high schools and community colleges both locally and throughout California;
2. Publishing informational materials about campus programs, services, and departments;
3. Providing assistance in completing admissions and financial aid application forms;
4. Offering on-campus counseling to both individuals and groups about application and admission processes and financial aid policies and procedures;
5. Leading campus tours for prospective students and their parents;
6. Extending application deadlines for EOP/SAA students when necessary;
7. Disseminating admissions information to high school and community college counselors;
8. Offering early admissions programs; and
9. Providing application information for all prospective students referred to the office by community agencies.

EOP/ORS also provides a number of post-application services, including:
1. Waiving the $35 application fee for qualified applicants;

2. Deferring the $50 Statement of Intention to Register fee for all students admitted through EOP/SAA;

3. Working with the Admissions Office and the Senate Committee on Scholarship to apply special admissions criteria when appropriate to EOP/SAA applicants who do not meet the regular criteria;

4. Using modified procedures to process special action applications;

5. Giving EOP/SAA applicants priority for on-campus housing;

6. Offering pre-enrollment information programs for EOP/SAA applicants and their parents;

7. Providing individual application, admissions, financial aid, and housing follow-up for EOP/SAA students;

8. Selecting EOP/SAA students for participation in the Summer Bridge Program offered by the Office of Academic Support and Instructional Services (OASIS); and

9. Encouraging students to use the tutoring and learning skills services available through OASIS.

EOP/ORS holds quarterly training sessions for its staff members to ensure that the information they present to the public is accurate and consistent with institutional publications and practices. These training sessions include critiques of the style of staff members' presentations to help make them effective communicators of UCSD's message.

3. Recruitment of Disadvantaged and Affirmative Action Students

EOP/ORS pays particular attention to the Student Affirmative Action (SAA) program—that is, to recruiting students from the five minority groups that the University considers under-represented in its student body (Black, Mexican-American/Chicano, Other Spanish, Filipino/Filipino, and American Indian). EOP also focuses on the recruitment of economically disadvantaged students regardless of ethnicity. In practice, approximately 75% of the SAA students fit into the EOP category also. In addition, over the past ten years the campus has admitted 30-40% of its SAA applicants through Special Action, under the 4% allowance for special admissions.

As is to be expected, Special Action students from the five under-represented groups are more likely to be in academic difficulty
by the end of their freshman year than their regularly admitted counterparts. Research into the factors influencing the success of these students continues, as do efforts to improve the social, economic, and academic support services available to them. (See OASIS Research Reports #20 and #26.)

One of the most successful of the existing programs is Summer Bridge. This is an intensive academic program for selected EOP/SAA entering freshmen that is run on-campus during the four weeks immediately prior to the beginning of Fall Quarter. The residential aspect of the program is a very important ingredient in its success.

The program is not remedial--four weeks is not long enough to correct substantial academic deficiencies. Rather, it is designed to integrate EOP/SAA students into the academic and social life of UCSD. (See OASIS Research Reports #19 and #28.)

In addition to EOP/ORS, the campus also participates in the University Early Outreach Program and the local Student Opportunity and Access Program (SOAP).

Early Outreach began in 1976 as the University of California’s Partnership Program. The program was designed to work with minority and low income students on the junior high school level to increase their eligibility for college. In 1978, the University added the University Partners Program to conduct follow-up activities for Partnership Program students when they reached high school. These two programs became the Early Outreach Program.

Each one of the UC campuses now has an Early Outreach Office, though the University administration in Berkeley still coordinates the program. The Early Outreach Program at UCSD sponsors:

- meetings for parents
- conferences for high school counselors
- a summer on-campus residential program
- the Upward Bound program for sixty selected students from five local high schools
- writing workshops for teachers from selected junior high and high schools
- SAT preparation workshops
- a special assistance program for the children of migrant workers.

In 1984, the UCSD Early Outreach Program received an award from the Office of the President as the outstanding program in the
University. The UCSD program produced about half the total number of UC eligible SAA students produced by all the campuses and one-third of those who enrolled in the University (Figure 17).

The Student Opportunity and Access Program (SOAP) also focuses on minority and low income students, placing counselors from local institutions of higher education on high school campuses. In addition to coordinating the recruitment efforts of all of the colleges and universities in the San Diego area, SOAP offers a variety of tutorial services to eligible students. UCSD is the fiscal agent for SOAP, but does not supervise the program on a day-to-day basis. EOP/ORS counselors from UCSD occasionally augment the activities of SOAP with presentations at local high schools, and EOP/ORS student interns frequently work at SOAP offices throughout the county.

Academic researchers are also involved in the effort to recruit students from underrepresented minorities and, especially, to increase the pool of eligible students from them. At UCSD, a group of scholars is studying the way disadvantaged students achieve literacy in order to develop programs to increase their performance. It is too early to judge the effectiveness of such programs.

For further discussion of affirmative action enrollment and retention, see "Trends in Enrollment and Continuation" on page 54.

4. Orientation

Every year, each of the four colleges offers a pre-enrollment orientation program for its new students and their parents. The programs are run on campus during June, with a final session held in September. They include tours, academic advising; mathematics, Subject A, and language testing; presentations by representatives from various support services; and social gatherings with staff, faculty, and continuing students. The most distinctive feature of orientation at UCSD is that it includes registration for classes. New students then know, long ahead of time, what courses they will be taking in their first term. The colleges review their respective programs at the end of every summer and make changes in subsequent programs as warranted.

5. Transfer Students

The University of California has a long-standing policy of accepting transfer students. College work completed elsewhere may be transferred to the University if it conforms in depth and scope to university work.

The University administration determines the general guidelines for the transferability of units. At UCSD, the college provosts determine whether transfer units may be applied to the fulfillment of the
### FIGURE 17

Number and Percent of Early Outreach Graduates in the Class of '84 Who Were UC Eligible

<table>
<thead>
<tr>
<th>Ethnic Status</th>
<th>Total Eligible</th>
<th>Total UC Enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Indian</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chicano</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latino</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filipino</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
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<tr>
<td>White</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Campus (n)</th>
<th>American Indian</th>
<th>Black</th>
<th>Chicano</th>
<th>Latino</th>
<th>Filipino</th>
<th>Asian</th>
<th>White</th>
<th>Other</th>
<th>Total Eligible</th>
<th>Total UC Enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCB (178)</td>
<td>4 (1)</td>
<td>(29)</td>
<td>(6)</td>
<td>(0)</td>
<td>(19)</td>
<td>(9)</td>
<td>(5)</td>
<td>(69)</td>
<td>(42)</td>
<td></td>
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<tr>
<td>UCD (156)</td>
<td>4 (6)</td>
<td>(11)</td>
<td>(6)</td>
<td>(0)</td>
<td>(3)</td>
<td>(13)</td>
<td>(3)</td>
<td>(36)</td>
<td>(45)</td>
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<td>UC (130)</td>
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<td>(6)</td>
<td>(0)</td>
<td>(6)</td>
<td>(8)</td>
<td>(3)</td>
<td>(26)</td>
<td>(19)</td>
<td></td>
</tr>
<tr>
<td>UCLA (207)</td>
<td>4 (1)</td>
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<td>(2)</td>
<td>(4)</td>
<td>(18)</td>
<td>(0)</td>
<td>(0)</td>
<td>(17)</td>
<td>(64)</td>
</tr>
<tr>
<td>UCSB (187)</td>
<td>4 (0)</td>
<td>(18)</td>
<td>(19)</td>
<td>(1)</td>
<td>(1)</td>
<td>(12)</td>
<td>(13)</td>
<td>(2)</td>
<td>(66)</td>
<td>(48)</td>
</tr>
<tr>
<td>UCSD (1,113)</td>
<td>4 (1)</td>
<td>(26)</td>
<td>(89)</td>
<td>(4)</td>
<td>(87)</td>
<td>(27)</td>
<td>(25)</td>
<td>(7)</td>
<td>(266)</td>
<td>(83)</td>
</tr>
<tr>
<td>UC (256)</td>
<td>4 (1)</td>
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<td>(34)</td>
<td>(10)</td>
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<td>(15)</td>
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<td>(85)</td>
<td>(77)</td>
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<tr>
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<td>(87)</td>
<td>(27)</td>
<td>(25)</td>
<td>(7)</td>
<td>(266)</td>
<td>(83)</td>
</tr>
</tbody>
</table>


1The percentages below are calculated only for survey respondents with known ethnicity and eligibility status. This subset of respondents is less than the total number of graduates giving UC eligibility status for the UCD and UCSB campuses. The "Total Eligible" percentages based on the smaller sample (n) are slightly different than those reported elsewhere which were based on the total number of said graduates. For UCSD and UCSB, these percentages differ by .2 and .6 percent, respectively. These differences also result in the Systemwide figure changing by .4 percent.

2The percentages in this column are based on the entire Early Outreach Class of '84.

### Number and Percent of Early Outreach Graduates in the Class of '84 Who Enrolled at UC

<table>
<thead>
<tr>
<th>Campus (n)</th>
<th>American Indian</th>
<th>Black</th>
<th>Chicano</th>
<th>Latino</th>
<th>Filipino</th>
<th>Asian</th>
<th>White</th>
<th>Other Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCB (178)</td>
<td>4 (2)</td>
<td>(18)</td>
<td>(2)</td>
<td>(0)</td>
<td>(11)</td>
<td>(7)</td>
<td>(2)</td>
<td>(7)</td>
</tr>
<tr>
<td>UCD (156)</td>
<td>4 (1)</td>
<td>(18)</td>
<td>(19)</td>
<td>(1)</td>
<td>(12)</td>
<td>(13)</td>
<td>(2)</td>
<td>(66)</td>
</tr>
<tr>
<td>UC (130)</td>
<td>4 (1)</td>
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<td>(2)</td>
<td>(6)</td>
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<td>(13)</td>
<td>(3)</td>
<td>(36)</td>
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<tr>
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<td>(33)</td>
<td>(2)</td>
<td>(4)</td>
<td>(18)</td>
<td>(0)</td>
<td>(0)</td>
</tr>
<tr>
<td>UCSB (187)</td>
<td>4 (0)</td>
<td>(18)</td>
<td>(19)</td>
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<td>(1)</td>
<td>(12)</td>
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<td>(89)</td>
<td>(4)</td>
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<td>(34)</td>
<td>(10)</td>
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<td>(15)</td>
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<td>(89)</td>
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<td>(87)</td>
<td>(27)</td>
<td>(25)</td>
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<td>UC (256)</td>
<td>4 (1)</td>
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<td>(10)</td>
<td>(5)</td>
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<td>(85)</td>
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<td>UCSD (1,113)</td>
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<td>(4)</td>
<td>(87)</td>
<td>(27)</td>
<td>(25)</td>
<td>(7)</td>
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</table>


*This is the total number of graduates for whom ethnicity and enrollment data are available.*
general education requirements of their respective colleges, and each academic department rules on the applicability of transfer units to its major programs.

Despite this policy and the encouragement to transfer built into the California Master Plan, the number of students transferring to four-year colleges and universities has steadily declined in recent years. UCSD is trying to help reverse this trend through its outreach program for transfer students.

The elements of this program continue to develop. Once a quarter for the last four years, UCSD has sponsored an on-campus UCSD/Community College Transition Forum. The Forum brings representatives from local community colleges and UCSD together to discuss issues of common concern and to address problems related to the transfer of students from two-year to four-year colleges. For the past two years, the campus has hosted community conferences for college counselors to encourage more interaction between the two-year colleges and the University. In Spring 1985, UCSD hosted a "community college day" for potential transfer students. The activities of the day included tours and special meetings.

In addition, teams of UCSD faculty and staff have begun visiting local community colleges to provide students with information about admissions, student life, academic programs, housing, and financial aid. EOP/ORS has also assigned its outreach counselors as liaisons to particular community colleges. Each counselor visits his or her community colleges several times a semester to meet with staff and to counsel students.

In 1985, UCSD began using a new format for its general education articulation agreements with local community colleges. The new design makes it easier for counselors and prospective transfer students to plan a course of study that will meet the standards of one or more of UCSD's colleges. Beyond this, UCSD is expanding its efforts to develop articulation agreements according to major fields. Such agreements with community colleges in UCSD's service area are currently in effect for math, science, and engineering majors.

Finally, UCSD's Associate Vice Chancellor for Academic Planning has recently met with the Vice Presidents for Instruction of the local community colleges to discuss formation of a council to assist in the articulation process. The review of the Master Plan that is now taking place may have a significant effect on the transfer function.

6. International Students

UCSD enrolls approximately 300 undergraduate international students each year. The campus has clearly defined admissions policies for foreign students (General Catalog, pp. 53-54). For example, prospective students from abroad must demonstrate above-average
scholarship and an adequate command of English and must have sufficient funds to cover all fees and living expenses. The campus admits such students only in the Fall Quarter in order to assist them in adjusting to a new environment and to ensure that all necessary paperwork, including financial statements, is completed in a timely manner.

The International Center, operated primarily by volunteers, provides a variety of services for international students and scholars, including immigration advising, consultation with the State Department, and help in finding housing. For a more complete discussion of the International Center, see the section on it under Academic Support Services (Chapter IX).

7. Financial Aid

The Student Financial Services Office administers financial aid for both undergraduate and graduate students. The office is periodically evaluated to ensure that it is well-organized and well-publicized and that aid is being administered equitably. Many of the publications already mentioned contain information about financial aid. In addition, the Student Financial Services publishes undergraduate and graduate financial aid consumer handbooks to help students take advantage of the various financial aid opportunities available to them.

Recently, the campus has become interested in actively pursuing students of exceptional ability, and the Financial Aids Office is planning special benefits for Regents' Scholars, National Merit Scholars, and other scholarship winners. Benefits under consideration include stipends, guaranteed on-campus housing, preferred enrollment, training as tutors for OASIS, social events, more liberal library borrowing and check cashing privileges than other students, and special parking and recreation privileges.

Staff and students appear reasonably well-satisfied with the operation of Student Financial Services. Audits have uncovered no mismanagement of funds, but they have made suggestions for improving the operations of the office. In 1983, a Management Review Team conducted a review of the office and made recommendations to improve its operations, and the Registration Fee Committee has also made suggestions. The office is still in the process of considering these recommendations and putting them into effect.

D. TRENDS IN ENROLLMENT AND CONTINUATION

Since 1976, undergraduate enrollment at UCSD has risen from 8,065 to 11,122. From 1979 to 1984 UCSD grew more than any other UC campus (Figures 18 and 19).
### FIGURE 18

**UC Fall Undergraduate Enrollments, 1979 - 1983**
(Ranked by 4 Year Percentage Rate of Growth)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Campus</th>
<th>Fall Undergrad. Headcount Enrollments</th>
<th>4 Year Absolute Incr./Decr.</th>
<th>4 Year Percentage Incr./Decr.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1979</td>
<td>1983</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>SAN DIEGO</td>
<td>8819</td>
<td>11122</td>
<td>2303</td>
</tr>
<tr>
<td>2.</td>
<td>Irvine</td>
<td>7688</td>
<td>9436</td>
<td>1748</td>
</tr>
<tr>
<td>3.</td>
<td>Santa Barbara</td>
<td>12804</td>
<td>14744</td>
<td>1940</td>
</tr>
<tr>
<td>4.</td>
<td>Santa Cruz</td>
<td>5693</td>
<td>6350</td>
<td>657</td>
</tr>
<tr>
<td>5.</td>
<td>Los Angeles</td>
<td>21082</td>
<td>23132</td>
<td>2050</td>
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<td>6.</td>
<td>Davis</td>
<td>12999</td>
<td>13888</td>
<td>889</td>
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<td>7.</td>
<td>Riverside</td>
<td>3199</td>
<td>3357</td>
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<tr>
<td>8.</td>
<td>Berkeley</td>
<td>21277</td>
<td>21267</td>
<td>-10</td>
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</tbody>
</table>

*Source: UC Corporate Student Data System Statistical Summary, Fall 1983*
### UC Continuation Rates and General Campus Undergraduate Enrollments

**Adjusted Fall - Fall Quarters - Fall 1976 Through Current Year**

<table>
<thead>
<tr>
<th>Campus</th>
<th>F76-77 Enrl Rate</th>
<th>F77-78 Enrl Rate</th>
<th>F78-79 Enrl Rate</th>
<th>F79-80 Enrl Rate</th>
<th>F80-81 Enrl Rate</th>
<th>F81-82 Enrl Rate</th>
<th>F82-83 Enrl Rate</th>
<th>F83-84 Enrl Rate</th>
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</thead>
<tbody>
<tr>
<td>Santa Cruz</td>
<td>5.803 .758</td>
<td>5.748 .754</td>
<td>5.533 .759</td>
<td>5.693 .780</td>
<td>5.998 .815</td>
<td>6.332 .783</td>
<td>6.286 .796</td>
<td>6.350 .804</td>
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<tr>
<td>UC Average</td>
<td>90.318 .818</td>
<td>88.956 .818</td>
<td>90.166 .829</td>
<td>93.184 .845</td>
<td>96.472 .857</td>
<td>98.547 .861</td>
<td>100.381 .873</td>
<td>103.034 .880</td>
</tr>
</tbody>
</table>

**Source:** UC Statistical Summary of Students

**Note:** Continuation Rate = Continuing/Returning Fall

Total Previous Fall + New Previous Winter and Spring - Degrees Previous Year
The total number of applications rose from 4,224 in 1978 to 5,590 in 1985. The application period for the University begins on November 1 and campuses cannot close until November 30. Since 1982, UCSD has closed on that date, and in 1984 the campus received 1,000 applications too many in the application period. Starting in 1978, the proportion of applicants who actually registered the following year rose from 48% to 55% in 1984 (Figure 20). Because the office of the Registrar and Admissions has predicted the enrollment of new students on the basis of this percentage, UCSD has overenrolled new students every year since 1978.

Within the overall growth, the enrollment of under-represented minorities has also grown. Taken together, absolute and proportional enrollments of the five groups the UC system recognizes as under-represented—Black, Mexican-American, Other Spanish, American Indian, and Filipino—rose from 813 (10.9%) in 1975 to 1,521 (13.3%) in 1984. (See Figures 15 and 16, pages 44 and 45.)

Viewed separately, the enrollment of Mexican/American and Filipino students increased both absolutely and proportionally between 1975 and 1985, rising from 302 (4.05%) to 614 (5.19%) and from 70 (.94%) to 474 (4.01%) respectively. In contrast, the enrollment of Black students decreased from a high of 376 (4.69%) in 1977 to 307 (2.68%) in 1984. In 1985, the enrollment of Black students began to recover, rising to 340 (2.87%). Enrollments of Asian students rose from 254 (3.4%) in 1975 to 1,339 (11.32%) in 1985.

From 1979-80 to 1983-84, the Fall-to-Fall continuation rate rose from 77.6% to 84.5%. In 1979-80, UCSD had the lowest rate in the University; in 1983-84, it was fifth. (See Figure 19, page 56.) Preliminary figures show that the rate rose again in 1984-85; it was nearly 87%.

In 1984, students who had entered UCSD directly from high school took an average of 4.76 years to graduate (comparative figures for earlier years are unavailable): Revelle College students took an average of 5.08 years, Third College students 4.89 years, Warren College students 4.77 years, and Muir College students 4.64 years. The length of the college career seem to reflect the decline in the average number of units student take each quarter. In 1975, the average was 14.7 units per quarter; in 1983, it was 13.9. Consequently, the mean time to graduation has probably increased during the last decade (Figures 21 and 22).

OASIS and the colleges have conducted limited analytical studies on undergraduate student performance and retention. In 1984, to complement and improve such efforts, the VCUA established a Student Research Office within the Office of the Registrar and Admissions. During Summer 1985, this office began the most in-depth investigation of retention to date. The first task has been to restructure the collection of data from students to allow longitudinal studies of particular age, ability, and ethnic groups.
### UCSD Freshmen and Advanced Standing Fall Quarter

**Applications to Registrants Data**

**1978 - 1984**

<table>
<thead>
<tr>
<th>Year</th>
<th>All Freshmen</th>
<th>All Advanced Standing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Appl.</td>
<td>Admits</td>
</tr>
<tr>
<td>1975</td>
<td>3528</td>
<td>2943(83%)</td>
</tr>
<tr>
<td>1978</td>
<td>4224</td>
<td>3203</td>
</tr>
<tr>
<td>1979</td>
<td>3935</td>
<td>2998(76%)</td>
</tr>
<tr>
<td>1980</td>
<td>3936</td>
<td>3083(78%)</td>
</tr>
<tr>
<td>1981</td>
<td>4306</td>
<td>3377(78%)</td>
</tr>
<tr>
<td>1982</td>
<td>4692</td>
<td>3569(76%)</td>
</tr>
<tr>
<td>1983a</td>
<td>4313</td>
<td>3530(82%)</td>
</tr>
<tr>
<td>1984a</td>
<td>4651</td>
<td>4030(87%)</td>
</tr>
</tbody>
</table>

---

*a) UCSD closed on November 30 in these years.

b) Until 1985, UCSD admitted all qualified students.

Source: UCSD Campus Planning Office
Average Number of Years/Units to Complete Degree Requirements*  
by  
College  
1984

<table>
<thead>
<tr>
<th>College</th>
<th>M Years to Graduation</th>
<th>M Units to Graduation</th>
<th>M Units per Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revelle</td>
<td>5.08</td>
<td>212.49</td>
<td>14.66</td>
</tr>
<tr>
<td>Third</td>
<td>4.89</td>
<td>195.34</td>
<td>14.04</td>
</tr>
<tr>
<td>Warren</td>
<td>4.77</td>
<td>187.97</td>
<td>13.86</td>
</tr>
<tr>
<td>Muir</td>
<td>4.64</td>
<td>193.46</td>
<td>14.10</td>
</tr>
</tbody>
</table>

Total Population: 4.75**  
194.15**  
14.34**

*10% sample of Summer, Fall, Winter and Spring graduates (n=168);  
**Weighted by college  
Calculation of years to graduate based on following formula:  
(M, of quarters to graduate * .25) * .75 = M, of years to graduate  
Calculation of average number of units per quarter based on following formula:  
M, of units  
.3 X (M, years - .25) = M, units per quarter

Source: UCSD Office of the Registrar
### Average Units Per Undergraduate Student, 1964 to 1983

<table>
<thead>
<tr>
<th>Student Level</th>
<th>Fall 1964</th>
<th>Fall 1965</th>
<th>Fall 1967</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD</td>
<td>15.3</td>
<td>11.4</td>
<td>14.4</td>
</tr>
<tr>
<td>UD</td>
<td>--</td>
<td>1.6</td>
<td>1.7</td>
</tr>
<tr>
<td>UG</td>
<td>--</td>
<td>15.3</td>
<td>--</td>
</tr>
<tr>
<td>Grad</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>15.3</td>
<td>12.9</td>
<td>16.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student Level</th>
<th>Fall 1971</th>
<th>Fall 1972</th>
<th>Fall 1973</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD</td>
<td>13.0</td>
<td>13.1</td>
<td>13.3</td>
</tr>
<tr>
<td>UD</td>
<td>2.1</td>
<td>1.8</td>
<td>1.8</td>
</tr>
<tr>
<td>UG</td>
<td>--</td>
<td>1.0</td>
<td>--</td>
</tr>
<tr>
<td>Grad</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>15.1</td>
<td>15.0</td>
<td>15.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student Level</th>
<th>Fall 1974</th>
<th>Fall 1975</th>
<th>Fall 1976</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD</td>
<td>13.7</td>
<td>12.9</td>
<td>12.9</td>
</tr>
<tr>
<td>UD</td>
<td>1.0</td>
<td>1.6</td>
<td>1.7</td>
</tr>
<tr>
<td>UG</td>
<td>--</td>
<td>1.0</td>
<td>--</td>
</tr>
<tr>
<td>Grad</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>15.6</td>
<td>14.7</td>
<td>14.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student Level</th>
<th>Fall 1977</th>
<th>Fall 1978</th>
<th>Fall 1979</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD</td>
<td>12.7</td>
<td>12.7</td>
<td>12.3</td>
</tr>
<tr>
<td>UD</td>
<td>1.8</td>
<td>1.6</td>
<td>1.8</td>
</tr>
<tr>
<td>UG</td>
<td>--</td>
<td>1.0</td>
<td>--</td>
</tr>
<tr>
<td>Grad</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>14.5</td>
<td>14.3</td>
<td>14.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student Level</th>
<th>Fall 1980</th>
<th>Fall 1981</th>
<th>Fall 1982</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD</td>
<td>12.1</td>
<td>11.9</td>
<td>8.5</td>
</tr>
<tr>
<td>UD</td>
<td>1.9</td>
<td>1.9</td>
<td>5.5</td>
</tr>
<tr>
<td>UG</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Grad</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>14.0</td>
<td>13.8</td>
<td>13.9</td>
</tr>
</tbody>
</table>

**Note:** Data not available for 1966, 1968, 1969, 1970

**Source:** UCSD Planning Office, December, 1983
In the meantime, the campus assumes that the overall improvement in the continuation rate is a sign of increased student satisfaction with their undergraduate experience. The expansion of student services over the last five years, and the commercial and residential development of the community surrounding the campus have helped to make the campus more attractive to students. The students themselves have taken measures to improve the social atmosphere of the campus, as evidenced by a resurgence of interest in student government, the introduction of fraternities and sororities, and the student mandated and funded construction of a new University Center.

