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San Diego State University
Graduate Division Bulletin 1979-1980

BULLETIN

ANNOUNCEMENT
OF THE
GRADUATE DIVISION

1979-1980

SAN DIEGO STATE UNIVERSITY
5300 CAMPANILE DRIVE
SAN DIEGO, CALIFORNIA 92182
(714) 286-5000

On August 20, 1979 the prefix for all SDSU telephone numbers will be changed from 286 to 265.

Preparation of the Graduate Bulletin, completed in January of each year, is under the direction of the Curriculum Assistant to the Vice President for Academic Affairs. Bulletin cover by University Design Center. The Bulletin may be purchased, starting in May of each year, at the Aztec Shops on campus for \$2.10 plus 6% sales tax. To order by mail, send \$3.60 directly to the Aztec Shops, San Diego State University, 5300 Campanile Drive, San Diego CA 92182.

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1979-1980

Academic Calendar

1979 Summer Sessions

- May 29-June 15
June 9
Term I summer session (3 weeks).
Graduate Record Examination Aptitude Test for master's degree applicants, by appointment five weeks in advance, Test Office.
- June 18-July 27
June 23
Term II summer session (6 weeks).
Graduate School Foreign Language Test, by appointment five weeks in advance, Test Office.
Last day to apply for summer graduation with an advanced degree, Graduate Division Office.
- July 2
Holiday—Independence Day.
- July 4
July 21
Graduate Record Examination Aptitude Test for master's degree applicants, by appointment five weeks in advance, Test Office.
- July 30
Final day for submitting theses to the Thesis Review Service, University Library.
- July 30-August 17
August 20
Term III summer session (3 weeks).
Final day for depositing completed approved theses at Aztec Shops for processing for summer graduation. Also last day for removing incompletes and for reporting results on comprehensive examinations to the Graduate Division Office by department or college.

Fall Semester

- August 1
Applications for admission or readmission to San Diego State University for the spring semester 1980 accepted. Applications are accepted until degree program enrollment quotas are met.
- August 27-31
August 27
September 3
September 4
September 7
September 7
Schedule adjustment days/walk-through registration.
Opening date of the academic year.
Holiday—Labor Day.
First day of classes.
Last day to file petition for concurrent master's degree credit.
Last day to apply for mid-year graduation with an advanced degree, Graduate Division Office.
- September 18
October 1
October 20
Last day to apply for refunds.
Last day to withdraw from class or change program.
- October 27
Graduate Record Examination Aptitude Test for master's degree applicants, by appointment five weeks in advance, Test Office.
- November 1
Graduate School Foreign Language Test, by appointment five weeks in advance, Test Office.
Application for admission or readmission to San Diego State University for the fall semester 1980 accepted. Applications are accepted until degree program enrollment quotas are met.
- November 16
Last day for submission of incomplete and SP grade removals for mid-year graduation with an advanced degree.
- November 22-25
November 30
Thanksgiving Recess.
Final day for submitting theses to the Thesis Review Service, University Library.
- December 8
Graduate Record Examination Aptitude Test for master's degree applicants, by appointment five weeks in advance, Test Office.
- December 14
December 14
Last day of classes before final examinations.
Last day to apply for leave of absence for spring semester.

December 15-21
December 21

Final examinations.
Final day for depositing completed approved theses at Aztec Shops for processing for mid-year graduation. Also last day for removing incompletes and for reporting results on comprehensive examinations to the Graduate Division Office by department or college.