However, other factors entirely different from increased student satisfaction may be operating to improve the continuation rate at UCSD. The fact that students are taking fewer units on the average, whether to earn money or to relieve academic stress, may have increased the rate. Increased interest in engineering may also have increased the rate. Pre-engineering students tend to take less than a full load of courses in the interest of earning high grade-point averages, and it is difficult to transfer in and out of engineering programs. Finally, the campus now offers more major programs than it did ten years ago, and students may be finding appropriate courses here instead of seeking them elsewhere. The new studies by the Student Research Office and the Campus Planning Office will test these assumptions.

Continuation rates differ for different ethnic minorities. Calculations based on the crude measure of Fall-to-Fall rates (not taking into account the effect of Winter and Spring admissions and continuation) show that for the period 1982-84, the rate for the whole campus was 78%. The rate for Whites was 78%, for under-represented minorities 74.5%, and for Asians 83.5%. The campus is concerned about these differences and is seeking ways to improve the retention of students from under-represented minorities. Many of the programs of the Office of Academic Support and Instructional Services (OASIS) are directed to this goal. Third College has founded a Minority Math Honors Workshop to help students achieve the level of performance needed for careers in science and engineering and is presently setting up a Writing Workshop.

E. PROFILE OF UCSD STUDENTS

In Fall 1984, two of UCSD's colleges participated in the Cooperative Institutional Research Project (CIRP). Freshmen from Muir and Third Colleges were surveyed. The survey asked questions about parental income, political orientation, choice of college, and career objectives. The campus last participated in the survey in 1969. Comparison between the two surveys is not very useful because the campus was so small at that time and its students were pioneers—a rather special breed.
The Campus Planning Office has added data to the material collected by CIRP. Regarding the whole freshman class, these data show:

Freshman Enrolled 2,545  Male 52%  Female 48%

Special Action Admissions 7%

Re-entry Students 3%

Mean SAT Verbal 500  Math 570

Mean High School GPA 3.53

Ethnic Distribution:
White 75%
Black 4%
Hispanic 8%
Asian 12%
Am. Ind. 1%

Geographical Origins:
San Diego County 45%
California 92%
Other States 6%
Foreign 2%

Most Frequently Declared Majors:
Engineering 26%
Biology 23%
Undeclared 28%

Studies of the student body as a whole (Fall 1983) indicated that UCSD has a relatively high percentage of students who declare science and engineering majors (54%) and a correspondingly low percentage declare "Undeclared" (17%). Figure 23 compares these figures with Berkeley and UCLA and shows the change from Fall 1980 to Fall 1983. Figure 24 shows changes in enrollment in individual departments between Fall 1981 and Fall 1985.

Figure 25 gives a profile of UCSD's students from the 1984 CIRP survey. The data confirm the cruder measures gathered by the Campus Planning Office. It is particularly interesting to see that the choices of major indicated in Figure 24 are reflected in the students' aspirations. In comparison to the national norms, more of UCSD's students want to go to medical school and to be scientific researchers and computer scientists. In the same comparison, a smaller percentage want to be lawyers or businessmen.
### Undergrad. Enrollment

<table>
<thead>
<tr>
<th></th>
<th>UCB</th>
<th>ULCA</th>
<th>UCSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>F80</td>
<td>F80</td>
<td>F80</td>
<td>F80</td>
</tr>
<tr>
<td>F83</td>
<td>F83</td>
<td>F83</td>
<td>F83</td>
</tr>
</tbody>
</table>

- Biological Sciences
- Physical Sciences
- Mathematics
- Engineering
- Comp. & Info. Science

- All Else Declared: 20% F80, 21% F83, 19% F80, 17% F83, 47% F80, 54% F83
- General & Unclassified: 32% F80, 26% F83, 44% F80, 35% F83, 32% F80, 29% F83

### Graduate Enrollment

<table>
<thead>
<tr>
<th></th>
<th>UCB</th>
<th>UCLA</th>
<th>UCSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>F80</td>
<td>F80</td>
<td>F80</td>
<td>F80</td>
</tr>
<tr>
<td>F83</td>
<td>F83</td>
<td>F83</td>
<td>F83</td>
</tr>
</tbody>
</table>

- Biological Sciences
- Physical Sciences
- Mathematics
- Engineering
- Com. & Info. Science

- All Else Declared: 40% F80, 37% F83, 24% F80, 28% F83, 52% F80, 54% F83
- Unclassified: 58% F80, 60% F83, 75% F80, 70% F83, 48% F80, 46% F83

---

1 Excludes Health Sciences
2 Includes Marine Sciences at UCSD
FIGURE 25
PROFILE OF UCSD FRESHMEN, FALL 1984

An asterisk (*) marks those distributions or percentages that are significant at the .05 level of probability, using the Chi Squared test.

<table>
<thead>
<tr>
<th></th>
<th>UCSD</th>
<th>Selective</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Attending College of:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>first choice...........</td>
<td>80.5%</td>
<td>71.8%</td>
<td>+08.7</td>
</tr>
<tr>
<td>second choice...........</td>
<td>14.1</td>
<td>20.0</td>
<td>-05.9</td>
</tr>
<tr>
<td>third &amp; below...........</td>
<td>05.4</td>
<td>08.2</td>
<td>-02.8</td>
</tr>
<tr>
<td>*Distance From Home:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 to 100 miles.....</td>
<td>25.7%</td>
<td>41.7%</td>
<td>-16.0</td>
</tr>
<tr>
<td>101 to 500 miles...</td>
<td>49.3</td>
<td>49.0</td>
<td>+00.3</td>
</tr>
<tr>
<td>over 500 miles...</td>
<td>25.1</td>
<td>09.3</td>
<td>+15.8</td>
</tr>
<tr>
<td>*Self-Reported Need for Remedial Work in:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities/Soc Sci...</td>
<td>24.5%</td>
<td>11.6%</td>
<td>+12.9</td>
</tr>
<tr>
<td>Science/Mathematics...</td>
<td>62.9</td>
<td>27.2</td>
<td>+35.7</td>
</tr>
<tr>
<td>Foreign Language...</td>
<td>12.1</td>
<td>07.8</td>
<td>+04.3</td>
</tr>
<tr>
<td>High School Attended:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>public..............</td>
<td>81.9%</td>
<td>84.8%</td>
<td>+02.9</td>
</tr>
<tr>
<td>private..............</td>
<td>17.1</td>
<td>17.0</td>
<td>00.1</td>
</tr>
<tr>
<td>*Thought High School Grading Was Too Easy:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>71.1%</td>
<td>58.2%</td>
<td>+12.9</td>
</tr>
<tr>
<td>*Parental Income:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;4K to 19K...........</td>
<td>10.7%</td>
<td>17.0%</td>
<td>-06.3</td>
</tr>
<tr>
<td>20K to 49K...........</td>
<td>40.3</td>
<td>52.8</td>
<td>-12.5</td>
</tr>
<tr>
<td>&gt;50K...........</td>
<td>48.9</td>
<td>30.2</td>
<td>+18.7</td>
</tr>
</tbody>
</table>
FIGURE 25 (cont.)

Important Objectives:

<table>
<thead>
<tr>
<th>Objective</th>
<th>1974</th>
<th>1975</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>become authority in field</td>
<td>74.4%</td>
<td>74.7%</td>
<td>-0.3</td>
</tr>
<tr>
<td>raise a family</td>
<td>72.6</td>
<td>70.0</td>
<td>+2.6</td>
</tr>
<tr>
<td>have administrative responsibility</td>
<td>40.4</td>
<td>42.4</td>
<td>-2.0</td>
</tr>
<tr>
<td>be very well off financially</td>
<td>68.7</td>
<td>72.1</td>
<td>-3.4</td>
</tr>
<tr>
<td>help others in difficulty</td>
<td>65.7</td>
<td>60.9</td>
<td>+4.8</td>
</tr>
<tr>
<td>succeed in own business</td>
<td>49.4</td>
<td>49.5</td>
<td>0.1</td>
</tr>
<tr>
<td>*be involved in environmental cleanup</td>
<td>26.4</td>
<td>19.7</td>
<td>+6.7</td>
</tr>
<tr>
<td>make theoretical contrib to science</td>
<td>19.3</td>
<td>17.7</td>
<td>+1.6</td>
</tr>
<tr>
<td>receive recognition from colleagues</td>
<td>53.6</td>
<td>58.7</td>
<td>-5.1</td>
</tr>
</tbody>
</table>

*Post-Graduation Plans:

<table>
<thead>
<tr>
<th>Program</th>
<th>1974</th>
<th>1975</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>masters pgm........</td>
<td>41.3%</td>
<td>36.2%</td>
<td>+5.1</td>
</tr>
<tr>
<td>doctoral pgm.......</td>
<td>22.3</td>
<td>14.1</td>
<td>+8.2</td>
</tr>
<tr>
<td>med school.........</td>
<td>16.5</td>
<td>11.6</td>
<td>+4.9</td>
</tr>
<tr>
<td>law school.........</td>
<td>04.8</td>
<td>06.8</td>
<td>-2.0</td>
</tr>
<tr>
<td>other..............</td>
<td>15.2</td>
<td>31.3</td>
<td>-16.1</td>
</tr>
</tbody>
</table>

Source: Cooperative Institutional Research Project, UCLA.
CHAPTER IV
GOALS AND RESPONSIBILITIES OF THE UNIVERSITY

A. GOALS

The goals of UC San Diego are:

- To continue to provide high-quality undergraduate, graduate, and professional instruction in an environment conducive to teaching and learning;

- To maintain existing "centers of excellence" in graduate instruction and research, as long as they are relevant and creative, and develop new centers in approved areas as opportunity permits;

- To develop and maintain a balance of disciplines sufficient to support undergraduate teaching programs in all commonly recognized instructional areas, in interdisciplinary studies, and in selected pre-professional subjects;

- To integrate research with graduate, professional, and undergraduate education whenever feasible in order to improve the effectiveness of academic programs;

- To continue to support graduate and professional school research programs and the organized research units, particularly in the Marine Sciences and Health Sciences;

- To expand and intensify the campus's public service programs, especially in University Extension and the School of Medicine, in ways that will improve the quality of life in the community, state, and nation;

- To maintain organizational flexibility within the colleges and departments in order to encourage interdisciplinary studies that are responsive not only to the needs of scholars, but also to the needs of society; and

- To facilitate equal opportunity in education by building and maintaining a student body, faculty, and staff that reflects the composition of the population at large.

To ensure that it meets its goals, the campus takes care in establishing academic programs and engages in regular reviews of its existing programs. From time to time, the administration or the Academic Senate organizes special reviews of administrative units. For example, the administration recently commissioned a review of the Staff Personnel Office, and the Senate reviewed the operations of the Office of the Registrar.
The self-study process has contributed to this cycle of reviews. Academic reviews proceed on a regular schedule, but the self-study has required that all administrative and support units be reviewed, at least by themselves. The self-study will, therefore, contribute to the campus's knowledge of itself.

1. Academic Reviews: Existing Programs

a. Undergraduate Programs

All instructional programs and organized research units are reviewed every five years, or more frequently in special circumstances. Procedures for review of graduate and undergraduate programs are contained in documents of the San Diego Division of the Academic Senate, dated June 13, 1978, revised April 16, 1984.

The Committee on Educational Policy (CEP) of the San Diego Division of the Academic Senate reviews undergraduate programs. The committee appoints an ad hoc committee for each review. This subcommittee submits a review to the full committee, which reviews it and makes an evaluation based on it. The committee then shares its findings with the department or program and asks it to respond to any criticisms contained in the report. This process of consultation resembles a negotiation. In some cases, the CEP arranges for an early re-review of a program to monitor progress in the correction of defects.

The CEP began reviewing undergraduate programs in 1977 and has tried to review each program every five years. However, the complexity of the reviews and the lack of staff support has meant that the average time between reviews is actually a little over six years. The committee makes an effort to conduct a review of a department's undergraduate program the year after its graduate program has been reviewed. The earlier review produces a great deal of useful information, and the department does not have to redo the whole self-study that is connected with the review. The procedures for reviews and the schedule through 1992 are published in the Academic Senate Manual (Figure 26).

In addition to the reviews conducted by the Senate, the colleges keep a constant watch on departmental courses that affect general education programs. For example, the Muir Curriculum Review and Development Board examines every course used to satisfy the college's general education requirements. The other colleges have similar boards. Occasionally, they also contribute to monitoring the departmental majors, dealing directly with departments when problems or questions arise.
<table>
<thead>
<tr>
<th>YEAR</th>
<th>GRADUATE</th>
<th>UNDERGRADUATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974-75</td>
<td>Economics</td>
<td>Chemistry</td>
</tr>
<tr>
<td></td>
<td>History</td>
<td>Communications Program</td>
</tr>
<tr>
<td></td>
<td>Physics</td>
<td></td>
</tr>
<tr>
<td>1975-76</td>
<td>Chemistry</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Literature</td>
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**FIGURE 26 (cont.)**

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</table>
b. Graduate Programs

Next only to the review of academic personnel, the graduate program review process is the most important and effective tool the campus has for maintaining and improving its quality. Reviewers look at virtually every aspect of the department--its subdisciplinary structure, the quality of its faculty and graduate students, the success of graduates in getting employment, and the competitive position of the department with respect to the pool of applicants in the field. The CEP uses information from the graduate reviews in conducting its reviews of undergraduate programs.

The campus began to review graduate programs in 1975. The process not only identifies strengths, but also serves to pinpoint aspects of programs that need improvement. Graduate programs that have been in existence for five years or more are subject to review, which under the current schedule will occur every seven years.

The Graduate Council of the Academic Senate, together with the Dean of Graduate Studies and Research, conducts the reviews. Each department to be reviewed works with staff in the Office of Graduate Studies and Research (OGSR) to gather extensive data about its program, faculty, and students. The Dean then appoints a visiting committee of three to five distinguished scholars from the discipline of the department being reviewed. Usually, the committees contain one member who is from another campus of the University of California, but the majority of members come from outside the UC system. The committee gets the dossier of information about the department and its program about one month before the visit.

The Visiting Committee comes to the campus for two full days to meet with faculty, students, and campus administrators. When the campus receives the Committee's final report, it is made available to members of the department and to the department's graduate students. The department then prepares a written response to the Visiting Committee's report.

The report, with the response, is then discussed in a meeting among the Chancellor, the Vice Chancellor - Academic Affairs, the Dean of Graduate Studies and Research, the Chair of the Graduate Council, and the Chair of the department. The Graduate Council subsequently reviews the report.

The result of the process varies from case to case; some problems are soluble, others intractable. The Dean of Graduate Studies is principally responsible for helping departments solve their problems, but the Vice Chancellor - Academic Affairs also is much concerned with the findings of the Visiting Committees. The Graduate Council conducts a follow-up review of a department approximately one year after the review to see what progress is being made in implementing the recommendations of the Visiting Committee's report.
Obviously, this process of review is not always successful. The reviews require a great deal of work, and it can sometimes be difficult to get people to serve on the Visiting Committees. The reports are occasionally not of the depth or quality the campus would like, and they are sometimes not completed until many months after the campus visit. Finally, departments sometimes do not institute recommended changes as vigorously or as completely as they should. Overall, however, the reviews are well worth the effort because they produce a great deal of information and lead more often than not to an improvement of the quality of UCSD's graduate and research programs.

2. New Programs and Degrees

a. Undergraduate Programs

(4A9) The process for approving new programs and degrees is set out in the UCSD Policy and Procedure Manual, Section 165-76. Both the Academic Senate and the Administration are involved in the process.

(4B3) Groups of faculty--either organized as a department or as an ad hoc group--propose new programs and degrees to the Committee on Educational Policy of the San Diego Division of the Academic Senate. If the committee endorses the proposal, it forwards it to the Vice Chancellor - Academic Affairs (VCAA).

The VCAA presents the program to the Program Review Committee (PRC) for a discussion of the resources needed for the program. If PRC approves the commitment of resources, then the VCAA sends the proposal to the Chancellor of UCSD, who must also endorse it. After the Chancellor has approved the program, he forwards it to the Office of the President, which analyzes the budgetary implications of the proposal and consults with the University Committee on Educational Policy (UCEP). The President has final authority to approve the program.

b. Graduate Programs

(4A9) The process for approval of new graduate programs is more elaborate than that for undergraduate programs. Proposals for graduate programs ordinarily come from departments, but interdisciplinary groups of faculty can also propose programs. Proposals are usually developed in consultation with the OGSR.

After it is formulated, the proposal is first analyzed by the Campus Planning Office to determine what fiscal and physical resources it requires. It then goes to the Senate's Graduate Council and Committee on Planning and Budget, which study it. The main work on the proposal is done by the Graduate Council, which often consults with the department or faculty proposing it throughout its
consideration. If convinced that the program is sound and that the
department or group has the resources to carry it out, the Graduate
Council and Committee on Planning and Budget recommend that the
Division approve it.

After the Division has approved a program, the VCAA and the
PRC review it and decide whether to commit the necessary resources
to the department to carry out the program. Once this commitment is
made, the Chancellor must endorse the program and submit it to the
Office of the President for systemwide review and approval.

The Office of the President does an analysis of the program’s re-
source needs, justification, and relationship with other programs in the
University and submits it to the Coordinating Committee on Graduate
Affairs (CCGA), a standing committee of the University Academic
Senate. CCGA makes a recommendation to the Assembly of the Uni-
versity Academic Senate, but before the Assembly considers the pro-
gram, the Academic Planning and Program Review Board studies it and
adds its recommendation. If the Assembly approves it, the proposal is
sent to the California Postsecondary Education Commission (CPEC) for
review. CPEC acts in an advisory capacity to the Legislature, so that
its review affects any budgetary proposals the University might make
to support the new program. The Commission also makes its views
known to the University.

The results of all these reviews are reported to the President of
the University, who consults with the Regents. The President has
final authority to approve new graduate programs.

When the proposal is to establish a new school or academic de-
gree, the Regents of the University have final authority to approve it.
Otherwise, the steps of approval are very similar to those normally
used for new graduate programs. The whole process normally takes
about eighteen months.

B. COMMITMENT TO ETHICAL PRINCIPLES

UCSD has a firm commitment to ethical practice in carrying out
its mission. It has established many policies to guide faculty, staff,
and students in their work and their associations with other members
of the university community. In addition, the various offices on cam-
pus strive to ensure that publications and public statements are
accurate and clear.

1. Publications

   a. The General Catalog

The Bylaws of the San Diego Division of the Academic Senate
require that the Committee on Educational Policy (CEP) “supervise the
Division's endorsement of publications dealing in any way with educational matters." For example, two years ago CEP demanded that all departments purge their lists of those courses that had not been given for two years. Occasionally, CEP has also asked departments to clarify language in the descriptions of programs.

In order to carry out this responsibility, especially as it relates to the UCSD General Catalog, departments submit all copy for the catalog to the Academic Senate Office. The office staff ensures that the copy is consistent with requirements for admission, descriptions of courses, and academic program requirements that have been approved by the various committees of the Academic Senate.

The Senate also supervises the non-academic sections of the catalog. Offices that have material in the catalog send their copy to the Senate for review. The Office of the Vice Chancellor - Undergraduate Affairs also has supervisory functions in the preparation of the non-academic material, but the Senate exercises the principal authority.

The General Catalog is revised annually. New or revised copy is due in the Senate Office in the second week of January, and the book is published during Spring Quarter.

b. Review of Other Publications

The Office of Graduate Studies and Research approves the content of graduate program brochures and recruitment posters generated by the departments.

The Publications Office reviews materials published on behalf of various "service" offices and departments that have no specific contractual or legal implications. The office accepts such materials from the departmental representative without additional clearance. The appropriate Vice Chancellors and Deans review the contents of the University's publications to ensure their accuracy.

2. Integrity of Scholarship

The San Diego Division of the Academic Senate has adopted the following policy on Integrity of Scholarship:

The principle of honesty must be upheld if the integrity of scholarship is to be maintained by an academic community. The University expects that both faculty and students will honor this principle and in so doing protect the validity of University grading. This means that all academic work will be done by the student to whom it is assigned, without unauthorized aid of any kind. Instructors, for their part, will exercise care in planning and supervising academic
work, so that honest effort will be encouraged. (General Catalog, p. 74)

In general, students shall not "engage in any activity that involves attempting to receive a grade by means other than honest effort." The policy statement also includes examples of dishonest effort. Instructors, for their part, "should state the objectives and requirements of each course at the beginning of the term, clearly informing students what kinds of aid and collaboration on assignments are permitted."

The policy sets out the procedures for handling cases of alleged academic dishonesty and specifies the penalties for violation of the policy. The procedures permit an informal settlement of the case and seek to protect a student's right to due process. (See General Catalog, pp. 75-6.)

The self-study process itself led to a clarification of this policy. One of the special study groups involved in the self-study discovered gaps in the procedures for handling cases and the Liaison Officer brought these to the attention of the Senate, which acted to correct the deficiencies.

3. Rights of Privacy

The University is subject to the laws and regulations of the State of California with respect to the rights of privacy enjoyed by its students and employees. As a public institution, the University is obligated to give budgetary information, salary scales, and the ranks and titles of employees to members of the public.

The privacy of students is protected by both state law and University regulations. At the time of admission and in each issue of the Schedule of Classes, the Office of the Registrar notifies students of their privacy rights. The office maintains the integrity and confidentiality of students' records according to published regulations (Policies Applying to Campus Activities, Organizations, and Students, Part B, Sections 10.00-11.30). The office refers queries about disclosure records to the Student Records Adviser, who monitors the campus's disclosure practices and serves as a resource person for UCSD departments that handle students' records.

4. Resolution of Student Grievances

As instructors may expect students to earn their grades through honest effort, so students may expect instructors to grade them fairly on the basis of clearly stated academic criteria. The Academic Senate has adopted a regulation governing grade appeals by students who believe their work has been judged on the basis of non-academic
criteria. Non-academic criteria may include discrimination on political grounds, race or ethnic origin, religion, or sex.

If a student believes that an instructor has graded him on non-academic grounds, he should first discuss the matter with the instructor. If this conference does not resolve the matter, then the student may appeal to the Chair of the instructor's department, the Provost of the student's college (or, in the case of a graduate student, the Dean of Graduate Studies and Research), and the Subcommittee on Grade Appeals of the Committee on Educational Policy. (See General Catalog, pp. 73-4.)

A discussion of problems and issues arising out of the University's grievance procedures may be found in Chapter XIV of the Self-Study, "Concerns Raised in Previous Accreditation Reviews."

C. COMMITMENT TO ACADEMIC FREEDOM

The University of California has always had a strong commitment to academic freedom. In 1934, President Robert G. Sproul eloquently expressed this commitment of the University in an address to the Academic Senate.

The function of the University is to seek and to transmit knowledge and to train students in the processes whereby truth is to be made known. To convert, or to make converts, is alien and hostile to this dispassionate duty. Where it becomes necessary, in performing this function of a university, to consider political, social, or sectarian movements, they are dissected and examined—not taught—and the conclusion left, with no tipping of scales, to the logic of the facts.

The University is founded upon faith in intelligence and knowledge, and it must defend their free operation. It must rely upon truth to combat error. Its obligation is to see that the conditions under which questions are examined are those which give play to intellect rather than passion. Essentially the freedom of a university is the freedom of competent persons in the classroom. In order to protect this freedom, the University assumes the right to prevent exploitation of its prestige by unqualified persons or by those who would use it as a platform for propaganda. It therefore takes great care in the appointment of its teachers; it must take corresponding care with respect to others who wish to speak in its name.

The University respects personal belief as the private concern of the individual. It equally respects the constitutional rights of the citizen. It insists only that its members, as
individuals and as citizens, shall likewise always respect—and not exploit—their University connection.

The University of California is the creature of the State and its loyalty to the State will never waver. It will not aid nor will it condone actions contrary to the laws of the State. Its high function—and its high privilege—the University will steadily continue to fulfill, serving the people by providing facilities for investigation and teaching free from domination by parties, sects, or selfish interests. The University expects the State, in return, and to its own great gain, to protect this indispensable freedom, a freedom like the freedom of the press, that is the heritage and the right of a free people (Academic Personnel Manual, 010).

As a consequence of this commitment, the San Diego Division of the Academic Senate has a Committee on Academic Freedom, whose charge is to:

...study, and, at its discretion, report to the Division any conditions within or without the University which, in the judgment of the committee, may affect the academic freedom of the members of the University, with particular reference to the acceptance of positions and resignations from positions in the University, and to the reputation of the University and of individual members of the Division.

The committee shall represent the Division in review of publications dealing with campus regulations, and report the results of its review to the Division (Academic Senate Manual, 3.29, para. B-C).

Further evidence of the University's commitment to academic freedom may be found in the Preamble to the "Faculty Code of Conduct," which was approved by the Academic Senate and is incorporated into the University's Academic Personnel Manual:

The University seeks to provide and sustain an environment conducive to sharing, extending, and critically examining knowledge and values, and to furthering the search for wisdom. Effective performance of these central functions requires that faculty members be free within their respective fields of competence to pursue and teach the truth in accord with appropriate standards of scholarly inquiry.

The faculty's privileges and protection, including that of tenure, rest on the mutually supportive relationships between the faculty's special professional competence, its academic freedom, and the central functions of the University. These relationships are also the source of the professional responsibilities of faculty members.
It is the intent of this Code to protect academic freedom, to help preserve the highest standards of teaching and scholarship, and to advance the mission of the University as an institution of higher learning (*Academic Personnel Manual*, 015).
CHAPTER V
PLANNING AT UCSD

A. ACADEMIC PLANNING

1. History

The York Plan of 1963, which outlined the college system, was the first formal academic plan for the development of UCSD. It was formulated by the founding faculty of the campus and approved by President Clark Kerr. It remains the basic framework for academic planning at UCSD, although revised several times. In addition, the campus administration and Senate have established various committees to monitor the growth of the campus under the plan.

In 1969, Chancellor McGill appointed a Senate/Administration Long Range Planning Committee to begin the process of revising the 1963 York Plan. This committee met most intensively from 1969 to 1971 and remained in existence until 1975, when the revised plan was approved.

In 1970, McGill created the Program Review Committee (PRC) to advise him of the views of faculty, staff, and students on planning and budget priorities. (The PRC still exists, although it has been reformed several times, and will be discussed in Chapter XI.) To give impetus to the renewed planning effort, Chancellor McGill held a retreat for senior campus management at a nearby conference center in April 1970.

As the revision of the academic plan began, the University was in the process of reviewing the demographic predictions on which the York Plan had been based. During the summer of 1972, a UC Task Force, in close consultation with the leadership at UCSD, recommended a drastic reduction of UCSD’s steady-state enrollment (to be achieved by the year 2000) from 27,500 to 14,000 students and a reduction from 12 colleges to 6.

As part of the new initiatives in planning, the President’s Office had, earlier in the year, created the Academic Planning and Program Review Board (APPRB) to develop a systemwide academic plan and to coordinate the academic plans of the nine campuses. The APPRB has remained an important coordinating body within the University.

At UCSD, during 1972, planning continued under the new Chancellor, William McElroy. The planners concentrated on the consequences of reducing the size of the campus. How would faculty be allocated to the various fields now that the ultimate size of the campus had been cut in half? To resolve this issue, the Vice Chancellor - Academic Affairs (VCAA), Paul Saltman, proposed a "40:30:30" formula as a guideline for the allocation of faculty FTEs among the various disciplines. The formula called for 40% of the
campus's faculty FTE's to be allocated to the natural sciences, 30% to the social sciences, and 30% to the humanities and fine arts. The formula became part of the revised academic plan of 1975 and has proven to be a helpful, though imprecise, guideline for directing the growth of UCSD's faculty.

The new academic plan, completed by the campus in 1972, was approved by the President in 1975 and replaced the York Plan as the basis for the growth of UCSD. In sum, it foresaw the development of a campus of six colleges with an undergraduate enrollment of 14,000, roughly half the size originally planned.

However, the campus could not rest on the new plan. The mid-1970s was a period of restricted resources and fiscal uncertainty, and the campus found it necessary to monitor its plan very carefully. In 1977, the Academic Senate established the Committee on Planning and Budget (CPB) to review campus planning and budget matters in detail from a faculty perspective. This committee has suffered from a lack of adequate staff support—as do most Senate committees—but the chair of the CPB sits on the Program Review Committee and on virtually all other important planning committees. This has helped to make the committee effective.

In the late 1970s, the Office of the President, convinced that enrollment declines and further funding reductions lay ahead, asked the campuses to review their academic plans again and submit draft revisions by the beginning of 1980. The draft revision of the 1975 academic plan was prepared by the Contingency Planning Task Group of the PRC, approved by the PRC in April of 1980, and reviewed by the APPRB in May. The Office of the President used the campus drafts to develop the University Planning Statement, published in May, 1981. UCSD's part of this statement was published separately in September, 1981, as the Academic Planning Statement.

The revised plan came into existence with an addendum intended for local use only, the Report of the Critical Mass Subcommittee of the PRC. At about the same time that it responded to the President's call for new planning, the PRC formed the subcommittee to prepare for the threat of significant budget cutbacks resulting from the passage of Proposition 13 in 1978. The PRC charged the subcommittee with determining the minimum number of faculty each department needed to maintain its intellectual viability. The Report of the Critical Mass Subcommittee was intended to guide the reallocation of resources in the event that the campus budget was reduced significantly. It is a good example of the kind of contingency planning that occupied much of the faculty's and administration's attention during the late 1970s and early 1980s.

As part of the University Planning Statement (May 1981), the Office of the President issued a report called "General Campus Issues for the Eighties" (Part I of the Statement). This part of the Statement rested on three assumptions:
1. The interests of the people of California, the State Government, and the University itself will be best served if the UC system continues to emphasize quality at every turn;

2. The University of California can play its role most effectively if the general framework of the Master Plan remains intact; and

3. The University of California is a single university system.

Soon after the publication of the Statement, UCSD issued its own Academic Planning Statement, General Campus Academic Issues for the Eighties (September 1981). The local Statement focused on: the quality of undergraduate, graduate, and professional education; research; faculty vitality; basic academic skills; student access; and enrollments.

In 1984, the Vice Chancellor - Academic Affairs gave the Dean of Arts and Sciences (now the Associate Vice Chancellor - Academic Planning) the task of overseeing the preparation of a new long-range academic planning document. As noted in Chapter III, the new planning effort is based on the experience of the campus since 1981. In this short period, undergraduate enrollment has grown at nearly twice the predicted rate, and the campus has begun to receive significant amounts of new capital and fiscal resources.

The planning groups are focusing on the following concerns:

1. Raising the ratio of graduate to undergraduate students;

2. Discussion of the disciplinary balance of the campus;

3. The structure of the departments, especially their current subdisciplinary structures and their views about future growth;

4. Interdepartmental programs and the development of criteria for determining which programs should be changed into departments, expanded, left the same, or disbanded;

5. Proposals for new professional and graduate programs, including a discussion of their integration with existing departments;

6. Strategies for achieving campus goals; and

7. Capital planning. (The campus is critically short of space.)

The Associate Vice Chancellor - Academic Planning chairs many special committees and task forces concerned with planning. He is chair of the Enrollment Projections Review Committee (EPRC), which
reviews and revises the enrollment plan for the campus and monitors the performance of the existing plan. He chairs the Space Allocation and Management Subcommittee of the PRC, which allocates space on the General Campus, and he serves on both the Capital Outlay and Space Advisory Committee (COSAC) and the Campus Community Planning Committee (C/CPC), which advise the Chancellor on capital projects and land use. He works with the Senate's Committee on Educational Policy (CEP), which approves and reviews all undergraduate programs and courses and sets broad educational policy, and with the Committee on Planning and Budget (CPB), which participates directly in academic planning.

All these groups produce special reports and studies that support the Campus Academic Plan. These documents include: University and campus planning statements; graduate and undergraduate enrollment plans; projected new programs, degrees, and research units; plans formulated by the academic departments and research units; University and campus library plans; administrative and academic computing plans; the instructional improvement plan; the campus plan for natural land and water reserve systems; the SIO growth plan; the Long-Range Development Plan (LRDP); and the report of the "Critical Mass" subcommittee.

2. Processes and Issues of Academic Planning

The academic plan for the campus as a whole is the sum of the plans of the academic units. In the School of Medicine and the Scripps Institution of Oceanography, planning is a function of the dean's and director's offices respectively. Each of those administrations consults with a faculty council. In the School of Medicine, the council of departmental chairs is also very influential. On the General Campus, the Vice Chancellor - Academic Affairs supervises, through the new Associate Vice Chancellor, a planning process that includes the active participation of the Academic Senate. The Senate includes faculty from the whole campus, but it concentrates its attention on this, the largest segment of the campus.

The planning process for the General Campus is the most complex of the three. SOM and SIO are units focused on specific professional or scholarly enterprises, which give shape and guidance to their planning. The General Campus encompasses all the academic disciplines, and the rapid growth expected during the next fifteen years will be concentrated in this unit. Making choices among the wide spectrum of possibilities for future development is one of the principal concerns of the planners.

On the General Campus, planning begins with the projection of future enrollments of undergraduate and graduate students, which will be the basis of the campus budget--i.e. the number of new faculty positions (Full Time Equivalents=FTEs), support funds, and capital funds.
In 1985, the Enrollment Projections Review Committee recommended new targets for enrollments. These targets are regarded as realistic for the first five years and subject to revision for the period after that. As shown in Figure 13, page 41, the plan foresees an enrollment (undergraduate and graduate, including SIO) of 15,450 in 1990-91 and 20,600 in 2000-01.

The second stage of the process is a close analysis of all the departments and programs on campus. For each department, the Associate Vice Chancellor has assembled data on size, subdisciplinary structure, age profile, teaching workload, and quality. The regular academic reviews of the undergraduate and graduate program contribute to these data. The Associate Vice Chancellor also asks each department and program to comment and add to the data he collects and to provide its views on future developments in its fields. These departmental contributions are the basis for planning their future growth.

The enrollment projections and goals of existing departments are the basis of planning. The projections tell the campus how many faculty FTEs will be available between 1985 and 2000, and the departmental goals indicate how many of these might be absorbed by existing units. The campus also reserves a certain number of FTEs for special programs, such as affirmative action and targets of opportunity. The Office of the President requires that each campus retain 10% of its total FTEs as temporary positions. This policy is a vestige of the period of budgetary uncertainty in the 1970s.

The FTEs left "free" after these deductions are available for wholly new departments and programs. Decisions about the development of such units are much more difficult than those about the future of existing units. In some cases, departments have suggested the development of new fields that are complementary to their disciplines, but many ideas come from individual faculty members. The present planning cycle, which looks ahead ten years, will be completed by December 1986.

Academic planning takes place in an uncertain environment. The campus must remain able to respond to special opportunities that often affect the development of existing or new programs. As a result, the academic plan is a guide rather than a blueprint. It provides a basis for making judgments about opportunities at the same time that it serves as the foundation for planned expansion of the academic program.

At UCSD, one of the principal concerns of the academic planning process has been the availability of space to expand existing programs and mount new ones. The campus has not built a state-funded project since 1978, when the second phase of the Third College campus was completed. Nearly every aspect of the academic plan has specific space requirements, and the plan that the present process produces
will take into account the prospects for expansion of the campus's physical plant. During the past two years, the State has been able to support capital projects, and capital planning is now running in parallel to academic planning.

B. CAPITAL AND PHYSICAL PLANNING

(8C)

Capital planning and physical planning are separate, but related activities. Capital planning involves the study of the space needs of campus units and the planning of buildings to accommodate them. Physical planning concerns itself with land use on the campus, the physical and aesthetic relationship of existing and proposed projects, and the physical relationship between the campus and the surrounding community.

Capital planning is carried out on a project by project basis, while physical planning rests on studies of long-term needs and plans.

1. Physical Planning

a. The Planning Process

The Campus Planner is the principal officer responsible for conducting or commissioning studies and for guiding the campus in its review of its long range development plans. The planner is part of the Campus Planning Office, which reports to the Vice Chancellor - Administration.

The Long Range Development Plan (LRDP) is the basis for physical planning on the campus. The LRDP is formulated by the campus and approved by The Regents. The present LRDP was approved in 1982 and reflects the changes in the academic plan published in that year. It designates areas of the campus for future colleges, recreation, services, and a nature preserve. The siting of specific projects is done in reference to the LRDP by the academic units and the administration.

The Campus and Community Planning Committee (C/CPC) advises the Chancellor concerning the LRDP and the location and design of specific facilities. It also assesses and monitors campus development in relation to the LRDP and development in the surrounding community. A subcommittee of the C/CPC, the Marine Sciences Physical Planning Committee (MSPPC), is responsible for siting, land use, and exterior aesthetics at Scripps Institution of Oceanography. The C/CPC is composed of students, faculty, and staff.

The local division of the Academic Senate recently established a Committee on Campus and Community Environment to consider and
make recommendations regarding the development and utilization of buildings, the use of land, and transportation and parking facilities on the campus. The members of this committee also serve as the faculty members of the Chancellor's Campus/Community Planning Committee.

b. Current Activities

Since The Regents adopted the revised Long Range Development Plan (LRDP) for UCSD in 1982, the campus has undertaken a series of planning studies to augment and refine the general guidelines contained in the LRDP. The Campus Planning Office, which reports to the Vice Chancellor - Administration, carries out the studies.

First, the campus commissioned a study of student housing needs. This study led to the construction of 900 apartment units and is the basis of plans to add 900 additional beds--divided between dormitory rooms and apartments--to be built in the next two years.

Second, a consulting firm prepared a detailed development plan for the area east of the Central University Library. The plan identified suitable building sites for several projects, including housing and academic facilities. The area is presently called the Miramar Academic Complex because it sits on Old Miramar Road. The first academic buildings in the new area will be Engineering Unit I, a Center for Magnetic Recording Research (funded by an industrial consortium), and a structures laboratory (funded by private and federal funds). The latter two projects are already under construction. The new Instruction and Research Facility will also be sited in the complex. A new University Center, to be completed in 1988, will be adjacent to this area.

Third, the campus commissioned a topographical study and road alignment drawing for the University's property east of Interstate 5. This study demarcates land for a new campus hospital and clinical facilities, aligns future streets and a freeway crossing, and designates a parcel for a Science Research Park.

Fourth, the campus ordered a study of the Corporation Yard, which now occupies old military stables buildings on prime land that could be used for academic buildings. The study analyzed the needs of the campus and recommended a site for a new yard. It also analyzed the costs of constructing new facilities.

Fifth, a consulting firm did a study of administrative space needs. This study found that UCSD is currently in need of nearly 50,000 ASF of administrative space and that the unmet demand for space could rise to about 100,000 by the end of the 1980s. The campus does not expect to receive state funds for an administrative building and is looking for ways to finance such a structure.
Sixth, at the urging of the Department of Physical Education, the Campus Planning Office hired a firm to create a sports and recreation master plan for the campus. The plan led the administration to designate land in the northern sector of the campus for future athletic facilities.

Seventh, the campus commissioned a major traffic, access, and parking study to define the traffic circulation and parking needs of the campus in the future. This study was completed early in 1985, after nearly a year of public discussion and administrative analysis.

Finally, a consulting firm is presently engaged in a major study of the area of Matthews Campus, which contains the buildings of the old Marine Corps base. This area has served as a staging area for the colleges and increasingly has been occupied by administrative functions. Many of the old buildings are in poor condition. The consultants will create a master plan for the area, which will ultimately contain a college, administrative buildings, and other central facilities.

The campus is also in the process of siting several facilities. It has completed siting a supercomputer facility, a new aquarium at SIO, the Instruction and Research Building, a faculty club, and major recreation facilities. It is currently working on the facility for the proposed Graduate School of International Relations and Pacific Studies. In the near future, it will site the Institute for Research on Aging, the Cancer Research Facility, and an outdoor amphitheater.

c. Capital Planning and the San Diego Community

In accordance with the California Environmental Quality Act, UCSD consults regularly with its neighbors about land-use plans and capital projects that may have an impact on the community. The campus maintains a current list of local agencies, community groups, and individuals that are notified about the availability of environmental reports on University plans and construction projects. These agencies, groups, and individuals have an opportunity to comment on University plans and projects.

In the past, community members sometimes found out about UCSD’s physical plans after the planning process was well underway, and they tended to form strong opinions about UCSD projects before discussion could take place. There have been incidents of serious conflict between the campus and the community.

To remedy the situation, UCSD now initiates informal contact with the community through the recently formed Office of University Relations. The office coordinates presentations about UCSD’s plans to concerned agencies, groups, and individuals prior to the release of environmental documents.
2. Capital Planning

Capital projects fall into two categories—major and minor. The State has defined minor capital projects as those costing less than $200,000. In general, they are designed to renovate existing buildings for new uses as a campus grows or its academic programs evolve. Of course, some renovations fall into the category of major projects.

Planning for capital projects starts in the academic or administrative units. Proposals are then submitted to the Capital Outlay and Space Advisory Committee (COSAC). COSAC is composed of students, faculty, and staff. It evaluates campus space needs and resources, recommends space assignments among the vice chancellorial areas, and approves the campus major and minor capital improvement programs. This committee also proposes new capital projects in response to an annual capital need assessment. Committee recommendations are submitted to the Chancellor for final approval and implementation.

a. Minor Capital Projects

Each year, the academic and administrative units (General Campus, School of Medicine, Scripps Institution of Oceanography, Administration) establish their lists of needed minor capital improvements. The Office of Resource Management (under the Vice Chancellor - Administration) helps each of the units form its list. It provides information about space standards for each discipline and analysis of space needs.

On the General Campus, the formation of the list includes a survey of the departments and analysis by the Office of the Vice Chancellor - Academic Affairs. The proposals gathered in this way are studied by the Space Allocation and Management Subcommittee of the PRC, which establishes a priority listing.

The lists of all units are submitted to COSAC, which integrates them and recommends a campus list to the Chancellor. Normally, the campus proposes twenty projects to the Office of the President. The budget for these projects is negotiated with the State each year, and the Office of the President then divides up the money among the campuses. In recent years, UCSD has received funds for its top ten projects.

b. Major Capital Projects

1) Planning a Project

Project planning begins with a study of space needs by the units on campus. Here, a distinction must be made between buildings to be funded by state and private funds. For privately funded buildings, the
campus determines the needs of departments or units and plans the facility accordingly. For state-funded buildings, the space requirements for each department are established by the "Restudy Standards," a set of guidelines developed by the California Commission on Higher Education (CCHE) in the 1960s. The State Legislature makes judgments based on these standards.

In developing a state-funded project, the academic or administrative unit consults with Resource Management, which calculates the needs of each unit according to the restudy standards and assists the Vice Chancellor of each unit in ranking their needs and determining the configuration of projects. This first stage of the planning is usually carried out by an ad hoc committee reporting to the Vice Chancellor of the unit. On the General Campus, the PRC through its Subcommittee on Space Allocation, advises the Vice Chancellor about major and minor capital projects. At SIO, the Marine Sciences Physical Planning Committee advises the Vice Chancellor - Marine Sciences about projects. In the School of Medicine, the Dean's Office coordinates consultation through the Faculty Council and the Council of Chairs.

When the unit has determined which departments or activities will occupy a proposed building, Resource Management forms a Building Advisory Committee (BAC). This committee is representative of those who will use the building, and it has staff members from Resource Management, Design and Construction, and the Campus Planner. It prepares a use-plan for the building, indicating the number and type of offices, laboratories, and other facilities—and a set of specifications about other aspects of the structure—pedestrian and vehicular access, relationship to other buildings, and other features.

The BAC then considers the site of the building, in consultation with the Campus Planner (under the Vice Chancellor - Administration). The planner and committee occasionally use outside consultants to help determine the site.

The BAC describes the specifications for the building and its siting proposal in a Project Planning Guide (PPG), which becomes the basis for further review and for selection of an architect. If the building is to be submitted for state funding, the PPG is reviewed by both COSAC and C/CPC. COSAC considers the project in relation to others proposed by the various units and places it in a priority ranking of all projects, which it recommends to the Chancellor. C/CPC reviews the proposed site and aesthetic considerations and also makes a recommendation to the Chancellor. The Chancellor has final authority to approve both the priority rankings and the site selections of the two committees.

If the building is to be constructed with private funds, then only C/CPC needs to review its siting and aesthetic characteristics. COSAC merely notes that it has been added to the campus's capital program.
The Regents have ultimate authority over the campuses' capital plans, which include all projects (funded by state or private funds) that each campus wishes to construct. The Regents must approve every construction project in the University. For state-funded projects, the Office of the President and The Regents set the priorities for the University as a whole.

The Office of the President plays an active role in shaping campus projects before they are presented to The Regents. Discussions between the campus and the Office of the President usually focus on the prospects for approval by The Regents and the state government. These discussions can have a substantial effect on the size and scope of a project.

The regental list of capital projects determines which state-funded projects will be presented in the University's budget, which goes to the Governor in the Fall of each year. The Capital Planning Office in the Office of the President negotiates the capital budget with the Governor's Department of Finance and with the Legislature.

2) Building a Project

The course of events after campus approval depends on the source of funding for the project. Buildings to be constructed with private donations or research funds must be approved by The Regents, but once they have acted, the campus can proceed to develop the project.

The BAC advertises for an architect, screens applicants, and recommends the hiring of one of them. It works with the architect to develop plans for the building, in consultation with the campus Office of Design and Construction. The plans must then be reviewed by C/CPC to ensure that the building will be compatible with other structures on campus and with the LRDP. The C/CPC makes a recommendation to the Chancellor, who has final authority.

After the plans are complete, the campus goes out for construction bids. The Office of Design and Construction supervises this process and assists the BAC in judging the quality of the bids. Construction begins as soon as possible after a bid is accepted. When private funding is used to build a structure, it normally takes between nine months and a year to plan and bid a project.

Buildings to be constructed with state funds must be presented to the state government. The Office of the President first tries to get the project into the Governor's budget, which is presented to the Legislature in January. If a project survives this step, the Office of the President shepherds it through the legislative hearings and debates. During this process, the campus planners are often called upon to help answer questions and justify the project.
The State normally funds projects in four phases—plans, working drawings, construction, and equipment. Usually, these phases are funded over four years, but, in special circumstances, two or more of the phases can be funded in a single year. For large projects, the construction phase can last two years, although the government authorizes the funding only once.

The process of selecting an architect and bidding, outlined above, for privately-funded buildings is also followed for state-funded ones. The latter merely takes much longer than the former. The Regents must approve the selections of the architect and contractor for all projects valued over $5 million.

3. Private Funding of Capital Projects

Over the last five years, private donations for capital projects increased 75%. The campus has received major donations for the Center for Magnetic Recording Research, a Structures and Materials Testing Laboratory, a Molecular Genetics Research Facility, and a faculty club. In 1983-84, the Gildred Foundation built the Institute of the Americas on campus. The Institute is an independent center that cooperates with several of the campus's programs. Its building houses UCSD's Center for US-Mexican Studies and Center for Iberian and Latin American Studies.