December 22
December 24-25
December 26
December 26

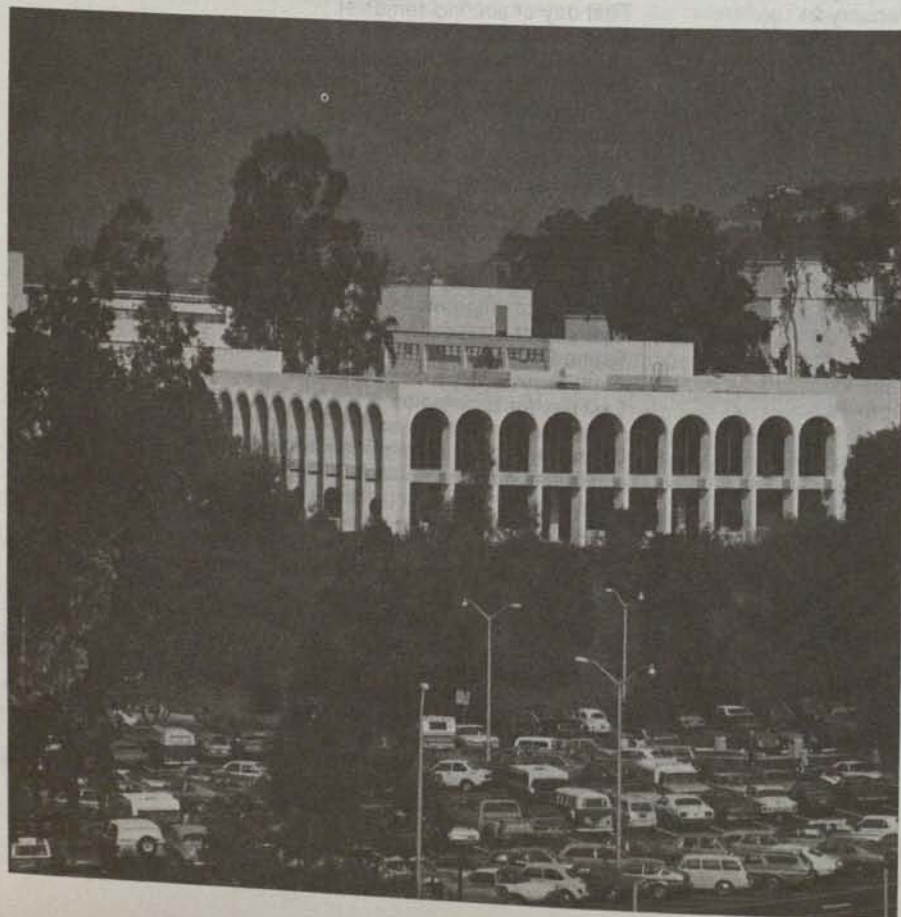
Winter recess begins.
Campus Closed and Holiday.
Grades due.
Last day of fall semester.

Spring Semester

- November 1
Application for admission or readmission to San Diego State University for the fall semester 1980 accepted until degree program enrollment quotas are met.
- January 12
Graduate Record Examination Aptitude Test for master's degree applicants, by appointment five weeks in advance, Test Office.
- January 21-25
January 21
January 28
February 1
February 1
Schedule adjustment days/walk-through registration.
First day of second semester.
First day of classes.
Last day to file petition for concurrent master's degree credit.
Last day to apply for May graduation with an advanced degree, Graduate Division Office.
- February 2
February 12
February 18
February 23
Graduate School Foreign Language Test, by appointment five weeks in advance, Test Office.
Last day to apply for refunds.
Holiday—Washington's Birthday.
Graduate Record Examination Aptitude Test for master's degree applicants, by appointment five weeks in advance, Test Office.
- February 25
March 28
March 31-April 6
April 7
April 11
Last day to withdraw from class or change program.
Last day of classes before spring recess.
Spring Recess.
Classes resume.
Last day for submission of incomplete and SP removals for May graduation with an advanced degree.
- April 12
April 25
April 26
Graduate School Foreign Language Test, by appointment five weeks in advance, Test Office.
Final day for submitting theses to the Thesis Review Service, Love Library, for processing for May graduation.
Graduate Record Examination Aptitude Test for master's degree applicants, by appointment five weeks in advance, Test Office.
- May 15
May 16
May 16
Last day of classes before final examinations.
Study and Consultation Day.
Final day for depositing completed approved theses at Aztec Shops for processing for May graduation.
- May 17-23
May 23
Final examinations.
Last day for reporting results on comprehensive examinations to the Graduate Division Office by department or college.
- May 25
May 26
May 28
May 28
June 27
Commencement.
Holiday—Memorial Day.
Grades due.
Last day of spring semester.
Last day to apply for leave of absence for fall semester.

1980 Summer Session

- June 2-June 20 Term I summer session (3 weeks).
- June 14 Graduate Record Examination Aptitude Test for master's degree applicants, by appointment five weeks in advance, Test Office.
- June 23-August 1 Term II summer session (6 weeks).
- June 23 Last day to apply for summer graduation with an advanced degree, Graduate Division Office.
- June 27 Last day to apply for leave of absence for fall semester.
- June 27 Last day to file petition for concurrent master's degree credit.
- June 28 Graduate School Foreign Language Test, by appointment five weeks in advance, Test Office.
- July 4 Holiday—Independence Day.
- July 28 Final day for submitting theses to the Thesis Review Service, Love Library.
- August 1 Last day for submission of incomplete and SP grade removals for summer graduation with an advanced degree.
- August 4-22 Term III summer session (3 weeks).
- August 18 Final day for depositing completed approved theses at Aztec Shops for processing for summer graduation.
- August 22 Last day for reporting results on comprehensive examinations to the Graduate Division Office by department or college.



Annual Calendar

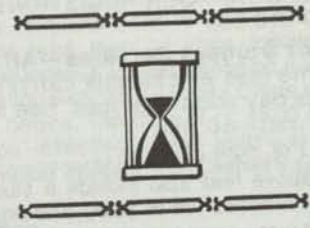
CALENDAR 1979

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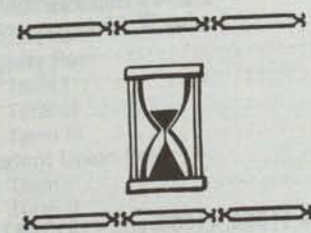
CALENDAR 1980

JANUARY							FEBRUARY							MARCH						
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APRIL							MAY							JUNE						
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20	21	22	23	24	25	26	18	19	20	21	22	23	24	22	23	24	25	26	27	28
27	28	29	30	25	26	27	28	29	30	31	29	30								

JULY							AUGUST							SEPTEMBER						
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20	21	22	23	24	25	26	17	18	19	20	21	22	23	21	22	23	24	25	26	27
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OCTOBER							NOVEMBER							DECEMBER						
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12	13	14	15	16	17	18	9	10	11	12	13	14	15	14	15	16	17	18	19	20
19	20	21	22	23	24	25	16	17	18	19	20	21	22	21	22	23	24	25	26	27
26	27	28	29	30	31	23	24	25	26	27	28	29	28	29	30	31				



Schedule of Fees

Fees are subject to change by the Trustees
of The California State University and Colleges

FEES MUST BE PAID AT TIME OF REGISTRATION. CHECKS ACCEPTED FOR EXACT AMOUNT OF FEES. (IF YOUR CHECK IS RETURNED BY THE BANK FOR ANY REASON, YOUR REGISTRATION WILL BE CANCELED AND YOU WILL BE BILLED \$10.00.)

Fees for Student Services—All Students: on basis of units carried. (Auditors pay same fees as students carrying courses for credit.) Nonresident and foreign students pay additional fees. See information below.

0 units—6.0 units	\$86.00
6.1 or more units	101.00

The above fees also include a student activity fee of \$10.00, a student union fee of \$11.00, a facilities fee of \$3.00, and an instructionally related activities fee of \$5.00.

Tuition for Nonresident Student (Foreign and Domestic)

(In addition to student services and activity fees.)

Nonresident student enrolled for 15 units or more \$900.00

Nonresident student enrolled for less than 15 units or fraction thereof—per unit \$60.00

(For fee-paying purposes, zero unit courses are counted as one unit.)

Health insurance (mandatory for foreign students) per year, approximately \$125.00

Parking Fees

Nonreserved parking space, per semester \$18.00

Car pool—see cashier at registration.

Less than four-wheeled, self-propelled vehicle \$4.50

Miscellaneous Fees (Fees payable when service is rendered.)

Application for admission or readmission (nonrefundable) \$20.00

Late registration (Refer to class schedule for dates when this fee will be assessed) 5.00

Failure to meet administratively required appointment or time limit 2.00

Photo-identification card (One-time cost to new students at time of registration) 2.00

Lost identification cards/ stickers

Card only 10.00

Registration sticker only 2.00

Card and sticker 4.00

Transcript of record 1.00

R.O.T.C. deposit (unexpended portion is refundable) 25.00

Check returned for any cause 5.00

Loss of or damage to library materials Replacement cost plus \$5.85 service charge

Graduation fee 6.00

Credential fee 20.00

Master Charge/Visa Cards

See Extension and Summer Session Bulletins.