1983-84 also marked the beginning of UCSD's first major fund-raising campaign, conducted in conjunction with the Twenty-Fifth Anniversary Celebration. Approved by the Board of Regents in November 1984, this campaign began in Fall 1985 and will continue through Spring 1986. It has a goal of raising $30.4 million, to be distributed among various building funds and academic enrichment programs (Figure 27).

Private donations are having a great effect on the physical and capital planning of the campus. The process and pace of planning facilities to be funded by the State is relatively slow and predictable, but gifts for capital development come unexpectedly and often put pressure on the administration and faculty to act quickly. To the extent possible, the campus has tried to create a wish list of projects that a private donor might fund, but surprises are characteristic of this arena. During the next several years, the campus expects to become increasingly adept at fitting donated structures into its capital program and physical plan.

4. The Adequacy of Current Facilities and Equipment

a. Buildings

The construction of new instruction and research (I&R) facilities has not kept pace with enrollment growth at UCSD. The campus now
FIGURE 27

DISTRIBUTION OF THE 25TH ANNIVERSARY CAMPAIGN FUNDS
(Millions)

<table>
<thead>
<tr>
<th>BUILDING FUNDS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>University Student Center</td>
<td>$ 2.00</td>
</tr>
<tr>
<td>Faculty/Staff/Community Center</td>
<td>$ 1.50</td>
</tr>
<tr>
<td>Outdoor Amphitheater</td>
<td>$ 1.00</td>
</tr>
<tr>
<td>Aquarium</td>
<td>$ 6.00</td>
</tr>
<tr>
<td>Institute for Research on Aging</td>
<td>$ 6.00</td>
</tr>
<tr>
<td>Cancer Center Research Facility</td>
<td>$ 3.00</td>
</tr>
<tr>
<td>Critical Care Units (including neo-natal)</td>
<td>$ 1.00</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$20.50</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACADEMIC ENRICHMENT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pacific Basin Studies:</td>
<td></td>
</tr>
<tr>
<td>Three endowed chairs</td>
<td>$ 0.75</td>
</tr>
<tr>
<td>Visiting scholar program</td>
<td>$ 0.75</td>
</tr>
<tr>
<td>Core endowment</td>
<td>$ 1.00</td>
</tr>
<tr>
<td>Humanities Institute:</td>
<td></td>
</tr>
<tr>
<td>Three endowed chairs</td>
<td>$ 0.75</td>
</tr>
<tr>
<td>Core endowment</td>
<td>$ 1.00</td>
</tr>
<tr>
<td>Library Special Collections (includes Pacific Basin-Latin American, 20th Century Arts)</td>
<td>$ 2.00</td>
</tr>
<tr>
<td>Resident Artist Program</td>
<td>$ 0.50</td>
</tr>
<tr>
<td>Lecture/Seminar Programs</td>
<td>$ 0.30</td>
</tr>
<tr>
<td>Music Ensemble Fellowships</td>
<td>$ 0.60</td>
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<tr>
<td>Additional Endowed Chairs (3)</td>
<td>$ 0.75</td>
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<td><strong>Subtotal</strong></td>
<td><strong>$ 8.40</strong></td>
</tr>
<tr>
<td><strong>FUND-RAISING COSTS</strong></td>
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<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$1.50</strong></td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>$30.40</td>
</tr>
</tbody>
</table>

Source: UCSD Development Office
has only 78.8% of its total required space, as determined by the CCHE Restudy Standards. Without the construction of new I&R facilities, this proportion would drop to 67% by 1988-89.

To remedy this situation, UCSD is seeking funding for new I&R facilities. The 1985-86 state budget contains funds for the construction of Engineering Building Unit One, a structure of 128,000 assignable square feet (ASF) that will provide space for the Electrical Engineering part of the Department of Electrical Engineering and Computer Sciences and for most of the Department of Applied Mechanics and Engineering Sciences. The 1985-86 budget also contains funds for the planning of an 80,000 ASF structure known as the Instruction and Research Facility. This building would house the Departments of Anthropology, History, and Political Science, and provide new undergraduate laboratories for Physics, a high-bay laboratory for Physics, music facilities (a recording studio, faculty studios, and practice rooms), two new lecture halls, and three smaller classrooms. Moving these departments will free up space for others.

Engineering Building Unit One is to be completed by Summer 1987, and the Instruction and Research Facility by Winter 1989. Measured against the projected growth of undergraduate and graduate enrollments, these two new facilities will raise the campus to 86% of its required space as determined by CCHE Restudy Standards. Unless the campus can build additional facilities soon after that, the campus will rapidly fall substantially below its needs again (Figure 28).

UCSD also needs communal facilities. The space available for student activities is woefully inadequate. The campus has no large meeting place, no faculty club, and inadequate athletic facilities. All available capital funds have gone into academic buildings.

These needs will be met during the next three to five years. The campus has chosen an architect for a University Center of about 110,000 ASF, which will house student activities, food service, shops, and the campus bookstore. The Center will also have facilities for campus events. It is being built with money voted by the students from their fees, some campus funds, bookstore funds, and private donations.

During Fall 1985, the campus chose an architect and a site for a faculty club. All employees of the campus will be able to join the club, which will also offer memberships to some people from the community. The project is being supported entirely from gifts.

Finally, the campus has approved the siting of major athletic facilities and will move to develop the area during the next several years. It also seeks funds, through the Twenty-Fifth Anniversary Campaign, for a large outdoor amphitheater.
FIGURE 28
Actual and Projected UCSD I & R ASF
Compared with Estimated Space Needs,
1985-86 to 1990-91

Projected Space Needs

Percent of Needed Space
75% 72%

Projected ASF Upon Completion of Bldgs Noted
75% 71% 67%

I & R Building

Engineering Unit I

Current Actual ASF
67% 63%


YEAR

Source: UCSD Campus Planning Office
Figure 29 contains UCSD's program of major capital projects. The list contains all buildings the campus wants to build, including privately funded and state-funded projects. Some of the projects have been approved or are being built; others represent wishes.

b. Equipment

In the late 1970s and early 1980s, funding for instructional equipment was also inadequate because of poor economic conditions and critical revenue shortfalls in the State. A concomitant lack of capital equipment funding, stemming from a state freeze on capital expenditures in FYs 1980-81 and 1981-82, made the situation worse.

Recently, the State has dramatically increased funding for new equipment. In 1984-85, annual funding for instructional equipment for UCSD reached $1,747,000, plus a one-time increase of $245,714. The base amount allocated for equipment remained the same in the 1985-86 budget ($1,747,000), but the State made another one-time allocation to reduce the backlog of equipment needs. This special fund was $9,375,000, of which UCSD got $975,000.

The State has also dramatically increased funding for the instructional use of computers (IUC). This increase is in response to a report by a University-wide Task Force on Academic Computing, which the Governor and Legislature found persuasive. In 1984-85, $9.4 million was provided for IUC, of which UCSD received $971,000. For 1985-86, the University requested an augmentation of $6 million to meet an estimated annual need of $17 million. The state budget increased IUC funds substantially, and UCSD received a total allocation of $1,769,000 for 1985-86. The University will seek additional funds again in 1986-87.

At UCSD, IUC are funds devoted almost exclusively to the province of the Office of Academic Computing, which reports to the Vice Chancellor - Academic Affairs. Administrative Computing is a separate operation reporting directly to the Chancellor. (See Chapter XIII.)
<table>
<thead>
<tr>
<th>Project Name</th>
<th>Status</th>
<th>ASF</th>
<th>Completion or Occupancy Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Building Unit 1</td>
<td>W in progress; C proposed in 1985-86</td>
<td>128,700</td>
<td>8/87</td>
</tr>
<tr>
<td>SIO Seawater Supply System &amp; Pier Replacement</td>
<td>P &amp; W in progress; C proposed in 1985-86</td>
<td>N/A</td>
<td>9/86</td>
</tr>
<tr>
<td>Instruction and Research Facility</td>
<td>DPP Finalized, P proposed in 1985-86</td>
<td>79,780</td>
<td>2/89</td>
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<tr>
<td>UCEMC ICU Modifications and Consolidations</td>
<td>W and part of C proposed for funding in 1985-86</td>
<td>N/A</td>
<td>12/87</td>
</tr>
<tr>
<td>Uray Hall Air Handling Systems Improvements</td>
<td>P &amp; W proposed for funding in 1985-86</td>
<td>N/A</td>
<td>7/87</td>
</tr>
<tr>
<td>SIO Seawall Extension, Step 2</td>
<td>Project Under Construction</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Muir College Biology Bldg Elevator</td>
<td>W in progress</td>
<td>N/A</td>
<td>8/83</td>
</tr>
<tr>
<td>UCSOMC Seismic Structural Corrections</td>
<td>Construction alternatives under study</td>
<td>N/A</td>
<td>8/83</td>
</tr>
<tr>
<td>Non-State</td>
<td></td>
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<tr>
<td>UCSOMC Magnetic Resonance Facility</td>
<td>Project under construction</td>
<td>4,661</td>
<td>4/83</td>
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<tr>
<td>Career Planning and Placement Center</td>
<td>Project under construction</td>
<td>6,330</td>
<td>5/83</td>
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<td>Center for Magnetic Recording Research (and Structures Lab)</td>
<td>Project under construction</td>
<td>39,848</td>
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<td>Molecular Biology Research Facility</td>
<td>Project under construction</td>
<td>26,700</td>
<td>Fall 83</td>
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<td>Institute for Research in Aging Facility</td>
<td>In 1985-86 Non-State program; Included in 25th Anniversary campaign</td>
<td>26,300</td>
<td>1/88</td>
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<tr>
<td>Cancer Center Research Facility</td>
<td>In 1985-86 Non-State program; Included in 25th Anniversary campaign</td>
<td>23,220</td>
<td>1/88</td>
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<tr>
<td>University Center</td>
<td>PPG being prepared; consultant reviewing possible sites;</td>
<td>70,000</td>
<td>?</td>
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<td></td>
<td>Included in 25th Anniversary campaign</td>
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<td>Bookstore</td>
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</tr>
<tr>
<td>International Center Expansion</td>
<td>PPG being prepared; probable inclusion with University Center</td>
<td>40,000</td>
<td>7</td>
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<tr>
<td>Telecommunication Bldg Expansion/Remodelation</td>
<td>PPG in progress; fundraising underway</td>
<td>3,500</td>
<td>2/86</td>
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<td>Supercomputer Facility</td>
<td>W in progress</td>
<td>6,000</td>
<td>10/83</td>
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<td>SIO Aquarium &amp; Ocean Science Center</td>
<td>Joint project between campus and CS Technologies, proposed to NSF;</td>
<td>7</td>
<td>?</td>
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<tr>
<td></td>
<td>negotiations underway</td>
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</tr>
<tr>
<td>Outdoor Amphitheater</td>
<td>BAC being appointed; Included in 25th Anniversary campaign</td>
<td>7</td>
<td>?</td>
</tr>
<tr>
<td>Program review group being appointed; Included in 25th Anniversary campaign</td>
<td></td>
<td>7</td>
<td>?</td>
</tr>
<tr>
<td>UCSOMC Critical Care Units</td>
<td>Future project; included in 25th Anniversary campaign</td>
<td>7</td>
<td>?</td>
</tr>
<tr>
<td>Faculty/Staff/Community Center</td>
<td>Future project; included in 25th Anniversary campaign</td>
<td>7</td>
<td>?</td>
</tr>
</tbody>
</table>

Source: UCSD Management Office
CHAPTER VI
EDUCATION AT UCSD

This chapter presents an in-depth look at education at UCSD. The chapter begins with an examination of undergraduate education at UCSD, and then takes up graduate, professional, and extension programs in turn. It also describes academic support programs.

A. UNDERGRADUATE EDUCATION

Responsibility for undergraduate education is shared by the four colleges and twenty academic departments. On the one hand, each college has its own general education and graduation requirements and monitors its students' academic progress and compliance with college and university regulations. General education requirements are one of a college's main instruments for realizing its distinctive educational philosophy. Colleges also stimulate faculty to form interdisciplinary programs that express their philosophies and emphases. An example is the Academic Internship Program in Warren College, a college emphasizing pre-professional education.

On the other hand, each department designs and administers its own major field curriculum. Some departments offer several majors. The major program consists of no fewer than twelve upper-division courses.

Some B.A. programs, such as the Computer Science major in the EECS Department, require the completion of as many as fifteen upper-division courses. Many departments also require a number of lower-division courses as prerequisites.

In engineering, both AMES and EECS require ten lower-division courses in addition to the usual upper-division program. When combined with collegiate requirements, these programs add up to more than the 180 units traditionally required for graduation. To resolve this problem, the Academic Senate instituted a B.S. degree in Engineering requiring a total of 192 units.

To complete the B.S. degree in four years, a student must average at least 16 units per quarter and adhere to a rigidly structured program. UCSD requires engineering students to take more liberal arts and more engineering courses than other UC campuses. The General Catalog warns engineering majors that they will "normally be unable to complete" their programs in four years.
1. General Education

Figure 30 shows the general education programs of the four colleges.

In order to take the basic courses, students must have met minimum standards in English composition and mathematics. By state law, all students must also pass a course in American History and Institutions, but most have satisfied that requirement in high school.

a. Remedial Courses in English and Mathematics

Students who do not meet the English composition standard—called Subject A—must take a remedial course that carries no baccalaureate credit. They may not take a college course in which the teacher makes writing assignments until they have satisfied Subject A.

Students can satisfy Subject A in several ways. A score of 600 or above on the English Composition Test administered by the College Board or a passing score (3, 4, or 5) in Advanced Placement English satisfy Subject A. Those who do not pass the requirement in one of these ways take an examination given by the University. The exam is given in the Spring and at summer orientation sessions. Passing the exam exempts a student from having to take the Subject A course. At present, each campus gives its own exam, although there is substantial cooperation among the campuses. The Subject A directors of the UC campuses hope to institute a systemwide exam soon. This would allow students to take the exams throughout the State and would permit early testing, which would improve both the registration process and the ability of students to plan their activities in the summer before they enter the University.

Subject A is an old program in the University, but until this year UCSD had not offered it. The campus had a variance to the Senate regulations because it required every student to take English composition courses. The Senate was willing to presume that students who passed the first of these courses had demonstrated sufficient competence as writers. In 1983, the Senate changed its regulations and declared that any course used to satisfy Subject A and remedial mathematics could carry no baccalaureate credit. Further, the new regulations stated that students who have not satisfied these requirements cannot register in college-level courses in these subjects. Because of the new regulations, UCSD instituted a Subject A program in Fall 1985.

Students "held" for Subject A take a one-quarter course. The final examination of the course is a Subject A exam equivalent to the one they took when they were held. At UCSD, this course will be given by Mesa College, a local community college, under a special
# Graduation Requirements in the UCSD Colleges

## General Education

<table>
<thead>
<tr>
<th>Revelle College</th>
<th>Muir College</th>
<th>Third College</th>
<th>Warren College</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities (includes two 6-unit courses with intensive writing requirement and lower level writing)</td>
<td>Writing 2-3</td>
<td>A three course sequence in each of two of the following categories: Humanities, Fine Arts, Foreign Language and Social Science</td>
<td>Writing 2</td>
</tr>
<tr>
<td>Biology</td>
<td>Biology</td>
<td>Chemistry</td>
<td>Social Sciences and Humanities</td>
</tr>
<tr>
<td>Physics and Earth Science</td>
<td>Physics</td>
<td>Physics</td>
<td>Formal Skills</td>
</tr>
<tr>
<td>A total of four courses with at least one course from each area</td>
<td>A three course sequence in each of the four areas Communication and Social Science and Applied Mathematics and Natural Science</td>
<td>A three course sequence in Foreign Language and Humanities or Fine Arts</td>
<td>A three course sequence in Natural Science</td>
</tr>
<tr>
<td>Calculus</td>
<td>Calculus</td>
<td>Calculus</td>
<td>Calculus and Physics</td>
</tr>
<tr>
<td>Social Science</td>
<td>Social Science</td>
<td>Social Science</td>
<td>Social Sciences and Humanities</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>Fine Arts</td>
<td>Fine Arts</td>
<td>Fine Arts</td>
</tr>
</tbody>
</table>

### Minor

- May be a focused noncontiguous minor or any six noncontiguous courses. All at least three of these courses must be upper division.

### Major

- Any six courses (180 units)
- At least eighteen courses must be upper division.
- Thirty-five courses (150 units)
- At least eighteen courses must be upper division and three must be noncontiguous to a major. At least one must focus on a culture or society other than one's own.

### Total Number of Courses Required for Graduation

- Any six courses (180 units)
- At least eighteen courses must be upper division.
- Thirty-five courses (150 units)
- At least eighteen courses must be upper division and three must be noncontiguous to a major. At least one must focus on a culture or society other than one's own.

- B.A. Degrees: 180 units at least 60 at a level must be upper division.
- B.S. Degrees: 192 units at least 72 of which must be upper division.

---

* Third College now requires 3 upper-division courses in disciplines not contiguous to a student's major.

Source: 1985-86 UCSD General Catalog
agreement. Mesa College faculty will offer the course on the UCSD campus, but students will be registered in the community college course, not in a UCSD course. The final exam of the course will be the Subject A exam.

The campus already has experience with this arrangement. It has been used for several years for the teaching of remedial mathematics and has been very successful. All students entering the University take a math placement test, and those whose scores are below a certain level must take the remedial course before enrolling in pre-calculus and calculus. A recent study showed that the students who go through the Mesa math program perform well in the regular mathematics courses.

The cooperation between UCSD and Mesa College is part of a developing relationship among the segments of higher education in California. The Master Plan assumes that the segments would operate synergistically, but until recently each has acted without much regard for what the others were doing. Now, the segments are making a positive effort to cooperate. They have published a joint statement on competencies in English and mathematics, cooperated in the counseling of students, and planned cooperation in the management of some academic programs.

b. General Education Courses

The executive council or curriculum board of each college controls the college's program. The provosts chair the councils. These councils monitor the programs and specify which courses can be used to satisfy requirements. The councils are dominated by faculty, but have student members as well. In some colleges, the students form a separate curriculum committee to advise the faculty council and the provost.

The founders of the campus intended that each college offer its own courses, both lower- and upper-division. When departments began to control the upper-division programs, the colleges still tried to offer distinctive general education courses. This arrangement remained intact until the mid-1970s. Revelle students took lower-division science courses different from those taken by Muir and Third College students, and so on.

The system broke down first in mathematics, where the collegiate distinction made little sense, but it soon began to erode in other subjects as well. The principal cause of the change was that the proliferation of colleges put a great burden on the departments to offer a variety of lower-division courses. In addition, departments wanted prospective majors to take certain lower-division courses and the only practical way this could be assured would be to consolidate their lower-division courses to serve the purposes both of general education and of introduction to the major. The result is that the
departments no longer offer different lower-division science courses for different colleges.

Today, only the humanities programs preserve the old idea. Revelle College offers a five-quarter interdisciplinary humanities sequence taught by members of the departments of History, Philosophy, and Literature. The course is governed by a representative faculty committee. Muir College offers two interdisciplinary programs, Cultural Traditions and Contemporary Issues, and Third College has organized interdisciplinary courses in Third World Studies. Warren has recently instituted a course in ethics.

The colleges influence the design of departments' lower-division curricula by accepting only particular courses in fulfillment of their general education requirements. Departments frequently consult with the colleges about their lower-division classes and course sequences to ensure that students will be able to use them to fulfill general education requirements.

Because the general education requirements of the respective colleges are predominantly distribution requirements instead of prescribed series of particular courses, students have more or less flexibility in their choice of lower-division classes depending on the college they attend. Warren College students have the most flexibility, while Revelle College students have the least.

2. Major and Minor Programs

The General Catalog provides a good introduction to the majors offered by departments and interdisciplinary programs. At present, there are 60 major programs (Figure 31). In Muir College, students may design Special Project Majors under faculty supervision.

Revelle College requires its students to take a minor program consisting of six courses, of which three must be upper-division. The minor must be non-contiguous with the major; so that, for example, students majoring in a natural science field must minor in humanities, fine arts, or social science. Warren College requires students to take two six-course concentrations in addition to the major. The concentrations are structured similarly to minors; they must be non-contiguous to each other and to the major. They function, therefore, as a main element in the breadth requirements of the college. Minors are optional in the other two colleges.

In most cases students form individual minor programs with guidance from faculty. Several departments offer minor programs as packages, and interdisciplinary programs offer many minor programs. The colleges have been active in stimulating the formation of such programs for their students. Examples are the Law and Society Program founded under the aegis of Warren College and the Humanities Program given through Revelle College.
### FIGURE 31

**Departmental Undergraduate Majors**

<table>
<thead>
<tr>
<th>Major</th>
<th>Major</th>
<th>Major</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHROPOLOGY</td>
<td>COMPUTER SCIENCES (EECS)</td>
<td>PHILOSOPHY</td>
</tr>
<tr>
<td>Anthropology</td>
<td>Applied Physics</td>
<td>Philosophy</td>
</tr>
<tr>
<td>APPLIED MECHANICS AND</td>
<td>Information Science</td>
<td>PHYSICS</td>
</tr>
<tr>
<td>ENGINEERING SCIENCES (AMES)</td>
<td>Computer Engineering</td>
<td>Physics</td>
</tr>
<tr>
<td>Applied Mechanics</td>
<td>Computer Science</td>
<td>Physics with Specialization</td>
</tr>
<tr>
<td>Bioengineering</td>
<td>Engineering Physics</td>
<td>in Earth Sciences</td>
</tr>
<tr>
<td>Bioengineering, Premedical Systems</td>
<td>Electrical Engineering</td>
<td></td>
</tr>
<tr>
<td>Chemical Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOLOGY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Biology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal Physiology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biochemistry and Cell Biology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ecology, Behavior, and Evolution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microbiology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molecular Biology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEMICAL ENGINEERING (see AMES)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEMISTRY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemistry/Biochemistry</td>
<td>MANAGEMENT SCIENCE (see Economics)</td>
<td>INTERDISCIPLINARY MAJORS</td>
</tr>
<tr>
<td>Chemistry with Specialization in</td>
<td></td>
<td>(see Footnote 4)</td>
</tr>
<tr>
<td>Earth Sciences</td>
<td></td>
<td>Chicano Studies</td>
</tr>
<tr>
<td>COMMUNICATION</td>
<td></td>
<td>Chinese Studies</td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td>Classical Studies</td>
</tr>
<tr>
<td>COMPUTER SCIENCE (see EECS)</td>
<td></td>
<td>College Special Individual Majors</td>
</tr>
<tr>
<td>DRAMA</td>
<td></td>
<td>Italian Studies</td>
</tr>
<tr>
<td>Drama</td>
<td></td>
<td>Judaic Studies</td>
</tr>
<tr>
<td>ECONOMICS</td>
<td></td>
<td>Third World Studies</td>
</tr>
<tr>
<td>Economics</td>
<td></td>
<td>Urban Studies and Planning</td>
</tr>
<tr>
<td>Management Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDUCATION (see Footnote 1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Footnote 1** The full teaching credential in California requires a major in education, but in an academic subject or group of subjects, plus some special courses in educational topics, an approved program of practice teaching, and a full year of college work beyond the baccalaureate. The UCSD Teacher Education Program (TEP) leads to a partial multiple-subjects credential in elementary teaching, which provides temporary qualification as a teacher. To obtain the full credential, you must (within five years) teach a total of at least two years and complete the required fifth year of college (which is not yet offered at UCSD). The main thrust of the TEP program is in child-centered multicultural education.

**Footnote 2** Law schools do not require any particular major, but they do require evidence of good scholarship in demanding subjects. Almost any undergraduate major can qualify a student for consideration by a law school. The UCSD staff includes professional prelaw advisers.

**Footnote 3** Like law schools, medical schools do not generally demand a particular major, but ask for a solid background in the sciences upon which medicine is built. Most med-prem students major in biology, chemistry, physics, or bioengineering, but a substantial number major in the humanities and social sciences. The UCSD staff includes professional premed advisers.

**Footnote 4** Interdisciplinary majors usually consist of a prescribed collection of courses from two or more departments. Students interested in such majors should consult the “Courses, Curricula, and Programs of Instruction” section at the back of this catalog.

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**Source:** 1985–86 UCSD General Catalog
3. Academic Assistance

The Office of Academic Support and Instructional Services (OASIS)—founded in 1978—offers a wide range of tutoring and other assistance to undergraduates. In 1984-85, it served 4,220 students in its programs, and these students used OASIS frequently, averaging 13.9 contacts per student. EOP/SAA students accounted for 68% of the contacts (31.5 per student). Nineteen and one-half percent of the students seeking assistance were transfers to UCSD. Fifty-five percent of the freshmen used OASIS. One disappointment was that only 18% of the students on academic probation used OASIS. The staff reports that it has instituted a program to bring in these students in 1985-86.

OASIS works with undergraduate tutors and has an extensive training program for them. It runs a basic tutorial service, a writing workshop, and a special Before Calculus Program for students registered in the Mesa Math Program. In Fall 1985, it ran a special Subject A workshop for students registered in the Mesa College program.

4. Recent Issues in General Education and Major Programs

In 1984, the CEP undertook a full study of general education on the campus. The study uncovered four problems:

1. Some students were graduating from UCSD with no courses in the humanities;
2. Some were graduating with no science courses;
3. Faculty members expressed widespread dissatisfaction with the writing abilities of students; and
4. Too many students were using courses required by their major programs to satisfy portions of their college's general education requirements.

To solve these problems, CEP recommended the adoption of campus-wide minimum general education requirements that would serve as guidelines for the colleges and advisers. The suggested requirements allowed the colleges enough latitude to maintain their separate identities. (See Academic Senate Manual.) The Academic Senate approved the guidelines in May of 1984. Muir, Third, and Warren Colleges adjusted their general education requirements because of the new policy; Revelle College was already in compliance.

The CEP is currently examining the problem of accommodating both general education requirements and major programs, particularly the demands placed upon engineering students. The problems include: whether all colleges ought to have language requirements, how many
courses a department may require for a major, and whether the campus should develop upper-division general education requirements.

The committee has also been concerned with the proliferation of minor programs. Here, the problem is that interdisciplinary groups of faculty with little or no administrative support get such programs approved and then have difficulty maintaining them when members of the groups go on leave or sabbatical.

5. Undergraduates and Research

A number of major programs at UCSD require students to take courses that require some independent research. Each term, several hundred students are involved in faculty-supervised, independent study. In addition, each year, approximately 100 students enroll in honors programs--offered by most departments--that require students to engage in substantial projects of independent research under the guidance of a faculty member.

There are a couple of programs that support original research by students. The Associated Students (AS) awards between 50 and 60 small grants each year to support projects. The President of the University also offers research grants for undergraduate students. The President’s program is small, but the grants are larger than those made by the AS.

Students can also gain direct research experience through employment in faculty laboratories or on faculty projects. The campus employs approximately 500 students as research assistants each year.

Students have several publishing enterprises that serve as outlets for their research and creative activities. The Undergraduate Research Journal, published by the AS, prints the best papers resulting from the AS grant program. The Literature Department and AS cooperate in the production of the Birdcage Review, an annual journal containing undergraduate poetry, short stories, and photo essays. Warren College also publishes an annual student literary journal, and two other undergraduate journals appear occasionally as interest and resources permit--Philoi, an undergraduate journal in philosophy and Polit-journal, which prints outstanding undergraduate articles in the social sciences. The AS also sponsors the annual Undergraduate Arts Festival, which has become a popular forum for the presentation of undergraduate art, including the performing, visual, and plastic arts.

6. Academic Advising

a. Processes of Advising

(7B1,2)

Academic advising begins at college-sponsored summer orientations and during Welcome Week just before classes begin. After these
sessions, students must generally take the initiative in seeking counsel, academic or otherwise.

Because of differences among the general education requirements of UCSD’s four colleges, each college maintains its own office of academic advising. Likewise, each academic department and program has its own system for advising students about major and minor program requirements and about graduate and professional schools. The recent establishment of pre-major programs in the two engineering departments (AMES and EECS) and the Department of Communication, through which departments exert a powerful influence on the lower-division programs of undergraduates, has established yet another avenue of advising.

The Career Planning and Placement Center also assists students in planning their academic programs and in choosing graduate and professional schools. Finally, a Graduate School Advising Committee serves as an advisory body to all campus units providing counseling about graduate study. Any coordination among the individuals and groups concerned with academic advising occurs on an ad hoc, informal basis.

In practice, the college advisers play a major role in advising. The heads of the advising staffs meet weekly to discuss programs and problems and are in constant touch with other groups--such as Senate committees and Career Planning--that are concerned with advising. Students also rely upon their peers. They publish the Course and Professor Evaluation (CAPE) each quarter with reviews of courses.

b. Changes in Policy and Procedures

The campus uses a variety of media, such as student newspapers, the quarterly Schedule of Classes, and direct mailings, to communicate changes in policies, procedures, and requirements to students. For example, the colleges recently used a direct mailing to inform affected students of new regulations about minimum progress. The Senate’s Committee on Educational Policy regularly informs departments and individual faculty of policy and changes in policy.

c. Attempts to Reform the Advising System

Problems in UCSD’s system of academic advising have received considerable attention, but advising remains a difficult problem. In 1980, the campus conducted a thorough study of undergraduate advising. The Undergraduate Advising Committee concluded that a lack of communication between the departments and the college advisers resulted in students occasionally receiving contradictory advice. The committee also found that because departments generally do not compensate faculty for time spent in advising undergraduate students--for example, by authorizing release time from teaching--many
of the faculty advisers have little motivation either to keep up-to-date on departmental requirements or to spend sufficient time advising undergraduate students.

The Committee recommended (1) that the Vice Chancellor - Academic Affairs establish a permanent Undergraduate Advising Council to facilitate communication among the various campus units involved with academic advising, (2) that the Council develop a comprehensive advising handbook, and (3) that the academic departments consider ways to make the role of undergraduate faculty adviser less burdensome and more attractive.

The Vice Chancellor - Academic Affairs formed such a Council in June 1981, but it remained active for only a year. The Council consisted of over forty staff and faculty members and proved to be unwieldy. In addition, the vast majority of departments never supplied the information necessary to compile the proposed handbook. Since the demise of the Undergraduate Advising Council, the campus has made no further efforts to coordinate advising on the campus.

No comprehensive information is currently available on the steps departments have taken during the last five years to improve upper-division undergraduate advising. Some departments have, however, developed excellent programs. For example, the Department of Mathematics participates in a testing program for high school and college students that places students in appropriate courses, and the department has created a computer system to control enrollment in its courses. The system also makes it easier for the department to advise students.

7. Athletics

From its beginning, UCSD has considered a vigorous athletic program to be part of its educational mission. This program consists primarily of classes offered by the Department of Physical Education and in intramurals, but the campus has also developed an active intercollegiate program.

The Department of Physical Education is not a traditional academic department. It offers hundreds of classes, but students cannot major in Physical Education at UCSD. Students may elect to receive one-half credit for an activity course (up to a total of four courses) taught by the department, and these two credits count toward the baccalaureate.

In 1981, the Senate's Committee on Educational Policy authorized the department, in cooperation with other departments, to offer a minor program in Physical Fitness and Health Promotion. Students who elect the minor must take basic science and social science courses as well as courses in sports history, physiology, and psychology.
Education at UCSD

The department's intramural athletics program is exceptionally successful. Although it is not clear what percentage of UCSD's students participate in the program, the department's records show that over 13,500 participated last year. Total undergraduate enrollment last year was 11,350 (3-quarter average), and the chair of the department thinks that about 55% of the student body participate in intramurals. The program fielded over 1,500 teams in fifteen sports. Participation is so great that games must sometimes be scheduled after midnight (Figure 32).

UCSD fields 22 intercollegiate teams. It also supports six club teams. Ten of the intercollegiate teams are women's, ten are men's, and two are coed. Two of the club teams are men's; four are coed. Almost 500 students participate in intercollegiate sports; about 180 participate on club teams (Figure 33).

The campus is a member of the NCAA Division III, and its teams have won many national championships in the last five years. As a Division III school, UCSD awards no athletic scholarships. Admissions and grading policies apply equally to all students without regard to athletic potential.

The Intercollegiate and Recreational Athletics Advisory Committee (IRAAC), which is chaired by a faculty member, develops the policies governing intercollegiate athletics at UCSD. The Chair of the Department of Physical Education directly supervises the Intercollegiate Athletics Program, while the Vice Chancellor - Undergraduate Affairs provides indirect supervision. (For more information, see the section on the Department of Physical Education in Chapter VIII.)

8. International Education

The term "international education" embraces many programs and services the University offers to students, scholars, and faculty from abroad, to students and faculty from UCSD who wish to study in foreign countries, and to members of the campus and community interested in socializing with people from other countries.

The Academic Senate Committee on International Education oversees campus policy and programs in this area. The committee provides faculty members with opportunities to help shape all aspects of international education at UCSD and is actively involved in efforts to expand the scope of international education on the campus.

Because of the prospects for continued growth in international education at UCSD, the Senate committee, together with the Dean of International Education, sought and received a grant for a consultant to visit the campus in November 1985. The consultant, an experienced person from the University of Massachusetts, focused on the development of a coherent policy for international education at UCSD, the improvement of the organization of the international exchange
**FIGURE 32**

**UCSD INTRAMURAL SPORTS**
Team Sports Participation Survey (1974-1985)

<table>
<thead>
<tr>
<th>TEAM SPORTS</th>
<th>AVG. PARTC*</th>
<th>1984-85</th>
<th>1983-84</th>
<th>1982-83</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Programs</td>
<td></td>
<td>Teams</td>
<td>Partc</td>
<td>Teams</td>
</tr>
<tr>
<td>Football</td>
<td>12.2</td>
<td>180</td>
<td>2196</td>
<td>150</td>
</tr>
<tr>
<td>Basketball</td>
<td>7.5</td>
<td>188</td>
<td>1410</td>
<td>186</td>
</tr>
<tr>
<td>Softball</td>
<td>11.0</td>
<td>275</td>
<td>3025</td>
<td>268</td>
</tr>
<tr>
<td>Volleyball</td>
<td>6.5</td>
<td>223</td>
<td>1449</td>
<td>168</td>
</tr>
<tr>
<td>Soccer</td>
<td>12.8</td>
<td>144</td>
<td>1843</td>
<td>123</td>
</tr>
<tr>
<td>Floor Hockey</td>
<td>11.0</td>
<td>88</td>
<td>968</td>
<td>90</td>
</tr>
<tr>
<td>Water Polo</td>
<td>8.5</td>
<td>116</td>
<td>986</td>
<td>116</td>
</tr>
<tr>
<td>Team Tennis</td>
<td>4.2</td>
<td>28</td>
<td>118</td>
<td>30</td>
</tr>
<tr>
<td>Team Badminton</td>
<td>4.5</td>
<td>24</td>
<td>108</td>
<td>17</td>
</tr>
<tr>
<td>Team Bowling</td>
<td>4.0</td>
<td>48</td>
<td>192</td>
<td>42</td>
</tr>
<tr>
<td>Ultimate Disc</td>
<td>9.0</td>
<td>48</td>
<td>432</td>
<td>48</td>
</tr>
<tr>
<td>Minor Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hawaiian Football</td>
<td>10.0</td>
<td>15</td>
<td>150</td>
<td>15</td>
</tr>
<tr>
<td>One-Pitch Softball</td>
<td>9.0</td>
<td>54</td>
<td>486</td>
<td>48</td>
</tr>
<tr>
<td>3-On-3 Basketball</td>
<td>3.0</td>
<td>72</td>
<td>216</td>
<td>66</td>
</tr>
<tr>
<td>Alternative Soccer</td>
<td>8.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**TOTALS**

1503 13579 1367 12398 1365 12397

*AVG. PARTC=Average Number Participants Per Team

Source: UCSD Department of Physical Education
FIGURE 33

UCSD INTERCOLLEGIATE ATHLETICS
Sport/Athlete Participation Survey (1985)

<table>
<thead>
<tr>
<th>FALL SPORTS</th>
<th>ATHLETES</th>
<th>PARTICIPATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men's Soccer</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>Women's Soccer</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Women's Volleyball</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Men's Water Polo</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Men's Cross-Country</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Women's Cross-Country</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Men's Basketball</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Women's Basketball</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Men's Fencing</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Women's Fencing</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Men's Swimming</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Women's Swimming</td>
<td>26</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPRING SPORTS</th>
<th>ATHLETES</th>
<th>PARTICIPATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men's Baseball</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Women's Softball</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Men's Volleyball</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Men's Crew</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Women's Crew</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>Men's Tennis</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Women's Tennis</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Coed Golf</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Coed Track and Field</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Women's Water Polo</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL INTERCOLLEGIATE ATHLETES: 494

<table>
<thead>
<tr>
<th>CLUB SPORTS</th>
<th>ATHLETES</th>
<th>PARTICIPATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men's Rugby</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Men's Lacrosse</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Coed Surfing</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Coed Sailing</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Coed Snow Ski</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Coed Cycling</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CLUB ATHLETES: 180

Source: UCSD Department of Physical Education
process, and other aspects of the program. His final report has not yet been filed (December 1985).

a. The International Center

The International Center is the main focus for all international activities. The center provides extensive services and programs for international students, faculty, and scholars. It reviews the financial statements of foreign undergraduate and graduate students, sponsors orientations for foreign visitors to UCSD, administers the Education Abroad Program for the campus, offers legal help for visa and immigration matters, helps in finding suitable housing for foreign visitors, and sponsors social events, outings, and English tutoring.

A major development during the 1984-85 academic year was the opening of the Opportunities Abroad Office (OAO). OAO sponsors information sessions and offers counseling about work, travel, and study opportunities abroad. Student response has been positive; last year 59 students went abroad for the summer, or the academic year, as a direct result of OAO advising.

b. International Students and Scholars

UCSD enrolls approximately 300 undergraduate international students each year and a slightly greater number of graduate students. There are generally more foreign scholars on campus than international undergraduate and graduate students combined.

The campus has clearly defined admissions requirements for foreign students. For example, prospective students from abroad must demonstrate above average scholarship, have an adequate command of English, and have enough money to cover all fees and living expenses. The campus admits such students only in the Fall term in order to make certain that they have adequate time to become adjusted to their new environment and to ensure the timely completion of all necessary paperwork.

As the campus continues to grow, the staff of the International Center expects the number of foreign scholars to increase more rapidly than the number of foreign students. If this prediction is correct, the need for additional staff will become increasingly acute because scholars need more assistance than students in dealing with immigration and tax matters.

c. Education Abroad Program

Undergraduate students from UCSD may participate in the Educational Abroad Program (EAP), a university-wide program. EAP places mature, highly motivated, and academically superior students in foreign
universities for a year of upper-division instruction that applies to their degree programs at UCSD. Of the approximately 200 students who pick up applications each year, roughly 100 will apply, and perhaps 80 to 90 will spend a year abroad. Study centers for the program are located in Europe, the United Kingdom, Ireland, the USSR, the Middle East, East Asia, and Latin America.

The selection process for EAP is both rigorous and arduous. Students must supply two faculty references and a detailed essay, must undergo an individual interview (part of which is conducted in the appropriate foreign language), and must engage in thorough academic planning with a counselor. The percentage of students accepted into the program is high (80% to 90%) because of the high caliber of the applicants. For the last several years, the International Center has been making special efforts to encourage minority students to spend a year abroad, and minorities now account for about a quarter of the students who go overseas each year.

Once selected, the campus submits the names of its students and their institutional preferences to the EAP office at UC Santa Barbara, the program's systemwide headquarters. The EAP office acts as the official liaison between the UC system and foreign institutions and successfully places the vast majority of students in their preferred universities abroad.

UCSD maintains contact with its students during their year abroad in order to keep them abreast of campus developments and to alert them to important deadlines (such as financial aid and registration). Upon their return, the International Center involves as many EAP students as possible in projects and in the recruitment/selection/orientation process of students for the next year.

d. Friends of the International Center

The local community has always played a large part in international education at UCSD. The original funding for the International Center came from the community. The Friends of the International Center, now numbering more than 400, are campus and community volunteers who contribute their time, talents, and money to the center. The Friends host foreign students and scholars, help foreign visitors get settled, run an extensive English program, and hold many social events for foreigners.

B. GRADUATE EDUCATION

1. Introduction

The treatment of the graduate programs includes a discussion of recruitment, admissions, and retention of graduate students. At the
graduate level, these activities relate directly to the academic character of the programs. While undergraduate recruitment and admissions are carried out according to University standards and in programs run by the Vice Chancellor - Undergraduate Affairs, graduate recruitment and admissions is an integral part of each department's program. Likewise, the retention of graduate students is a part of the academic program itself, because most students who leave graduate school do so for academic reasons. Reviewers of a department's graduate program are always asked to review these aspects of the program.

UCSD has emphasized the Ph.D. in its graduate programs. The departments of Drama and Visual Arts offer the M.F.A., and there are some M.A. programs. However, many departments still regard the M.A. as a way-station on the route to the doctorate.

One consequence of this attitude is that the collapse of the academic market for Ph.D.s in the early 1970s greatly affected UCSD's graduate enrollments. Graduate enrollments have, therefore, grown much more slowly than undergraduate enrollments, and the campus now views the low number of graduate students (11.5% of total enrollment) as a problem.

Like other major universities, UCSD emphasizes research in its graduate programs. Whereas undergraduates are expected to learn about current knowledge, graduate students are expected to make original contributions to knowledge. The M.F.A. programs in Drama and Visual Arts emphasize creative contributions to the arts.

The Senate's Graduate Council has jurisdiction over all graduate programs. The Office of Graduate Studies and Research (OGSR) administers the programs, and the Dean of Graduate Studies is an ex officio member of the Graduate Council.

2. Characteristics of Graduate Programs

Graduate programs are primarily the provinces of the departments, and the Graduate Council has not imposed burdensome requirements on them. For example, there is no minimum number of units required for the Ph.D. The attitude of the campus is that graduate programs must meet the special needs and standards of individual disciplines and that campus-wide criteria are, for the most part, inappropriate. In general, to receive the Ph.D., students must demonstrate a broad knowledge of their chosen fields and produce original research of publishable quality.

Typically, Ph.D. students spend their first year taking core courses and doing limited research projects in order to become acquainted with the discipline and the research interests of individual faculty members. Second-year students usually undertake more ambitious research projects and independent study. The third year is
normally spent preparing for qualifying examinations and formulating a research topic for the dissertation. Students then devote the next two to three years to dissertation research and writing.

M.F.A. students normally spend significantly more time in structured group activities than Ph.D. students. Nonetheless, these programs also emphasize the design of individual courses of study. In the final quarter of their programs, M.F.A. students present an exhibition or performance of their work to the general public and prepare a critical or analytical thesis on their creative work.

M.A. and M.S. students (who account for 17% of the total graduate student population) usually spend most of their time in coursework and take a comprehensive examination at the conclusion of their studies. Very few students write a thesis for the Master's degree.

Most of the Ph.D. programs require students to teach for one or more quarters. All the fine arts programs, two of the three humanities programs, three of the six social science programs, and two of the ten science programs require teaching experience. Other programs strongly recommend teaching to their students. In nearly every case, students who teach do so as Teaching Assistants. In the humanities and social sciences a significant number find such assistantships in interdisciplinary programs in the colleges. Mathematics also uses students from other fields as TAs.

In 1978 the University instituted the Normative Time Program. The program sets standards for the time doctoral students in different programs are expected to spend in completing their degree requirements. Under the program, a student must be registered throughout his program of graduate study, and may not take more than one year's leave of absence. Once a student advances to candidacy, he receives Educational Fee grants of $260 per quarter until his normative time expires. The grants provide an incentive for students to advance to candidacy and to finish their dissertations (Figure 34).

Even though reliable data have not yet been collected, it is the impression of OCGSR that the Normative Time Program has increased the speed with which students advance to candidacy, reduced the number of students who drop out or go on leave, increased the percentage who register each quarter, and increased the percentage who complete their dissertations. Unfortunately, the mean time to the completion of all degree requirements has not decreased, but this may be a result of the tight job market, which makes haste to complete the degree relatively unattractive. It may also be a result of the reasonably good level of support graduate students receive in the University.
## NORMATIVE TIMES FOR DOCTORAL PROGRAMS

<table>
<thead>
<tr>
<th>Department or Group Program</th>
<th>Normative Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>6</td>
</tr>
<tr>
<td>Applied Mechanics and</td>
<td></td>
</tr>
<tr>
<td>Engineering Sciences</td>
<td></td>
</tr>
<tr>
<td>(Aerospace Engineering)</td>
<td>5</td>
</tr>
<tr>
<td>(Applied Mechanics)</td>
<td>5</td>
</tr>
<tr>
<td>(Applied Ocean Science)</td>
<td>5</td>
</tr>
<tr>
<td>(Bioengineering)</td>
<td>5</td>
</tr>
<tr>
<td>(Bioengineering) Ph D-M.D. program</td>
<td>7</td>
</tr>
<tr>
<td>(Chemical Engineering)</td>
<td>5</td>
</tr>
<tr>
<td>(Engineering Physics)</td>
<td>6</td>
</tr>
<tr>
<td>(Systems Science)</td>
<td>5</td>
</tr>
<tr>
<td>Biology</td>
<td></td>
</tr>
<tr>
<td>Biology Ph D-M.D. program</td>
<td>6 1/3</td>
</tr>
<tr>
<td>Chemistry</td>
<td>5 1/3</td>
</tr>
<tr>
<td>Chemistry Ph D-M.D. program</td>
<td>7</td>
</tr>
<tr>
<td>Cognitive Science</td>
<td>6</td>
</tr>
<tr>
<td>Communication *</td>
<td>5</td>
</tr>
<tr>
<td>Computer Science</td>
<td></td>
</tr>
<tr>
<td>With masters from another university</td>
<td>4</td>
</tr>
<tr>
<td>Without masters from another university</td>
<td>5</td>
</tr>
<tr>
<td>Economics</td>
<td></td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td></td>
</tr>
<tr>
<td>(Applied Ocean Science)</td>
<td></td>
</tr>
<tr>
<td>(Applied Physics)</td>
<td></td>
</tr>
<tr>
<td>(Communication Theory and Systems)</td>
<td></td>
</tr>
<tr>
<td>With masters from another university</td>
<td>4</td>
</tr>
<tr>
<td>Without masters from another university</td>
<td>5</td>
</tr>
<tr>
<td>Experimental Pathology</td>
<td></td>
</tr>
<tr>
<td>Experimental Pathology Ph D-M.D. program</td>
<td>7</td>
</tr>
<tr>
<td>Music</td>
<td></td>
</tr>
<tr>
<td>With masters from another university</td>
<td>4</td>
</tr>
<tr>
<td>Without masters from another university</td>
<td>5</td>
</tr>
<tr>
<td>Neurosciences</td>
<td></td>
</tr>
<tr>
<td>Neurosciences Ph.D-M.D program</td>
<td>5</td>
</tr>
<tr>
<td>Philosophy</td>
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<td>Physics</td>
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<td>Theoretical Physics</td>
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</tr>
<tr>
<td>Experimental Physics</td>
<td></td>
</tr>
<tr>
<td>Physics (Biophysics)</td>
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</tr>
<tr>
<td>Physiology and Pharmacology</td>
<td></td>
</tr>
<tr>
<td>Physiology and Pharmacology Ph.D-M.D. program</td>
<td>7</td>
</tr>
<tr>
<td>Political Science</td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td></td>
</tr>
<tr>
<td>Psychology Ph.D-M.D. program</td>
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</tr>
<tr>
<td>Scripps Institution of Oceanography</td>
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<tr>
<td>Oceanography</td>
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</tr>
<tr>
<td>Earth Science</td>
<td></td>
</tr>
<tr>
<td>Marine Biology</td>
<td></td>
</tr>
<tr>
<td>Sociology</td>
<td></td>
</tr>
</tbody>
</table>

*The above table represents the normative times for doctoral programs at UCSD as listed in the 1985-86 UCSD General Catalog.*
3. The Programs

Figure 35 lists the degree programs offered in 1985-86. The Departments of Oceanography, Biology, Chemistry, Physics, and Literature offer comprehensive programs that cover most of the subfields within their respective disciplines. The Departments of Anthropology, Economics, History, Linguistics, Music, Philosophy, Political Science, Psychology, Sociology, Visual Arts, and the interdisciplinary group in Teaching and Learning offer specialized programs that correspond with the subdisciplinary specialization of their faculties. The engineering programs were originally developed as applied science degrees, but they are now expanding to encompass the traditional engineering fields.