REGULAR SESSION FEE REFUNDS

Fees may be refunded only as authorized by Sections 41802, 41803, and 41913 of Title 5, California Administrative Code and other pertinent provisions of law. Whether a fee may be refunded and the circumstances under which a fee or any part of a fee may be refunded, may vary depending on the particular fee involved. Requirements governing refund may include such matters as the reason for seeking a refund (for example, death, disability, compulsory military service), the number of days of instruction which have elapsed before application for refund is made (for example, requests for refund of student services fees, student body organization fees, and student body center fees must be made no later than 14 days

following the commencement of instruction and requests for refund of extension course tuition fees must be made prior to the fourth meeting of the class), and the degree to which the campus has provided the services for which the fee has been charged. Details concerning the fees which may be refunded, the circumstances under which fees may be refunded, and the appropriate procedure to be followed in seeking a refund may be obtained from the Cashier's Office.

Refund of Fees

To be eligible for a refund of a student services fees, a student withdrawing from the university must obtain a withdrawal card from the Registrar's Office and file a refund application with the Cashier's Office, CL-108, not later than 14 days following the commencement of instruction. All but \$5.00 will be refunded. A student dropping from more than six units to six units or less must file an application with the Cashier's Office not later than 14 days following the day the academic term begins. The amount of \$5.00 shall be retained. An automatic billing will be made to you reflecting added units—see Class Schedule for deadline dates. For additional information contact the Cashier's Office or telephone 286-5253.

Refund of Nonresident and Foreign Student Tuition

Tuition paid for a course scheduled to continue for an entire semester may be refunded in accordance with the following schedule if application is received by the Cashier's Office within the following time limits:

Time Limit	Amount of Refund
(1) Before or during the first week of the semester	100 percent of fee
(2) During the second week of the semester	90 percent of fee
(3) During the third week of the semester	70 percent of fee
(4) During the fourth week of the semester	50 percent of fee
(5) During the fifth week of the semester	30 percent of fee
(6) During the sixth week of the semester	20 percent of fee

Refund of Parking fee

This schedule of refunds refers to calendar days, commencing on the date of the term when instruction begins.

Period	Amount of Refund
Nonreserved space per semester:	75 percent of fee
1—30 days	50 percent of fee
31—60 days	25 percent of fee
61—90 days	None
91—end of term	None

For a refund, the parking sticker must be removed from the vehicle by a University Police Officer. The refund application is obtained from the Cashier's Office, CLS-108.

The late registration fee is not refundable. The Cashier's Office should be consulted for further details.

SUMMER SESSION FEES

Tuition, each session	(per unit) \$39.00
Activity Fee:	
Term I	1.00
Term II	2.00
Term III	1.00
Student Union Fee:	
Term I	2.00
Term II	3.50
Term III	2.00
Parking Fees (nonreserved spaces):	
Entire summer period	10.00
Six-week session	6.00
Three-week session	4.00

EXTENSION COURSE FEES

Lecture or discussion course	(per unit) \$39.00
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EXEMPTIONS

Students under Public Law 894, 87-815, California state veterans' dependents, or state rehabilitation programs will have fees paid for tuition and materials and service under provisions of these respective programs.

ALAN PATTEE SCHOLARSHIPS

Children of deceased public law enforcement or fire suppression employees, who were California residents and who were killed in the course of law enforcement or fire suppression duties, are not charged fees or tuition of any kind at any California State University or College, according to the Alan Pattee Scholarship Act, Education Code Section 68121. Students qualifying for these benefits are known as Alan Pattee scholars. For further information, contact the Admissions / Registrar's Office, which determines eligibility.

STUDENT SERVICES FEE

A Students Services Fee was established by the Board of Trustees of The California State University and Colleges in January 1975. Previously, this fee was known as the Materials and Service Fee.

The student services fee provides financing for the following student services programs not covered by state funding:

- (1) **Social and Cultural Development Activities:** provides for the coordination of various student activities, student organizations, student government and cultural programs.
- (2) **Counseling:** includes the cost of counselor's salaries and clerical support plus operating expenses and equipment.
- (3) **Testing:** covers the cost of test officers, psychometrists, clerical support, operating expenses and equipment.
- (4) **Placement:** provides career information to students and faculty for academic program planning and employment information to graduates and students.
- (5) **Financial Aids Administration:** includes the cost of the counseling and business services provided in connection with the financial aid programs.
- (6) **Health Services:** provides health services to students and covers the cost of salaries of medical officers and nurses plus related clerical and technical personnel as well as operating expenses and equipment.
- (7) **Housing:** includes the cost of personnel providing housing information and monitoring housing services provided to students.
- (8) **Student Services Administration:** covers 50 percent of the cost of the Dean of Students Office which has responsibility for the overall administration of student services.