Interdisciplinary research and graduate education in areas such as nonlinear science, social sciences, biological and physical sciences, and between the School of Medicine and SIO are flourishing. Over the years, however, there has been a declining interaction between graduate programs in the School of Medicine and those on the General Campus. Thus, fewer Neuroscience and Physiology/Pharmacology students are now studying with General Campus faculty and fewer Biology, Chemistry, and Psychology students are now studying with School of Medicine faculty than originally planned.

Aside from the M.D. program, UCSD currently has none of the professional programs characteristic of major research universities. The campus is presently planning a new professional school in international relations. (See page 117.)

UCSD currently offers doctoral programs in chemistry and biology in conjunction with San Diego State University. A new joint doctoral program in clinical psychology enrolled its first students in Fall 1985.

4. Plans for New Graduate Programs

a. Ph.D. in Communication

UCSD's youngest department, Communication, expects to offer a Ph.D., beginning Fall 1986. The proposed program has been approved by the San Diego Division of the Academic Senate and by the University Academic Senate. It was approved by the Office of the President and by the California Postsecondary Education Commission during the summer of 1985.
FIGURE 35

Graduate Degrees Offered
1985-86

<table>
<thead>
<tr>
<th>Program</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Biology</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Biology (Joint doctoral with San Diego State University)</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Chemistry (Joint doctoral with San Diego State University)</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Clinical Psychology</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>(Joint doctoral with San Diego State University)</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Cognitive Science</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Communication</td>
<td>M.A., Ph.D.</td>
</tr>
<tr>
<td>Comparative Studies in Language, Society and Culture</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Computer Science</td>
<td>M.S., Ph.D.</td>
</tr>
<tr>
<td>Earth Sciences</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Economics</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>M.S., Ph.D.</td>
</tr>
<tr>
<td>(Applied Ocean Science)</td>
<td>M.S., Ph.D.</td>
</tr>
<tr>
<td>(Applied Physics)</td>
<td>M.S., Ph.D.</td>
</tr>
<tr>
<td>(Communication Theory and Systems)</td>
<td>M.S., Ph.D.</td>
</tr>
<tr>
<td>Engineering Sciences</td>
<td>M.S., Ph.D.</td>
</tr>
<tr>
<td>(Applied Mechanics)</td>
<td>M.S., Ph.D.</td>
</tr>
<tr>
<td>(Applied Ocean Science)</td>
<td>M.S., Ph.D.</td>
</tr>
<tr>
<td>(Bioengineering)</td>
<td>M.S., Ph.D.</td>
</tr>
<tr>
<td>(Chemical Engineering)</td>
<td>M.S., Ph.D.</td>
</tr>
<tr>
<td>(Engineering Physics)</td>
<td>M.S., Ph.D.</td>
</tr>
<tr>
<td>(Systems Science)</td>
<td>M.S., Ph.D.</td>
</tr>
<tr>
<td>Experimental Pathology</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>History</td>
<td>M.A., Ph.D.</td>
</tr>
<tr>
<td>Linguistics</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Literature</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Comparative</td>
<td>M.A., Ph.D.</td>
</tr>
<tr>
<td>English and American</td>
<td>M.A., Ph.D.</td>
</tr>
<tr>
<td>French</td>
<td>M.A., Ph.D.</td>
</tr>
<tr>
<td>German</td>
<td>M.A., Ph.D.</td>
</tr>
<tr>
<td>Spanish</td>
<td>M.A., Ph.D.</td>
</tr>
<tr>
<td>Marine Biology</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Mathematics</td>
<td>M.A., Ph.D.</td>
</tr>
<tr>
<td>Mathematics (Applied)</td>
<td>M.A.</td>
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<tr>
<td>Statistics</td>
<td>M.S.</td>
</tr>
<tr>
<td>Music</td>
<td>M.A., Ph.D.</td>
</tr>
<tr>
<td>Neurosciences</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Oceanography</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Philosophy</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Physics (Biophysics)</td>
<td>M.S., Ph.D.</td>
</tr>
<tr>
<td>Physiology and Pharmacology</td>
<td>Ph.D.</td>
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<tr>
<td>Political Science</td>
<td>Ph.D.</td>
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<td>Ph.D.</td>
</tr>
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<td>Sociology</td>
<td>Ph.D.</td>
</tr>
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<td>Teaching and Learning</td>
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</tr>
<tr>
<td>Theatre</td>
<td>M.F.A.</td>
</tr>
<tr>
<td>Visual Arts</td>
<td>M.F.A.</td>
</tr>
</tbody>
</table>

* The master's degree may be awarded to students pursuing work toward the Ph.D. after fulfillment of the appropriate requirements.

† Students who have completed some graduate study at UCSD and have been admitted to a doctoral program may秘书 by the interdisciplinary program.

‡ Administrative approval pending.

Source: 1985-86 UCSD General Catalog
The Department of Communication is markedly non-traditional because it does not focus on vocational training for the print or broadcast industries. Rather, it is in the forefront of a new discipline that focuses on theoretical issues in communication, the interaction between individuals and society, the role of different media in these interactions, and the interpretation of texts, discourse, and communication "products."

b. Doctor of Music

The Department of Music is considering the development of a Doctor of Music degree for performance students. The department is currently very strong in composition, and, to complement this strength, it needs to attract more faculty and students who are oriented toward the performance of contemporary music. The new program would be aimed at achieving this goal.

c. Ph.D. in Literature

Unlike other universities, all literatures are taught in a single department at UCSD, and the department is developing a new, comprehensive degree in literature to replace the individual degrees it now offers. The purpose of the new degree is to realize in the doctoral program the unified nature of the department itself.

d. Masters in International Relations

The campus is developing a unique new professional school to provide training for persons seeking careers in government, journalism, and business in the Pacific Basin. The program will be comparative and interdisciplinary, including professional training and research in international studies, management science, and finance, as well as the study of language, culture, and the arts.

The proposal for the Graduate School of International Relations and Pacific Studies was approved by The Regents of the University of California in January 1986. The campus could hire a dean and initial faculty for the school to begin work in 1986-87.

5. The Quality of Programs and Students

National studies, reviews of individual graduate programs, and aggregate data indicate that UCSD's graduate programs are generally strong and that the graduate population is composed of talented, promising individuals. For example:
1. The Conference Board of the Associated Research Councils ranked UCSD 18th in the country in the quality of its research doctorate programs. The Board's study did not include the programs at SIO.

2. During the past three years UCSD has admitted about 29% of the applicants to its M.A. and Ph.D. programs.

3. The median GRE scores of students entering in Fall 1984 were 630 verbal and 710 quantitative. The latest available comparative data (Fall 1982) shows that UCSD ranks near the top among UC campuses, but comparisons are difficult because the campuses report their data variously.

4. The median GPA of Ph.D. and M.F.A. students entering in Fall 1984 was 3.58. In 1982, UCSD ranked high among UC campuses in this category also.

5. The placement record of UCSD Ph.D. and Masters degree holders is excellent. Studies show that 21% go into teaching, 48% into research, 22% into professional employment, and 4% into further education. Only 4% are unemployed.

UCSD intends to maintain the selectivity of its admissions policies and the quality of its graduate programs.

6. Admissions

   a. Process and Results

   Although each of the departments makes the essential decisions about the admission of graduate students, the Dean of Graduate Studies has final authority to approve departmental actions. Formally, the Dean admits graduate students upon the recommendation of the departments.

   The Senate has established a minimum undergraduate GPA of 3.0 for admission to the graduate school, and departments must carefully justify their recommendations to admit students with lower GPAs. Only 21 out of 960 students admitted for Fall 1984 needed an exception to the minimum GPA requirement. Longitudinal studies have shown that such students perform as well as regularly admitted students.
**FIGURE 36**

GRADUATE APPLICATIONS/ADMISSIONS/REGISTRANTS

<table>
<thead>
<tr>
<th>Masters</th>
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The campus accepts about 29% of those who apply to its graduate programs (Figure 36). Among departments, the range is from an 11% admission rate (Drama and Psychology) to 53% (Philosophy). When programs are reviewed, the admission standards and quality of students admitted are among the principal concerns of OGSR and the campus.

Over the last decade, the campus has been much concerned about maintaining the quality of the students admitted to its humanities and social science programs. This is a problem shared by nearly all graduate schools.

At UCSD, applications to Ph.D. programs in these fields declined by half between 1974 and 1984. The departments responded by drastically reducing the size of their programs, and the acceptance rate remained about 34%. Nonetheless, the quality of the students admitted to the programs declined. The number of applications hit bottom in 1980; it has increased almost 20% since then.

7. The Office of Graduate Studies and Research

The mission of the Office of Graduate Studies and Research (OGSR) is to administer graduate academic programs, graduate student affairs, and research programs; to stimulate the departments and their students to maintain the highest standards of achievement; and to facilitate the development of new teaching and research programs.
a. Recruitment of Graduate Students

The academic departments have the principal responsibility for the recruitment of graduate students. Every department publishes and distributes literature describing its graduate programs in detail. Most departments make active efforts to recruit the best students by offering attractive financial support packages, telephoning students to describe departmental programs, and inviting students to visit the campus. OGSR gives advice to the departments about recruitment strategies, publishes a bulletin describing UCSD's graduate programs and faculty research interests, and prepares and widely distributes an attractive poster about graduate study at UCSD.

One of OGSR's major concerns is that many of UCSD's programs have not yet acquired the national and international prominence necessary to attract the most outstanding students. Exceptions are the Biology, SIO, Spanish Literature, and Arts graduate programs. In some fields—particularly Physics, Chemistry, Mathematics, and Psychology—the best applicants often choose to go to other graduate schools.

The individual reviews of graduate programs reveal these problems. In some cases, the problem is that departments are not publicizing their programs sufficiently; in others, they are not providing competitive support packages; and, in a few, they are not admitting the best available candidates. OGSR has been working with these departments, and there have been notable improvements over the last two years.

b. Graduate Student Affirmative Action

The campus has been concerned about increasing the number of graduate students from under-represented groups and providing them with the academic and social support they need to complete their programs. Working together, OGSR and the departments have made significant progress during the last fifteen years.

Since 1970, UCSD has had a large program of fellowships aimed specifically at students from under-represented groups. The fellowships pay the full costs of the students. From 1972 on, the Dean of Graduate Studies and the staff of Graduate Student Affirmative Action, based in OGSR, have provided coordination, advice, and assistance to departments on the recruitment, admission, and retention of students from under-represented groups. Steady gains were made throughout the mid-1970s, until the percentage of minorities in the graduate student population reached 6.4% in 1982.

However, the proportion of students from these groups has declined since then to 5.5% in Fall 1984. It is unclear why this decline has occurred. OGSR and the departments have not relaxed in their efforts to recruit students from under-representative minorities. The Chronicle of Higher Education (September 4, 1983, p. 2) reported that
c. Academic Support Programs

The overall purpose of academic support programs in OGSR is to enhance students' intellectual development. These programs are beyond what faculty and departments normally provide for their students.

i. Graduate Enrichment Program

(7A1) The Graduate Enrichment Program has been in operation since 1979 and has gained in popularity among faculty and students. The program provides services such as:

1. Individual and group tutoring;
2. Orientation for first-year students (separate from departmental orientations);
3. Student-run seminars designed to acquaint new students with faculty members and their areas of specialization;
4. Student seminars (discussions among students about their own research);
5. Assistance for students whose test results indicate a need for additional help;
6. Monitoring of students' progress in core courses; and
7. Assistance for students in preparing for comprehensive examinations.

The staff in OGSR also work with the Office of Academic Support and Instructional Services (OASIS) to encourage it to provide more help for graduate students.

ii. Computing

(6E2) OGSR offers basic and advanced training in the use of UNIX (the principal operating system on campus), word processing, and electronic message systems. The training provides instruction in the use of campus computer systems for research, writing, statistics, and dissertations.

iii. Advising

OGSR provides general advising for graduate students on all aspects of graduate study, including academic and personal matters, preparing for graduate study, information about the services of other campus units, and information about the Graduate Student Association.
Financial Support

Compared to other major public universities, UCSD offers a relatively high level of financial support to its graduate students. In 1983-84, support averaged $5,354 per student after tuition and fees were paid.

However, in nearly all fields, limits on support are hampering the campus's ability to attract top students. In some fields, the lack of Teaching Assistantships, Research Assistantships, and Trainee positions limits the number of students who can be admitted.

Federal funding provides approximately half of the total graduate support on campus. Fluctuations in that funding can cause disruptions in the administration and continuity of graduate student financial support. OGSR is especially concerned about proposed cutbacks in National Institute of Health (NIH) funding because of the significant negative effects such cutbacks would have on all of the science and some of the social science graduate programs.

Because UCSD is a young campus, it has few endowed fellowships for graduate students. In all fields outside the natural sciences, TA- ships make up the bulk of graduate student support, and most students serve as TAs throughout their graduate careers at UCSD. The problem in this type of support is that it distracts the attention of students from their course and research work. Moreover, the campus has a relatively high student:TA ratio, which places a heavy burden on TA's, particularly in the writing programs.

OGSR administers a fund for graduate student research. The office awards grants for supplies, equipment, and travel to graduate students in departments that have little or no extramural support. OGSR will also pay for a percentage of the travel costs incurred by students who have been invited to present their work at scholarly meetings.

In 1984, in order to give departments increased freedom in the tailoring of financial support packages to fit their needs and the needs of their students, OGSR initiated a "block grant" program. The program gives departments a lump sum of fellowship money that, within certain limits, they may use as they wish to attract new students or support continuing students. The core support for this program comes from graduate student support funds that used to be awarded directly by OGSR. The Vice Chancellor - Academic Affairs has augmented the block grant program with $200,000.

Effective July 1, 1985, a new policy requires that tuition and fees be paid as a perquisite of employment for RAs. Because most RA support money comes from grants, this policy should net the campus $600,000 annually in new funds for graduate support. The campus itself must provide equivalent support for the RAships it funds itself.
The policy should be in full effect within two to three years, when
the grant cycle has been completed.

8. Problems in Student Academic Affairs

The policies, regulations, and procedures regarding graduate stu-
dent academic affairs are well established, and their administration is
generally working smoothly. Nonetheless, some problems exist.

a. Non-Senate Faculty Advisors

The rapid growth of the campus has raised the number of faculty
who are not in the regular professorial series—specifically researchers,
adjunct professors, visiting professors, and lecturers. This has
affected the graduate program because many of these faculty are capa-
ble and desirous of sitting on doctoral committees. The Senate wants
to provide students with the opportunity to work with qualified faculty
who are not in the regular professorial series while also ensuring that
students have continuity of supervision by people who are qualified to
direct doctoral research. The policy governing membership on, and
the chairmanship of, doctoral committees has been reviewed and re-
vised several times in recent years to meet the twin objectives of
expanding opportunities and maintaining standards.

b. Incomplete Grades

Academic policy concerning the grade of "Incomplete" has caused
several problems. In some departments, students have been allowed to
accumulate "Incomplete," so that they find it very difficult to make
them up. Although "Incomplete" automatically lapse into "Fails" after
one quarter, departments have been lenient in permitting faculty to
grant passing grades retroactively. This practice has lengthened the
time to degree for students at both the undergraduate and graduate
level. In 1981, the Academic Senate finally ruled that lapsed "Incom-
pletes" may not be changed to passing grades retroactively. This
action considerably reduced the magnitude of the problem by forcing
departments, faculty, and students to control the granting and hand-
ling of "Incompletes."

C. SCRIPPS INSTITUTION OF OCEANOGRAPHY

The early history of SIO was recounted in Chapter II. SIO be-
came a research institute of the University in 1912 and granted,
through Berkeley, its first Ph.D. in Oceanography in 1930. After that,
until the foundation of UCSD, SIO acted as a de facto teaching de-
partment—awarding degrees first through Berkeley and then through
UCLA.
SIO developed rapidly during and after World War II. Its scientists played an important role in naval research during the war and have continued to serve the national interest actively. By the late 1950s, the SIO faculty had become an excellent and distinguished nucleus around which a new university campus could be built.

SIO began giving degrees through UCSD in 1960, when The Regents officially established the new campus. In the early 1960s, the SIO faculty was divided into two departments, Oceanography and Marine Biology, which gave separate Ph.D. degrees.

First College (later Revelle College) contained a Department of Earth Sciences that was actually housed at SIO. By 1967, it had become clear that an undergraduate program in Earth Sciences would require large resources the University was unlikely to provide and that the faculty in that department wanted to remain with colleagues at SIO. As a result, the Department of Earth Sciences merged with the Department of Oceanography. The Department of Marine Biology then decided to join this new unit, which formed the large, diverse, and strong Graduate Department of the Scripps Institution of Oceanography. This department still runs the teaching programs of SIO.

The graduate department offers three Ph.D. programs—Oceanography, Earth Sciences, and Marine Biology. For over a decade, the department has had a complement of about 180 graduate students. During the 1970s, the department developed an undergraduate program in Earth Sciences. This program is offered as a concentration in the departmental majors of Chemistry and Physics. Till now, the Revelle College Provost has administered the program, but in Fall 1985, a professor of Earth Sciences from SIO took over the directorship. The program attracts a small number of extraordinarily able students, who have had a remarkable record of success in the best graduate programs. The campus hopes to enlarge the program modestly during the next few years.

Because of its long history as an Organized Research Unit, a high percentage of the faculty of SIO hold positions funded both by University and extramural research funds. However, many of the leading members of SIO are supported wholly by contracts and grants. The graduate department does not distinguish between faculty and researchers when making its teaching assignments and organizing Ph.D. committees. Members of the staff who hold purely research positions are appointed as Adjunct Lecturers in order to involve them in teaching functions.

The department has created seven curricular groups to organize its teaching program. Each curricular group sets entrance requirements for and recommends the admission of applicants, determines the curriculum for its subspecialty, and administers doctoral examinations.
Biological Oceanography is concerned with the interactions of populations of marine organisms and with the physical and chemical environment of marine life. The field integrates physical oceanography, marine chemistry, marine geology, and biology.

Marine Biology is the study of marine organisms, their development, and their adaptations. It is concerned with the physiological and biochemical processes in marine organisms, their genetic relationships, and the relationship between them and their environment, both biotic and physical.

Marine Chemistry is concerned with the chemical processes operating within the marine environment—the oceans, the marine atmosphere, and the sea floor. It studies the interactions of the components of seawater with the atmosphere, with the sedimentary solid phases, and with plants and animals.

Geological Sciences apply the observational, experimental, and theoretical methods of the basic sciences to the understanding of the solid Earth, ocean, atmosphere, and solar system. The principal subfields at SIO are Marine Geology, Petrology, and Geochemistry.

Geophysics applies the general experimental and theoretical methods of physics to fundamental problems in the atmosphere, oceans, interior of the Earth, and solar system.

Physical Oceanography deals with mechanisms of energy transfer through the seas and across their boundaries. It also deals with the physical interactions of the sea with its surroundings, including the influence of the seas on the climate.

Applied Ocean Science is an interdepartmental program concerned with man's purposeful use of the sea. The program brings together faculty from SIO, Electrical Engineering and Computer Science, and Applied Mechanics and Engineering Sciences to train oceanographers to be knowledgeable about modern engineering and engineers to know about the oceans.

SIO is one of the three academic units of UCSD (the General Campus and the School of Medicine are the others). Its specialized functions and academic structure, its ability to run a fleet of research vessels, and its world renown will be best preserved by permitting it to operate separately. Nonetheless, the General Campus hopes to increase the number of interdepartmental programs involving faculty from SIO. Discussions are already started on the expansion of the undergraduate program in Earth Sciences.
D. PROFESSIONAL EDUCATION: UCSD SCHOOL OF MEDICINE

1. Introduction

(4D1,6) The M.D. curriculum of the School of Medicine is innovative. Students take a series of interdisciplinary courses during the first two years. These courses are the responsibility of core course committees rather than regular departments. The School does not have basic science departments common to other medical schools. Rather, it supports 23 FTEs in the General Campus Departments of Biology, Chemistry, Sociology, AMES, Mathematics, and SIO--the "participating departments." The faculty in Biology and Chemistry are primarily responsible for the first quarter courses in Cell Biology and Biochemistry. They may also supervise medical students in their required independent study projects and occasionally participate in teaching electives. The arrangement has fostered the development of exceptional basic science competencies in the traditional clinical departments such as Medicine, Pediatrics, and Neurosciences.

The innovative approach to the curriculum of the first two years has worked exceptionally well. Since the School's inception, successive classes have ranked among the top dozen nationally on Part I (basic sciences) of the National Board Examinations. The program also ensures fruitful interaction between SOM and General Campus faculty.

UCSD medical students take a series of traditional clerkships in the second two years, but they also complete an independent study project prior to graduation. The project is intended to sharpen students' analytical skills and to prepare them for the program of self-renewal required of practicing physicians. Recently, UCSD students ranked in the top third nationally on Part II (clinical sciences) of the National Boards.

Graduate Medical Education (GME)/house staff training programs have been carefully developed to balance several needs:

1. The need of the School to develop strength in certain specialties;
2. The profession's need for specialists in certain fields;
3. The needs for patient care; and
4. The need for house staff in a variety of specialties to serve as tutors for medical students.

In contrast to many other medical schools, UCSD rotates its residents from programs based at the Medical Center to affiliated community hospitals rather than simply affiliating with existing programs that are based in the community hospitals.
UCSD's GME programs are fully integrated—that is, the selection, processing, and evaluation of the residents, the planning and implementation of the curriculum, the counseling of residents, and so on, are carried out under the aegis of full-time faculty members. The early establishment of a faculty graduate medical education committee has provided institution-wide quality control. There are presently 414 trainees in 29 programs.

During the 1970's, in response to societal imperatives, the School developed a family medicine residency program and primary care tracks in pediatrics and general internal medicine. More recently, the School was accredited to give a preventive medicine residency in collaboration with San Diego State University.

The School has also developed distinguished Ph.D. programs in Pharmacology/Physiology, Neurosciences, and Experimental Pathology. Faculty groups appointed by the Office of Graduate Studies and Research, instead of departments, supervise these programs. In addition, the Department of Psychiatry offers a Ph.D. program in Clinical Psychology jointly with San Diego State University. The program enrolled its first students in Fall 1985.

The School of Medicine has also done very well with minority student recruitment and retention. In 1969, it instituted a highly successful recruitment and retention program, which has since become a model for other such programs nationwide. In particular, its tutorial program has been widely copied. Presently, 14% of the minority physicians in the San Diego Community are graduates of the UCSD School of Medicine, even though the first minority students did not complete their residencies until 1976.

2. Structure of the School of Medicine

The faculty of the School of Medicine is one of the six faculties of the San Diego Division of the Academic Senate (the four undergraduate colleges and SIO account for the other five faculties). The Senate has delegated authority to the faculty of the School of Medicine over admissions and requirements for the M.D. degree. Curriculum revisions in the School of Medicine are routinely approved by the Graduate Council. Requirements for Ph.D. programs must be approved by the Graduate Council.

In accord with the regulations of the Senate, the faculty of the School of Medicine has many internal governance mechanisms, such as a faculty council and committees on educational policy, admissions, student evaluation, core curriculum, electives, graduate medical education, and allied health programs.

The Dean of the School of Medicine also serves as the Vice Chancellor - Health Sciences and is responsible for the operation of
the UCSD Medical Center as well as for the School. A council of chairpersons, which includes the chairs of School of Medicine departments, representatives from the participating departments of the general campus, and the Chair of the Faculty Council, advises the Dean on a wide range of matters concerning the administration of the Medical School. The Dean is also assisted by Associate Deans. (See Chapter XI: Vice Chancellor - Health Sciences.)

As noted in Chapter II, the School has eleven departments and supports twenty-three faculty FTEs in the General Campus Departments of Biology, Chemistry, Sociology, AMES, Mathematics, and the Scripps Institution of Oceanography. Conversely, members of the School of Medicine departments also participate in a broad range of undergraduate and graduate programs on the General Campus.

3. Problems In Medical Education

When the School of Medicine was founded, the use of an interdisciplinary approach for teaching and research in a medical school setting followed naturally from the interdisciplinary tradition of SIO and the new General Campus. The plan to have the School of Medicine support faculty FTEs on the general campus was one outgrowth of the interdisciplinary approach. This plan was instituted in the early 1960s when resources were abundant and the potential for growth appeared virtually unlimited. However, the realities of the 1980s--especially decreased financial support for the health sciences on all fronts--have placed significant strains on the interrelationship of the faculties of the School of Medicine and the General Campus.

The School now perceives that General Campus departments do not give adequate support of the basic sciences within its curriculum and that General Campus scientists funded by the School do not adequately support the School's interests in this area. Further, because state support of the School of Medicine has declined, the proportion of faculty support provided for the General Campus since the late 1960s is not proportional to its workload in the 1980s.

Nonetheless, the School hopes to make some adjustments over the next several years to bring resource allocations more in harmony with fiscal realities while maintaining its fruitful relationship with the General Campus and its excellent reputation for teaching, research, and patient care.

4. The Future

There is general recognition that the distribution of physicians among specialties is inappropriately skewed towards tertiary care and away from primary care. The School of Medicine is aware of the problem and is consequently attempting to influence the development of its graduate medical education programs in a socially responsible
manner. In the hope that it will affect their choices, medical students are now exposed very early in their training to the careers available to them and to the latest formal studies and other data regarding the specialties and geographic distribution of physicians. The School foresees that substantial changes will take place through a slow, evolutionary process.

**E. UNIVERSITY EXTENSION**

The treatment of the programs offered by UCSD’s Extension division requires a description not only of the academic programs and courses, but also of the supporting offices and activities. The operation of Extension is integrated in a way that undergraduate programs are not. Like the graduate and professional programs, business and financial services are an integral part of education in Extension.

**1. Demographics**

Extension is dependent on the demography of the adult population of San Diego County. The City of San Diego is the eighth most populous city in the United States. The northern half of the county (where UCSD is situated) is one of the fastest growing areas in the State. Planners expect 85% of the growth in North County through 1990 to result from migration, and those who migrate to the area tend to be young and well educated. San Diego ranks fifth among major metropolitan areas in total personal income, with a median income of $23,000; 46% of the work force earns over $25,000.

Approximately 20% of the county’s population and 25% of the city’s population have had four years of college. An additional 24% of the county’s and 23% of the city’s population have had one to three years of college. A large proportion of the population is between 15 and 35 years old; but the median age is rising because birth rates are relatively low.

Almost one-third of the work force is employed in professional, technical, managerial, or administrative fields. Planners foresee a shift of employment away from traditional industry to high technology manufacturing, which is expanding in the area. They forecast that San Diego will gain close to 200,000 new jobs between now and 1990, of which 26,000 will be in the high technology manufacturing sector. Taking all of these factors into account, it is plain that the audience for UCSD Extension programs is expanding.

A typical UCSD Extension student is young, female, affluent and taking a course for professional reasons. Extension students tend to be college graduates (75%) and have post-graduate or professional degrees (42%). Half have incomes of over $30,000. More than half are between the ages of 30 and 49, and are attracted to Extension because of specific course offerings.
Of the more than 150,000 adults in San Diego who presently fit this profile, roughly 35,000 enrolled in UCSD Extension programs last year. In the future, Extension plans to open a comprehensive off-campus center, to develop "on site" educational programs in business and industry, and to continue aggressive promotional efforts aimed at reaching a larger percentage of those adults who could benefit from its programs.

2. Academic Programs

a. Concurrent Enrollment

Extension provides access to undergraduate and graduate courses on the General Campus. To enroll in the courses, Extension students need the permission of the professor. The fees paid by such students are divided between Extension and the General Campus. On the General Campus, the money is further divided, so that departments get some of the funds—according to the number of concurrent students they have taught—for special programming activities.

Each year, approximately 1,700 students take advantage of concurrent enrollment. Most (60%) are students wishing to qualify for admission to UCSD. Concurrently enrolled students may take eight units per quarter. In contrast to other UC campuses, where concurrent registration accounts for 10-15% of the total extension enrollment, at UCSD it accounts for 5% of all extension enrollments.

b. Courses for Credit

Whereas approximately 20% of the extension courses at other major UC campuses carry degree credit, there are fewer than a dozen extension courses offered for regular credit each year. With the expansion of M.A. and professional degree programs at UCSD, Extension's offerings in this area may also expand in the years to come. In addition, Extension has recently developed special certificate programs for professionals, and some of the courses in these programs may become accredited by the University.

c. ExtenNET Television Service

This new program allows selected on-campus upper-division, graduate, and extension courses to be broadcast "live" by ITFS into local business and industry. Thus far, six to eight courses, as well as periodic technical "updates," have been broadcast to twelve off-campus sites each quarter. The curriculum has emphasized engineering and management.
d. Professional Re-licensure and Teacher Credentials

In California, University Extension is a major resource to professionals needing to fulfill license, credential, or continuing education requirements. UCSD Extension offers courses fulfilling such requirements in the following areas: Nursing, Social Work, Accounting, Community College Instruction, Learning Handicapped, Pupil Personnel Services, Mathematics and Computer Concepts, Literacy, and Applications.

c. Advanced Certificate Programs

Post-professional education represents the largest component of UCSD Extension's total program and is geared to well-educated, employed adults who are interested either in staying up-to-date, broadening their skills in a given field, or both. Practicing professionals advise Extension about the curriculum and also teach in the programs. All courses and instructors are reviewed and approved by the appropriate on-campus academic departments and, when appropriate, by the Committee on Educational Policy of the Academic Senate.

Some of the programs in this category are: Engineering and Computer Science, including Microcomputer Engineering, Systems Programming, and Communications and Signal Processing; Management and Business, including Accounting and Taxation, Business Administration, Engineering Management, Information Systems Development and Management, and Personnel Management; Real Estate and Construction; Education, including Computers in Education, Early Childhood Education, and Teaching English as a Second Language; and Health Sciences, including Post-Anesthesia Nursing, Emergency Room Nursing, and Acute Care Nursing.

f. Introductory Certificate Programs

UCSD Extension assists a large number of college graduates who have liberal arts degrees and limited work experience to acquire information about different career options and to begin acquiring the skills necessary to enter them. This is accomplished by offering special curricula that have been designed in consultation with practicing professionals.

Examples are: Marketing and Communications, Paralegal Assistant, Fund Raising Management, Childbirth Education, Fitness Instruction and Health Management, Accounting, Real Estate, Alcohol and Drug Studies, and General Management.
g. State-of-the-Art Seminars and Colloquia

(4H1) University faculty and higher-level professionals are increasingly using Extension to disseminate new research findings and applications to fellow professionals and to the public.

Programs falling into this category include: Securities Regulation Institute, Industrial Liaison Program, UCSD Humanities Institute, Science Teacher Institute, Program in Technology and Entrepreneurship, Annual Summer School Alcohol Program, Colloquia on Electronic Technology for the Financial and Legal Communities, and Advances in Medical Technology.

h. Executive Education

Extension has developed programs for business executives. These programs have used the campus's special strength in science and technology by emphasizing management decision-making, innovation, and environmental issues pertinent to technological industries instead of retail, service, and financial industries.

Programs in this category include: Executive Program for Scientists and Engineers, Internal Venturing Symposium, Executive Institute on Large Scale Project Management, Executive Education within the Telecommunications Industry, and Management Development in the Health and Substance Abuse Fields.

i. Liberal Arts Programs

(4H1) Extension offers a small but growing number of programs in the liberal arts. Individual courses and seminars are now available each quarter in Writing, Foreign Languages, Visual and Performing Arts, Humanities, Science for Laypeople, and Classical Studies. A growing number of residential and travel/study programs emphasize history, the arts, and cultural traditions. Finally, Extension has a residential program in English Language Instruction, which provides more than 300 students a year with intensive English instruction and includes a number of subject-area study options.

j. National Media Programs

(4H2) For more than a decade, through a variety of contracts and grants, UCSD Extension has been active in the development and marketing of innovative courses using the public media--newspapers, radio, and television--as vehicles for instruction. Faculty members develop these courses with the assistance of specialists in media production. The courses are based on a series of programs or articles and on study guides, texts, and other instructional aids. The courses can be
used either for independent study or the classroom. The packages of course materials are made available for a fee to local colleges and universities.

Some of the major projects have been: Courses by Newspaper, (a program partly supported by NEH and featuring courses such as "Working: Changes and Choices" and "Food and People") and the Global Understanding Project (supported by the Annenberg/CPB Project and including courses on "Contemporary Western Europe" and "The Challenge of China and Japan").

k. Community Outreach and Public Service

Extension has offered a number of low cost or free programs both to the campus and to the San Diego community. Activities of this type include: Issues in the Humanities (an annual series of lectures), Institute for Continued Learning (a group of approximately 300 retired professionals who participate year-around in a program of study groups, faculty lectures, trips, tours, and social activities), Summer Academic Programs for San Diego Youth (a program utilizing mentor teachers and UC-affiliated faculty and staff to provide science, mathematics, and language education for approximately 300 elementary school and 200 junior and senior high school students each summer), and cosponsorship of campus colloquia and symposia (the Bronowski Symposium, the Warren Symposium, Regents' Lecturers, and other specially endowed lectureships).

3. Future Directions in Academic Programs

In 1985, University Extension took over the operation of the UCSD Summer Session. Previously, the session had been operated directly out of the Office of Academic Affairs. This addition to Extension, together with the continuing growth of campus academic programs, creates many possibilities for Extension's future growth. Likely areas for growth include:

1. Facilitating, through Extension courses, admission to and completion of Master's degrees in subjects such as engineering, education, and international relations;

2. Expanding the liberal arts curriculum to offer focused study in classical studies, oriental studies, European decorative arts, and Latin American culture;

3. Expanding professional, residential, and study-abroad programs in education, business, design and fine arts, selected technical fields, and foreign language study; and

4. Expanding professionally-oriented interdisciplinary programs in teaching and research, modeled after the Programs in
Technology and Entrepreneurship and the Programs in Alcohol Issues.

4. Academic Structure

To fulfill its mission of complementing the basic research and teaching function of the campus while serving the educational needs of the changing adult population in San Diego, Extension relies on a staff of Continuing Education Specialists who combine academic training with programming and managerial skills. There are nine such specialists, covering the following areas: Engineering and Applied Computer Science; Education and Behavioral and Health Science; Programs in Alcohol Issues; English as a Second Language; Arts, Humanities, and Sciences; Business, Management, and Finance; Executive Programs; ExtenNET Television Service; Programs in Technology and Entrepreneurship; and Special Contracted and Grant-funded Projects.

The specialists assess the need for education and training in the community, evaluate which needs UCSD should attempt to meet, and then develop and implement appropriate curricula in consultation with UCSD academic departments and community advisory committees. In administrating their programs, the specialists also select the most effective format and assign qualified instructional staff. As a result, Extension offers approximately 300 programs each quarter.

All Extension courses, whether credit or non-credit, are expected to be taught at an academic level that reflects positively on UCSD. Thus, Extension instructors are carefully screened and selected both by Extension itself and by the appropriate campus academic department. Currently, over 80% of Extension's instructors have M.A.'s or Ph.D.'s and are acknowledged experts in their professions. The assessment of prospective instructors is based on such things as their previous professional and teaching experience, academic training, confidential letters of reference, course descriptions and outlines, bibliographic materials, the criteria they plan to use for evaluating students, and interviews. For credit courses applicable to degrees from UCSD, review by the Academic Senate's Committee on Educational Policy (CEP) and by the appropriate campus department is also required. All new courses and instructors, and approximately 75% of repeat courses, are evaluated each quarter by students, faculty, and staff.

The vast majority of Extension's instructors are drawn from off-campus. UCSD-affiliated faculty, academic personnel, and general staff currently account for only about 20% of Extension's instructional staff. As the number of Masters programs, professional programs, special institutes, and organized research units increases at UCSD the proportion of campus-based Extension instructors should also grow.
5. Administrative Support Services

The division has three administrative offices responsible for supporting its academic programming—the Business Office, the Student Services Office, and the Communications and Marketing Office (Figure 37).

a. Business Office

The Extension Business Office handles teacher compensation, accounts receivable and payable, physical plant, personnel, and contracts and grants. The academic units within Extension produce gross revenues in excess of $5 million per year. The budget has grown at an annual rate of approximately 15% since 1981 when the current Dean assumed responsibility. Measured by revenues, UCSD Extension ranks third in size behind UCLA and UCB.

The 1984-1985 budget anticipates revenues of approximately $5.2 million (exclusive of any new grants and contracts), with expenditures of $5.175 million, giving Extension an operational margin of $200,000 to $250,000. Program departments are budgeted on an accrual basis, while the support departments are budgeted on a current expenditure basis. In the past three years, budget projections have varied from actual performance by 4-7%.

Revenues are currently distributed as follows:

- Engineering and Applied and Computer Science 11%
- Education and Behavioral and Health Science 19%
- English as a Second Language 5%
- Programs in Alcohol Issues 5%
- Arts, Humanities, and Science 10%
- Business, Management, and Finance 26%
- Executive Programs 4%
- ExtenNET Television Service 4%
- Technology and Entrepreneurship 2%
- Contracts and Grants 14%
FIGURE 37

UCSD EXTENSION
ORGANIZATION CHART

Vice Chancellor—
Academic Affairs
Harold K. Ticho

Dean
Mary Lindenstein Walshok
Associate Dean
Jim Carruthers

Management
Advisory Group**

Tim Johnson
Engineering, Applied,
and Computer Sciences

Pat Hallstrom
Business Office

Dotty Chandler
Academic & Staff
Personnel

Karen Lockwood
International Studies,
Alcohol Studies

Yvonne Hancher
Special Contracted and
Grant-funded Projects

John Thaxton
English as a Second
Language Program

Nancy Hancock
Communications and
Marketing

Judith Parzen
Arts, Humanities and
Sciences

Richard Skwarek
Business, Management
and Finance

Herman Gadon
Executive Programs

Thomas Reckord
ExevenNet Television
Service

Catherine Todd
Academic Services
Student Services

**Management Advisory Group: Policy-setting/budget reviewing committee, which meets bi-monthly made up of:
- Director of Communications and Director of Administration, and faculty rep(s) from:
  - Office of Student Affairs
  - Office of the Vice Chancellor—Academic Affairs
  - Office of the Vice Chancellor—Student Affairs
  - Office of the Dean—UCSD Ext.
Course fees represent 84% of the budget, while contracts and grants account for the remaining 16%. Extension has also done a small amount of fund raising in the community to provide seed money for special programs, such as the Science Teacher Institute, an expanded program on Alcohol Issues, and the program on Technology and Entrepreneurship.

b. Student Services

(4H12)
The Student Services Office is responsible for providing prospective and former students with information concerning Extension programs, certificate program advising, registration processing, and transcripts and records. Student Services is divided into four areas: Registration, Recording, Cashiering, and Data Processing.

Student Services monitors and issues certificates of completion for students enrolled in programs approved by such agencies as the California Board of Registered Nursing, the National Association of Social Workers, and other special agencies.

In addition, the Student Services Office administers an instructional microcomputer laboratory. Management of the lab involves product research and purchasing, hardware and software maintenance, security, logistics, and working with instructors and students. The lab staff provides consultation on microcomputers for the administrative staff. The lab is used by approximately 35 to 40 classes each quarter.

c. Communications and Marketing Office

The Communications and Marketing Office is responsible for promoting Extension programs. Each quarter the office publishes 120,000 copies of an 80-page catalog, entitled Explore. In addition, each year it produces approximately 170 direct mail projects, ranging from several hundred pieces to 50,000, and places approximately $80,000 of advertising in local media. The office also produces other printed materials for Extension, such as curriculum materials, signs, classroom handouts, and promotional giveaways. Finally, the office conducts market research and a quarterly evaluation of the effectiveness of various promotional efforts.

6. Summary

(4H1)
UCSD Extension is an independent, self-supporting academic unit with approximately 68 career employees. It enrolled over 35,000 students last year, and both its curriculum and enrollment are growing steadily. Extension is committed to excellence through programs that serve the following purposes as expressed in its mission statement:
To provide opportunities for educated adults to develop skills for employment, make career transitions, and receive "state-of-the-art" education in professional and managerial fields;

To contribute to the economic well-being of San Diego by developing the professional and technical skills of people employed in vital business, industrial, government, and social service sectors;

To contribute to the cultural and artistic life of San Diego through challenging educational programs in the arts and humanities; and

To provide a forum for new ideas and dialogues on contemporary issues by drawing on the unique faculty of the University of California and scholars from throughout the world.
B. SURVEY OF CURRENT RESEARCH PROGRAMS

I. Introduction

Research programs are carried out in the nineteen academic departments of the General Campus, in the eleven departments of the School of Medicine, and in eighteen organized research units (ORUs).

a. General Campus

The General Campus has a distinguished faculty of about 480 members, who are engaged in pioneering research on many fronts. The campus has become a major center for Latin American studies and has a renowned institute of U.S.-Mexican Affairs. The Center for Astrophysics and Space Sciences is one of the leading institutes of its kind, and the campus is expanding its already important research program in molecular biology and genetics. In the physical sciences and engineering, the campus has become a leader in nonlinear science and has developed a Center for Magnetic Recording Research. Recently, it was designated the national structures testing center for the development of earthquake resistant buildings. In the arts, the Center for Experimental Music is among the leaders in computer music, and the Drama Department is a member of the prestigious League of Professional Theatre Training Programs. Members of the Departments of Psychology, Computer Science, and Linguistics have joined in an Institute of Cognitive Science. These institutes and interdisciplinary research programs rest on the foundation of departmental research activities.

b. Scripps Institution of Oceanography

Research at SIO encompasses physical, chemical, biological, and geophysical studies. SIO operates four research vessels and two platforms and has developed much of the technology used in studies of the ocean. The major work on the Deep Sea Drilling Project was carried out at SIO. SIO scientists have identified the major determinants of the weather, contributed much to the present understanding of plate tectonics, and developed new methods for dating prehistoric artifacts. Current projects focus on such diverse subjects as studies of waves and currents, the building up of sediment in harbors, the mapping of the sea floor, the interchange of matter between seawater and the ocean floor, and the complexities of the food chains in the sea.
c. School of Medicine

The UCSD School of Medicine has earned a national reputation for its contributions to biomedical research. The faculty, composed of eminent physicians and scientists, has made the school an internationally recognized center for heart, lung, cancer, genetics, bioengineering, and aging research. Recently, the school was named one of the national centers for the study of Alzheimer's disease.

2. Funding of Research

Between 1973-74 and 1983-84, total research funds from extramural sources rose from about $63 million to over $153 million. Currently, UCSD ranks seventh in the country in total expenditures for research and fourth in total support from federal agencies. Among federal agencies, the Department of Health and Human Services provides the most support—$52.5 million in 1983-84. The National Science Foundation is the next largest source of funding—$33.8 million.

Private sector support for research has also increased dramatically. In 1983-84, the Fidia Research Laboratory granted $1.4 million for biological research. In the same year, a consortium of American corporations gave $5 million for research at the Center for Magnetic Recording Research, which the same group established at UCSD in 1982-83. The campus received another $1.4 million for research from various private foundations. In 1984-85, the Hughes Medical Foundation gave the campus $12 million to establish an institute of molecular biology.

In 1982-83, UCSD ranked sixth nationally in federal obligations for research and development and first in the UC system. It received $113.3 million in federal funds and $144 million overall for research. In 1983-84, the campus ranked fourth in federal obligations and seventh in total expenditures. The campus ranked second in the UC system that year in federal funding. It received $124 million in federal funds and $153.5 million overall.

During 1982-83, the last year for which complete records are available, 41% of the campus's research expenditures were in departments and 59% in ORUs. In 1982-83 and 1983-84, funding was distributed among the three academic units of the campus as follows:
FIGURE 38
RESEARCH FUNDING AT UCSD

<table>
<thead>
<tr>
<th></th>
<th>1982-83</th>
<th>1983-84</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Campus</td>
<td>29% ($41.3M)</td>
<td>31.6% ($48.5M)</td>
</tr>
<tr>
<td>SIO</td>
<td>41% ($59.9M)</td>
<td>33.2% ($51.0M)</td>
</tr>
<tr>
<td>School of Medicine</td>
<td>30% ($42.8M)</td>
<td>35.2% ($54.0M)</td>
</tr>
</tbody>
</table>

Of UCSD's total expenditures for research, 91% comes from extramural sources, 7% comes from state funds, and 2% from other unrestricted funds.

3. Problems in Research Funding

Research programs at UCSD and other universities are facing several critical funding problems. In particular, universities have been unable to obtain adequate funding for facilities and instrumentation for the last decade. The federal government recognizes the problem, but efforts to reduce the large federal budget deficit will probably prevent it from increasing budgets for research and development facilities and equipment.

As noted in Chapter V, the State of California has recently begun funding new facilities, and UCSD will soon begin construction of a new engineering building. The 1985-86 state budget also contains money for planning a new Instruction and Research Building.

The campus has successfully used creative financing to construct a Physical Oceanography Building and begin construction on a Molecular Biology Building. Private donations have made possible the construction of facilities for the Center for Magnetic Recording Research and for a structures laboratory (which also received federal support).

However, the need for funds to buy equipment remains great. While state-funded projects provide equipment funds—though usually not all that are necessary—private donations or special financing rarely contain such funds. For example, the campus is still seeking funds to equip the molecular biology facility.

The campus has only a small amount of unrestricted research funds, primarily because in recent years the State of California has tended to direct research funding to areas of special interest to elected state officials. The campus has had to use opportunity funds, derived from overhead charged to contracts and grants, to solve some of its space problems and to cover the costs of recruiting new faculty. Consequently, there is little left for seed money and for the direct support of new research programs.
To deal with this problem, the University of California is developing a long-range plan for organized research, which includes the goal of securing increased unrestricted state funding for research. The University will submit the plan to support its budget request for 1986-87. UCSD is actively contributing to the development of the plan.

C. ORGANIZED RESEARCH UNITS

1. Introduction

The University of California has developed Organized Research Units (ORUs) as institutional support for the research of faculty, research staff, and students. The University's policy on ORUs defines several different types--institutes, centers, and laboratories. An institute is a major research unit that coordinates and promotes faculty/student research in an area so broad that it extends across department, school, college, and sometimes even campus boundaries. A center is a smaller research unit that furthers research in a designated field. A laboratory is a non-departmental organization that establishes and maintains facilities for research in several departments. The University also operates a few MRUs (Major Research Units), such as SIO and Lick Observatory. In all cases, ORUs are supposed to be interdisciplinary in nature; research within individual disciplines is the province of the departments.

The University has also developed several Multi-campus Research Units (also called MRUs). These institutions coordinate the research effort of faculty and research staff on several campuses. Each of the participating campuses has an installation related to the MRU; one campus houses its central administration. UCSD is the headquarters for the Institute for Global Conflict and Cooperation (IGCC), the California Space Institute, and the Institute of Marine Resources. It has installations of the Institute for Geophysics and Planetary Physics (IGPP) and the Intercampus Institute for Research at Particle Accelerators. Currently, there are discussions concerning the establishment of MRUs for non-linear science, Mexican studies, and studies of Charles Dickens.