PROCEDURE FOR THE ESTABLISHMENT OF A STUDENT ACTIVITY FEE

The law governing The California State University and Colleges provides that a student activity fee, not to exceed \$20 per academic year may be established by student referendum with the approval of two-thirds of those students voting. The Student Activity Fee was established at San Diego State University by student referendum in 1955. The same fee can be abolished by a similar two-thirds approval of students voting on a referendum called for by a petition signed by 20 percent of the regularly enrolled students. (Education Code, Section 89300) The level of the fee is set by the Chancellor upon recommendation by the campus. Student activity fees support a variety of cultural and recreational programs, child care centers, and special student support programs.

DEBTS OWED TO THE INSTITUTION

Should a student or former student fail to pay a debt owed to the institution, the institution may "withhold permission to register, to use facilities for which a fee is authorized to be charged, to receive services, materials, food or merchandise or any combination of the above from any person owing a debt" until the debt is paid (see Title 5, *California Administrative Code*, Sections 42380 and 42381). For example, the institution may withhold such a service as furnishing copies of a student's transcript. If a student believes that he or she does not owe all or part of an unpaid obligation, the student should contact the cashiers office. The cashiers office, or another office on campus to which the student may be referred by the cashiers office, will review the pertinent information, including information the student may wish to present, and will advise the student of its conclusions with respect to the debt.

Principal Officers of Administration

President	Richard L. ...
Vice President for Academic Affairs	...
Vice President for Business and Financial Affairs	...
Dean of Student Affairs	...
Director of Institutional Planning	...

Academic Administration

GRADUATE DIVISION	...
THE GRADUATE COUNCIL	...

PART ONE

San Diego State University

Department of Anthropology	...
Department of Art	...
Department of Biology	...
Department of Business Administration	...
Department of Chemistry	...
Department of Civil Engineering	...
Department of Education	...
Department of Economics	...
Department of English	...
Department of Geology	...
Department of History	...
Department of Industrial Engineering	...
Department of Journalism	...
Department of Law	...
Department of Mathematics	...
Department of Mechanical Engineering	...
Department of Music	...
Department of Nursing	...
Department of Political Science	...
Department of Psychology	...
Department of Sociology	...
Department of Spanish	...
Department of Statistics	...
Department of Theater	...
Department of Urban Planning	...
Department of Visual Arts	...

Colleges, Schools, Departments and Programs

College of Arts and Letters	...
College of Business Administration	...
College of Education	...
College of Engineering	...
College of Health Sciences	...
College of Humanities	...
College of Science	...
College of Social and Behavioral Sciences	...

Principal Officers of Administration

President	Thomas B. Day
Vice President for Academic Affairs	Albert W. Johnson
Vice President for Business and Financial Affairs	William L. Erickson
Dean of Student Affairs	Daniel B. Nowak
Director of University Affairs (Acting)	Paul J. Steen

Academic Administration

GRADUATE DIVISION

Dean of the Graduate Division and Research (Acting)	Irving A. Sparks
Associate Dean (Acting)	Arthur W. Schatz
Associate Dean	Lawrence B. Feinberg

THE GRADUATE COUNCIL

The Graduate Council of San Diego State University consists of the Dean of the Graduate Division and Research (chairman), the Vice President for Academic Affairs, the Associate and Assistant Deans of the Graduate Division, and members of the faculty from the various schools and colleges. For the academic year 1978-79, the membership of the Council was as follows:

Irving A. Sparks	Acting Dean of the Graduate Division and Research
Albert W. Johnson	(ex officio) Acting Vice President for Academic Affairs
Louis A. Kenney	(ex officio) Director of Library Services
Arthur W. Schatz	Acting Associate Dean of the Graduate Division
Lawrence B. Feinberg	Associate Dean of the Graduate Division
Thomas J. Atchison	Department of Management
William F. Barber	Department of Marketing
Ronald L. Boostrom	Public Administration
Glendon F. Drake	Department of Linguistics
Lawrence R. Ford	Department of Geography
Peggy J. Hawley	Department of Counselor Education
Howard B. Holt	Department of Educational Administration
Harriet G. Kopp	Department of Communicative Disorders
Ruth M. Kukkonen	School of Social Work
Larry A. Samovar	Department of Speech Communication
Dennis C. Scheck	Department of Sociology
Douglas B. Stewart	Department of Economics
Frank E. Stratton	Department of Civil Engineering
Earl P. Wadsworth	Department of Chemistry
Donald Granger	Graduate Student, Psychology
T. Anthony Enerva	Graduate Student, Criminal Justice Administration

(Membership for 1979-80 will be determined prior to the beginning of the academic year.)

Colleges, Schools, Departments and Programs

COLLEGE OF ARTS AND LETTERS	<i>Chairs</i>
Associate Dean	Frank Marini, Dean
	Robert Detweiler

Assistant Dean for Student Affairs and Special Instructional Programs	Donald D. Basile
Afro American Studies	James N. Kerri
American Indian Studies	John Rouillard
Anthropology	Larry L. Leach
Classical and Oriental Languages and Literatures	E. N. Genovese
Economics	Dean O. Popp
English and Comparative Literature	Dan McLeod
French and Italian Languages and Literatures	Elizabeth Jackson
Geography	Ernst Griffin
Germanic and Slavic Languages and Literatures	Ludek Kozlik
History	Philip Flemion
Linguistics	Glendon Drake
Philosophy	Rosemary Lauer
Political Science	Betty Nesvold
Religious Studies	Christine Downing
Sociology	John Weeks
Spanish and Portuguese Languages and Literatures	Ben Christensen
Study Skills Center	Donald Basile
Women's Studies Program	Marilyn Boxer
COLLEGE OF BUSINESS ADMINISTRATION	Maurice L. Crawford
Associate Dean	William F. Barber
Associate Dean for Graduate Studies	Penny L. Wright
Assistant Dean for Student Affairs	Allan Bailey
School of Accountancy	Pieter A. Vandenberg
Finance	Norman Sondak
Information Systems	William R. Sherrard
Management	Robert Haas
Marketing	Tomas A. Arciniega, Dean
COLLEGE OF EDUCATION	Robert R. Nardelli
Associate Dean	Jaime Lujan
Assistant Dean for Student Affairs	Joan F. Curry
Coordinator, Clinical Training Center	John D. Chamley
Coordinator, Counselor Education	Ray Latta
Coordinator, Educational Administration	Patrick J. Harrison
Coordinator, Educational Technology and Librarianship	James M. Kaatz
Coordinator, Elementary Education	Henry Trueba
Coordinator, Multicultural Education	Peggy Hawley
Coordinator, Graduate Programs	Doris Meek
Coordinator, Higher Education Programs and Health Services Credential	John G. McLevie
Coordinator, Secondary Education	Donard Doorlag
Coordinator, Special Education	Glen L. Martin, Dean
COLLEGE OF ENGINEERING	Basil Ohnysty
Assistant Dean for Student Affairs	J. G. Conly
Aerospace Engineering and Engineering Mechanics	Howard H. Chang
Civil Engineering	Mao-Shiu Lin
Electrical and Computer Engineering	George C. Craig
Mechanical Engineering	Harry Butler, Dean
COLLEGE OF HUMAN SERVICES	John K. Ruffner (Acting)
Associate Dean	E. Frederick Anderson
Assistant Dean for Student Affairs	Harriet G. Kopp
Communicative Disorders	John Hanlon (Adviser)
Graduate School of Public Health	Dolores Wozniak
School of Nursing	E. Percil Stanford (Interim)
School of Social Work	Jerry Mandel, Dean
COLLEGE OF PROFESSIONAL STUDIES	Millard Biggs
Associate Dean	George Hutchinson
Associate Dean	