SIO was the first research unit at UCSD and is still the largest. Its total budget was $56 million in 1983-84. The General Campus currently has twelve ORUs and two MRUs. Total expenditures for these institutes was $21.5 million in 1983-84. The School of Medicine has two ORUs—one focusing on cancer research, the other on research on aging. Total expenditures for these ORUs was $4.4 million in 1983-84 (Figure 39).
FIGURE 39

UCSD ORGANIZED RESEARCH UNITS (ORUs), 1985-86

DIRECTORS
CENTERS INSTITUTES
LABORATORIES AND
PROJECTS
California Space Institute
James R. Arnold
Cancer Center
John Mendelsohn
Center for Astrophysics and Space
Sciences (CASS)
E. Margaret Burbidge
Center for Coastal Studies
Douglas L. Inman
Center for Human Information Processing
George Mandler
Center for Iberian and Latin American Studies
Paul W. Drake
Center for Molecular Genetics
Donald Heimski
Center for Music Experiment
and Related Research
F. Richard Moore
Center for Research in Language
Edward S. Klima
Center for U.S.-Mexican Studies
Wayne Cornelius
Institute for Cognitive Science
Donald A. Norman
Institute for Geophysics and Planetary Physics
J. Freeman Gilbert, Associate Director
John A. Orcutt, Associate Director
Institute on Global Conflict and Cooperation
Herbert F. York
Institute of Marine Resources
Fred N. Spieles
Institute for Pure and Applied
Physical Sciences
Harry Suht
Institute for Research of Aging
J. Edwin Seegmiller
Inter-campus Institute for Research
at Particle Accelerators
George E. Masak
Laboratory for Mathematics and Statistics
Richard A. Olshen
Marine Life Research Group
Joseph L. Reid
Marine Physical Laboratory
Kenneth M. Watson
Project in Nonlinear Science
Henry Abarbanel
The Energy Center
Stanford S. Penner
Most faculty associated with an ORU have their primary affiliation with an academic department. There is considerable interaction between departments and ORUs because of the dual affiliation of many faculty. The University also has a personnel series for researchers, who may have an appointment either in an ORU or a department, but rarely in both.

2. Organization

ORUs and MRUs have complex reporting relationships. Most are under the authority of the Dean of Graduate Studies and Research. SIO, the Institute of Marine Resources (IMR), the Institute of Geophysics and Planetary Sciences (IGPP), and the California Space Institute report to the Vice Chancellor - Marine Sciences for the administration of space, personnel, and contracts and grants. IMR and Cal Space report for policy matters to the President of the University and IGPP to a statewide director housed at UCLA.

On the General Campus, the Dean of Graduate Studies assists faculty during the establishment of ORUs and MRUs and then monitors their operation. He makes recommendations to the Vice Chancellor - Academic Affairs and the Chancellor about the appointment of directors, and he organizes reviews.

The main purpose of ORUs is to facilitate research. ORUs help faculty and research staff submit and manage contracts and grants. They maintain laboratories and other research facilities. While they have no direct role in the educational program of the University--which is controlled by the departments and the Academic Senate--they complement the educational mission by supporting the work of graduate students and postdoctoral researchers.

Each ORU has a director, who must be a member of the faculty. In addition, the Chancellor appoints an advisory board for each ORU to keep himself informed about its activities and about its relationship with other campus units. In practice, few of the advisory boards are very active.

The internal organization of an ORU may be simple or elaborate depending on the needs of the field and the desire of the ORU's members. In fields such as astrophysics in which research grants are large and involve subcontracting, an ORU may have a large management and engineering staff. In other fields, the director may have a single administrative assistant. Likewise, the relationships among the members of an ORU may be subject to a written constitution or completely informal.
3. Establishment and Review

ORUs and MRUs are approved by a process similar to that used for graduate programs. (See Chapter VI.) The faculty who want to establish an ORU develop a proposal in consultation with OGSR. It is then submitted to the Campus Planning Office for analysis of its resource implications. After this stage, the proposal goes to the Graduate Council and Committee on Planning and Budget of the Senate. These committees make a recommendation to the Division. If the Division approves the proposal and the Chancellor endorses it, it is submitted to the Office of the President, who consults with the Coordinating Council on Graduate Affairs (CCGA) and the Academic Planning and Program Review Board (APPRB). The proposal is also submitted to the California Postsecondary Education Commission (CPEC), which advises the Legislature about its resource implications and its relationship to other, similar institutes in the State. The President has final authority to approve the establishment of the ORU.

In the case of MRUs, the proposal is handled principally by the Office of the President, in consultation with CCGA, APRRB, and CPEC, but the individual units on the campuses must be approved by local authorities just as ORUs are.

In the past, the University approved ORUs for an indefinite period, but complaints that some had become moribund induced the University to change its policy in 1982. They are now approved for fifteen years and must submit a formal proposal to the President of the University to renew their approval.

The campus reviews the performance of each ORU and its director every five years. The reviews are similar to those carried out for graduate programs. A committee of visiting scholars studies the operation of the ORU and makes recommendations to the Dean of Graduate Studies and Research and to other campus administrators. The Chancellor's advisory board is also usually involved in the review.

D. RESEARCH INVOLVING HUMAN OR ANIMAL SUBJECTS

1. Human Subjects

Under the guidance of federal regulations, UCSD has established a policy for the use of human subjects in research. (See Policy and Procedure Manual, 150.) The policy requires that human subjects be fully informed about the project, their part in it, and any potential danger to themselves. Subjects are permitted to withdraw from a project at any time. The policy also requires that an Institutional Review Board (IRB) review all research projects involving human subjects before the projects can begin.
To implement this policy, the campus established two IRBs in accord with the relevant federal regulations (45 CFR, Part 46 and 21 CFR, Parts 50, 56, and 812)--the Medical School IRB and the Social and Behavioral Sciences IRB. Both IRBs are under the supervision of the Vice Chancellor - Administration.

The primary purpose of IRB review is to protect the rights and welfare of research subjects by ensuring that studies are conducted in the safest possible way, that risks to subjects are reasonable in relation to anticipated benefits, and that the researcher obtains the informed consent of the subjects in an appropriate manner.

The Medical School IRB meets monthly and reviews approximately 1,200 projects per year. The Social and Behavioral Sciences IRB has a much smaller workload, reviewing fewer than 100 projects per year. Investigators generally perceive the decisions of both IRBs to be reasonable, informed, and helpful. As a result, compliance with institutional policies and IRB judgments is the rule, and complaints from subjects are rare. Most complaints have concerned minor misunderstandings that were easily resolved or questions about payment for participation.

To identify and solve problems in a timely manner, the Vice Chancellor - Administration conducts annual administrative reviews of the IRBs. These reviews are conducted specifically to ensure that the policies and procedures already in place to protect research subjects are effective and that the IRBs are functioning properly.

Both IRBs are functioning well. However, one problem noted this past year was that new federal rules have had a negative effect on the Social and Behavioral Sciences IRB. The new rules permit "expedited review procedures" (i.e. review by the IRB chair rather than the full committee at a convened meeting) for almost all social and behavioral science research conducted on this campus.

In practice, the "expedited review procedures" eliminate the need for most meetings, a generally welcomed result, but they also undermine the functioning of the Board. The infrequent meetings make it difficult to orient new members and to maintain group consensus. To solve this problem, members have decided to forego the use of "expedited review procedures" for the 1984-85 school year, whenever possible. The next administrative review will evaluate the effects of this decision.

2. Animal Subjects

The University's research programs located in the School of Medicine; the Departments of Biology, Chemistry, and Psychology on the General Campus; and SIO make extensive use of animals. In 1972, UCSD established a committee to supervise the animal facilities and
the policies relating to the use of animals in research. Although this committee had general authority, the School of Medicine maintained its own committee, which was much more active than its counterpart.

In 1985, the campus combined the two committees into a single entity in order to ensure that it had a well-informed and vigorous panel to monitor the use of animals in research. The new committee reports to the Dean of Graduate Studies and Research and has the following duties:

1. It ensures that the treatment of animals in research meets the highest ethical standards;

2. It ensures that the University follows all federal, state, and University guidelines in its use of animals; and

3. It reviews all research protocols, inspects all animal facilities, and reviews all campus policies and procedures relating to the use of animals at UCSD.

E. RESEARCH PERSONNEL

1. The Research Series
   a. Status and Appointment

   The University has a separate personnel series for researchers. Persons in this series are not members of the Academic Senate. Although the University has provided funding for research positions, the overwhelming majority of these positions are funded by extramural grants. For this reason, there is no tenure in the Research Series.

   The Research Series parallels the faculty series. There are Assistant, Associate, and (Full) Researchers. UCSD regards appointees in the Research Series as research faculty—i.e. the campus expects research appointees, especially at the Associate Research and Research levels, to meet the same academic standards for appointment and promotion as ladder-rank faculty (except that there is no teaching requirement in the Research Series). All appointments to this series are reviewed by the Committee on Academic Personnel (CAP). As in the case of faculty, CAP uses ad hoc committees when it considers whether a researcher should be promoted to Associate Researcher or Researcher. For researchers, as for faculty, the committees are composed of members from the professorial ranks, but occasionally they include persons from the research series. Assistant Researchers are terminated unless they achieve the level of Associate Researcher within eight years.
FIGURE 40
RESEARCHERS AT UCSD

<table>
<thead>
<tr>
<th></th>
<th>Research Series</th>
<th>Postgraduate Researchers</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Campus</td>
<td>103</td>
<td>78</td>
</tr>
<tr>
<td>SIO</td>
<td>94</td>
<td>27</td>
</tr>
<tr>
<td>SOM</td>
<td>51</td>
<td>32</td>
</tr>
</tbody>
</table>

b. Problems

(5A3)
There are two outstanding problems in the treatment of researchers. First, appointees in the Research Series often feel left out of the University's regular business, even though they make important contributions to the research program. During the past five years, the Academic Senate has invited representatives of the series to sit on important committees, so that the voice of the researchers will be heard. In addition, the Senate has adjusted the regulations concerning the supervision of graduate students, so that distinguished researchers may participate in that important and rewarding work.

Second, it is not always certain who is responsible for initiating personnel actions for researchers. In general, the task is divided between departments and ORUs, but departments are often preoccupied with the cases of faculty, and ORUs are not organized to handle personnel cases.

The Center for Astrophysics and Space Sciences (CASS), which has a large concentration of appointees in the Research Series, has undertaken to solve this problem by establishing a standing committee to supervise the process or review. The committee has been in operation for several years and is regarded as very successful. It has been able to monitor the schedule of reviews of the researchers in CASS and to make certain that reviews are carried out in a timely manner.

2. Postdoctoral Appointees
a. Status and Appointment

(4G3)
There are two types of postdoctoral appointments at UCSD: (1) Postdoctoral Scholars, who receive a stipend for advanced study, and (2) Postgraduate Researchers, who receive a salary for the research work they perform. (See Figure 40 above.)
Postdoctoral Scholars, Trainees, and Fellows (hereafter called Postdoctoral Scholars), come to UCSD to pursue a program of research and advanced training under faculty guidance, with the approval of the faculty's department or research unit. Appointees in this category receive a fellowship or traineeship for a period not exceeding three years after the Ph.D.

A Postgraduate Research appointee (PGR) is an employee of the University and typically works on an extramurally-funded research grant. The faculty member who is the Principal Investigator of the grant prepares the personnel file recommending the appointment of the PGR. The appropriate department chair reviews the file, makes a recommendation, if necessary, and sends the file to the Dean of Graduate Studies and Research for the final decision. The performance of PGRs is usually reviewed each year, and they may be given annual merit raises.

At UCSD, approximately 75% of the Postdoctoral Scholars are in the biological and medical sciences, while PGR appointments are about evenly split between the biological and medical sciences on the one hand and the physical sciences on the other.

b. Problems

Even though appointees in the two postdoctoral series are generally engaged in comparable study and research activities, appointment titles, pay levels, and perquisites differ considerably. Stipends and salaries also vary widely within each category. The salary scale for PGRs is too low in the physical sciences and engineering, where the University is in competition with industry, but it appears to be adequate for the biological sciences.

Until 1984, the University did not offer Postdoctoral Scholars an adequate group health insurance plan. In 1984, the campus negotiated a Health Net plan for them, but while PGRs have as wide a choice of health-care plans as regular employees, Postdoctoral Scholars still have only one option. Moreover, where the University covers essentially all of the health care costs for PGRs, about half of the scholars must cover the monthly premium out of their own funds.

Finally, it is the impression of OGSR that the duration of postdoctoral appointments has been lengthening over the past several years. Many appointees are currently in their fifth, sixth, and seventh years beyond the Ph.D. If appointments are lengthening, the primary cause is probably the tight labor market. A secondary cause may be the increased time it takes to master research skills in highly specialized scientific fields.
The Dean of Graduate Studies and Research plans to appoint a faculty/postdoctoral committee in 1985-86 to review these issues and make recommendations for changes in campus policy.

3. Graduate Student Research Assistants

Research Assistants (RAs) are registered graduate students in full-time residence who are chosen because of their scholarly abilities to serve as assistants to faculty members. Appointments are limited to 50% time during the academic year and 100% time during the summer.

The University’s objective is that the work RAs perform on research grants should be related to their dissertations. This objective is achieved over 90% of the time.

As noted in Chapter VI, the University is currently implementing a new policy that will provide tuition and fees for RAs as a perquisite of employment. This should make UCSD’s RA compensation package a more effective device for recruiting high quality graduate students than it has been.

F. AFFIRMATIVE ACTION

The affirmative action policies for the recruitment, appointment, and promotion of researchers are the same as those for ladder-rank faculty, with one exception: Postgraduate Research appointments for up to two years are excepted from affirmative action requirements.

Campus policies require extensive searches for qualified candidates to fill research positions. In addition to requiring full and open searches, the affirmative action guidelines require that primary consideration be given to the meeting of affirmative action objectives when there is a choice between candidates who are equally well qualified for a particular position. The quality of performance is the only criterion employed in decisions about merit increases and promotions.

Blacks and American Indians are currently under-represented in the Research Series, while women, Hispanics, and Asians are represented at levels that exceed their availability. The campus thinks that its affirmative action program will end the under-representation of Blacks in the near future.

G. UNIONIZATION OF RESEARCH PERSONNEL

Under state law, public employees may choose exclusive bargaining agents, and research personnel at the University of California are
among those who may do so during the next year or so. The Public Employees Relations Board (PERB) has established two university-wide bargaining units for researchers.

Unit 19 is composed of all non-Senate academic research personnel, including appointments in the Research Series, Postgraduate Researchers, and Specialists. The main issue for the members of this unit is the uncertainty created by their dependence upon extramural funding. The University lacks the resources to cover salaries between grants.

The University’s point of view, which is shared by some members of the unit, is that collective bargaining is not likely to solve this fundamental problem. Moreover, collective bargaining could seriously compromise the flexibility and independence of Principal Investigators in the management of their research projects.

Unit 27 is composed of all non-academic staff research personnel, primarily the Staff Research Associates. The concerns of employees in this unit mirror those in Unit 19, because members of Unit 27 are also dependent, almost exclusively, on extramural funding. The challenge to the University in the long run will be to find realistic ways to provide reasonable job security for the members of both units.

H. RELATIONS WITH INDUSTRY

Although UCSD is a relatively young campus, it has achieved a significant level of interaction with industry. For instance, SIO has cooperated with industry for many years through its Industrial Associates Program. Likewise, the Department of Chemistry has had many cooperative projects with industry, and recently, the Center for Astrophysics and Space Sciences has begun to cooperate with aerospace firms.

The most recent cooperative venture between UCSD and industry is the supercomputer project. Although many universities, institutes, and companies are involved in the project—which is funded by NSF--UCSD and GA Technologies are the principal parties. The computer facility will be located on the UCSD campus and managed by GA.

Yet, it is in engineering that the most rapid development of a really significant relationship between the campus and industry has taken place. The Division of Engineering has developed a variety of joint university/industry research projects. The most notable of these is the Center for Magnetic Recording Research, which is funded by a group of major companies. The Division has also established an Industrial Liaison Program to facilitate cooperation between faculty and industrial firms in the San Diego region. The companies that support
the program enjoy library privileges as well as contact with faculty
and research personnel whose work is of interest to them.

UCSD Extension has also become an important link between the
campus and industry. It has expanded its offerings of technical short
courses aimed at employees in local industry, established certificate
programs in management for scientists and engineers, and founded an
Institute of Entrepreneurship.

The University is aware that basic differences in the goals of the
university and industry can lead to problems in cooperative research
programs. Consequently, in 1982 the Office of the President issued
*Interim Guidelines on University Relations* to protect the rights of the
University. The *Interim Guidelines* prescribe the retention of publica-
tion rights, patents, and copyrights and describe the conditions
under which royalty-free, non-exclusive licenses may be granted. They
also limit University participation in tests and investigations for in-
dustry to those that lead to the extension of knowledge or to
increased teaching effectiveness. Finally, they protect graduate stu-
dents’ rights in research activities that may advance a firm’s interests.

There is no consensus among UCSD faculty members about the
proper relationship between the campus and industry. On the one
hand, many faculty are concerned that the availability of substantial
support from industry may divert the campus from its central missions
of teaching and basic research. On the other hand, others think that
the campus is too stringent in its policies about interaction with in-
dustry and that it is not doing enough to attract industrial sponsorship
of research activities. This is an old debate that is likely to continue
indefinitely. It appears that in the near future university/industry
interaction will increase; we hope on terms that preserve the basic
ideals and purposes of the universities.

I. TRANSFER OF TECHNOLOGY AND EXPORT CONTROL

(4G3)

Over the past three years, the Departments of Defense, State,
and Commerce have grown increasingly concerned about the flow of
militarily useful scientific information and equipment to Communist
countries. Hence, they have made attempts to restrict the flow of
unclassified scientific information and to restrict the activities of
foreign students and scholars at American universities. In response,
the University of California has affirmed its commitment to the prin-
ciple of free inquiry and free exchange of information regarding un-
classified matters. UCSD supports this position. It rejects any
attempts by outside agencies to impose restrictions on the
participation of foreign students and scholars in unclassified research
at the campus.

In keeping with this policy, UCSD has rejected attempts by De-
partment of Defense agencies to impose restrictions on the publication
of scientific research it is sponsoring. To date, whenever an agency has stipulated such restrictions in a research grant or contract, UCSD has been successful in having the proposed restrictions removed.

Finally, federal agencies have made attempts to obtain detailed information about the research activities of individual scholars and students from "unfriendly" countries. The campus has steadfastly refused to provide such information. OGSR is principally responsible for handling these matters and for guarding the campus's interests in them.

J. PLANS FOR FUTURE DEVELOPMENT

The campus is developing research programs that will make it a center for excellence in comparative studies of the Pacific Basin. In addition to existing programs in Chinese, Latin American, and Melanesian studies, UCSD is in the process of establishing a program in Japanese studies. It has obtained funds for two endowed chairs in that field. As noted in Chapter VI, the campus has proposed a Graduate School of International Relations and Pacific Studies, which would become a center for research on the economy, politics, and cultures of the Pacific Basin.

Plans are also under way for an Institute in Nonlinear Science, which will promote interdisciplinary research in nonlinear dynamic systems, and for a Humanities Institute, which would bring together social scientists, humanists, and artists with the intention of building an interdisciplinary approach to the humanities. Finally, a group of faculty is considering the establishment of a new ORU in the Study of Emotion, which would seek to further interdisciplinary research into a field that is of interest not only to researchers at UCSD but also to scholars throughout the country.
CHAPTER VIII
DEPARTMENTS AND PROGRAMS

Chapter VIII describes and evaluates the academic departments of the General Campus. In many ways, the departments are the center of the University; their composition, authority, and relationship with the colleges, interdisciplinary programs, and the central administration shape much of what happens on campus. The chapter contains, therefore, descriptions and evaluations of all campus departments and interdisciplinary programs.

A. FORMAL STRUCTURE AND FUNCTION OF DEPARTMENTS

The General Campus contains 20 academic departments—two in the Division of Engineering and 18 in what might be called the "Division of Arts and Sciences." Usually, people on the campus use the term General Campus to describe the 18 liberal arts and two engineering departments. SIO constitutes a single department, responsible for all the teaching activities in that unit (see Chapter VI).

Departments are administrative units. Although the Senate recognizes them and even has an important rule regulating voting rights in them, they are not Senate agencies. Each department has a chairperson who is appointed by the Chancellor after consultation with the tenured faculty of the department. In practice, the departments make recommendations to the Vice Chancellor - Academic Affairs, who makes a recommendation to the Chancellor. Departmental recommendations almost always determine the appointment of a chair.

Chairs serve from three to five years. The Policy and Procedure Manual (PPM) specifies that the performance of a chair should be reviewed after five years of service to determine whether he or she should remain in the position. Again, there is a discrepancy between theory and practice. Chairs on the General Campus, including the engineering departments, rarely serve for more than three years and occasionally serve for less time than that. Only in the School of Medicine do the chairs remain in office for long periods.

The chairs have a variety of specific leadership and administrative responsibilities. These responsibilities are enumerated and explained in detail in the PPM, Section 230-1. A brief summary follows:

The leadership duties of the chair include:

1. Guiding the teaching and research programs of the department;

2. Keeping the curricula of the department under review;
3. Maintaining an atmosphere conducive to creativity and innovation;

4. Recruiting, selecting, and evaluating the academic and staff personnel of the department; and

5. Recommending appointments, promotions, and terminations.

The administrative duties of the department chair include:

1. Making teaching assignments;

2. Making committee assignments;

3. Preparing the schedule of courses;

4. Establishing and supervising procedures for complying with University regulations;

5. Assigning duty for the counseling of students and for the training and supervision of Teaching Assistants;

6. Preparing the budget and administering the financial affairs of the department;

7. Maintaining records and preparing reports in keeping with University requirements; and

8. Supervising the department's staff.

Each department has a Management Services Officer (MSO) who assists the chair in the administration of the department. Technically, MSOs serve at the pleasure of the chair, although in practice their positions are very stable. Because the chairs in most departments remain in office only three years, continuity of administration is provided largely by the MSO.

MSOs are responsible for the supervision of the non-academic affairs of the department, including managing the office staff, maintaining the budget, projecting enrollments, assigning office space, and ensuring the implementation of University personnel and affirmative action policies. Depending upon the chair, the MSO may also play a role in the academic affairs of the department (such as serving on committees making teaching assignments), but they play no role in faculty appointment, tenure, or promotion decisions. Because the departments differ greatly from each other, the actual rank (I, II, III, or IV) and range of responsibilities of the MSO depend upon the size and the structure of the department.

Academic Senate By-Law 188 governs the voting rights and privileges of department members. The right to vote on educational matters, such as the curriculum and the admission of graduate
students, is guaranteed to all Senate members in the department. On personnel decisions, Senate members at or above the rank of the person being considered have the right to vote. The tenured members of a department may extend the right to vote on all matters to non-tenured members. However, the right to vote on personnel matters may not be granted to a member of the department who is not a member of the Academic Senate.

With few exceptions, departments have decided to extend voting privileges to their non-tenured members. The voting procedures of all departments have been reviewed by the Privilege and Tenure Committee of the Academic Senate and are on file in the office of the Vice Chancellor - Academic Affairs.

Within the limits set by By-Law 188, departments have great latitude in how they operate—so much freedom that generalizations about their structure must be very broad. For example, most departments have adopted a committee structure. Some chairs administer their departments with the help of an executive committee composed of the chairs of the department’s committees. Most large departments divide their faculty into subgroups on the basis of their specialties for certain purposes, such as making recommendations about graduate student admissions.

A complex network of relationships exists among the departments, colleges, and central campus administration. Departmental chairs are directly responsible to the Vice Chancellor - Academic Affairs and indirectly responsible to the College Provosts, the Divisional Deans and the Dean of Graduate Studies and Research—all of whom are also directly responsible to the Vice Chancellor - Academic Affairs. (See Figure 42, Chapter XI.)

Each faculty member of a department in the Professorial Series or the In-Residence Series is a member of the Academic Senate and belongs to one of the six faculties into which it is divided—SIO, School of Medicine, and the four undergraduate colleges. The faculty of each college, under the leadership of the college provost, determines the general education requirements for that college, subject to the approval of the Senate. The provosts play a role in the promotion and merit reviews of faculty by evaluating the teaching performance and college service of the faculty. The provosts also comment on new appointments in regard to the needs of their colleges’ curricula.

The San Diego Division of the Academic Senate authorizes, supervises, and reviews the courses and curricula offered by the departments. In addition, the Senate advises the campus administration concerning faculty appointments, promotions, and severance; the direction of graduate study and research; and the awarding of degrees and credentials to students.