Assistant Dean for Student Affairs	Lois Kessler
Coordinator of Physical Facilities	Fred Hammond
Aerospace Studies	Lt. Col. Richard L. Neal
Art	Frederick J. Orth
Athletics	Cedric W. Dempsey
Drama	Don W. Powell
School of Family Studies and Consumer Sciences	Gwen C. Cooke
Health Science and Safety	Ralph Grawunder
Industrial Studies	Harold L. Marsters
Journalism	Lee M. Brown
Mexican-American Studies	Richard Griswold
Music	Robert E. Brown
Physical Education	B. Robert Carlson
School of Public Administration and Urban Studies	James A. Clapp
Recreation	Mary Duncan
Speech Communication	Stephen King
Telecommunications and Film	Kenneth Jones
COLLEGE OF SCIENCES	Donald Short, Dean
Associate Dean	James Neel
Associate Dean	John D. Schopp
Assistant Dean for Student Affairs	Celia Marshak
Astronomy	Burt Nelson
Biology	Adela Baer
Botany	David Rayle
Chemistry	Walter Jones
Geological Sciences	Richard W. Berry
Mathematical Sciences	R. Lee Van de Wetering
Microbiology	Beatrice L. Kelly
Natural Science	James Matthewson
Physics	Lowell J. Burnett
Psychology	John Grossberg
Zoology	Michael D. Atkins
COLLEGE OF EXTENDED STUDIES	William P. Locke, Dean
Director of Summer, Conferences, and Special Programs	Larry G. Cobb
Director of Extension and Professional Programs	Lawrence A. Clinger
Director of International Program	Ann M. Johns
Director of Retired Adult Education Programs	Peggy Covert
Director of Academy of Theatre Arts	Paul Gregory



PART TWO

General Information

**General Information
College of Extended Studies
External Degree Programs
Imperial Valley Campus**

General Information

San Diego State University

San Diego State University was founded on March 13, 1897 for the training of elementary school teachers. The seven faculty and ninety-one students of the then Normal School's first class met on November 1, 1898 in temporary quarters downtown while the first unit of the main building of the campus was under construction at Park Boulevard where El Cajon Boulevard begins.

The curriculum was limited at first to English, history and mathematics, but it broadened rapidly under the leadership of Samuel T. Black, who left the position of State Superintendent of Public Instruction to become the first President (1898-1910).

Under the vigorous administration of the second president, Edward L. Hardy (1910-1935), the School was reorganized as a four-year State Teachers' College in 1921, and control was transferred from a local board of trustees to the State Board of Education. In the same year, the two-year San Diego Junior College, the antecedent institution to the present Community Colleges, was incorporated as a branch of San Diego State, where it remained through 1964.

It became clear early that the only collegiate institution in San Diego would soon outgrow its 17-acre site, and a campaign was begun in the 1920s to build a new campus. The Legislature agreed, provided the city furnish a new site and buy the old one. In 1928 the present campus, on what was then the far eastern border of the city, was approved by the electorate.

In February 1931, the college moved to the seven mission-style buildings of the present campus, surrounding what is still called the Main Quad. In 1935, the Legislature removed the word "Teachers" from the name of the institution and authorized the expansion of degree programs into areas other than teacher preparation. In the same year, Walter R. Hepner (1935-1952) was appointed president, and the institution entered a period of slow growth and then, with the coming of war, of contraction. At the end of World War II, enrollment had fallen to 1918.

In the next quarter century, under Dr. Hepner and subsequently under Malcolm A. Love (1952-1971), enrollments increased phenomenally, until with some 30,000 students San Diego State is today one of the largest institutions in the State. In 1960, the College became a part of the newly created California State College system, under a statewide Board of Trustees and a Chancellor. In 1971, recognizing that the institution had in fact achieved the status of a university, the Legislature renamed the system The California State University and Colleges, and shortly afterward renamed this institution San Diego State University.

Acting President Donald E. Walker (1971-1972), President Brage Golding (1972-1977), and Acting President Trevor Colbourn (1977-1978) were followed by the sixth president Thomas B. Day (1978-) who faces problems and opportunities of a magnitude undreamed of 80 years ago.

New buildings added in recent years include the Aztec Center, the first student union building in the CSUC system; Dramatic Arts, with the finest University theater in the county; Music, with a Recital Hall; and the 307,000 square foot Malcolm A. Love Library, with its ample reading areas and ideally arranged collections and services. The new Health Services, Art and Humanities classroom buildings are the most recent additions to the campus physical facilities.

The University now offers bachelor's degrees in 70 areas, the master's in 52, and the doctorate in four. A remarkable 88 percent of the teaching faculty possess the doctorate in those disciplines where it is the standard terminal degree.

A chapter of Phi Beta Kappa was inaugurated at the University in 1974, joining Phi Kappa Phi and many other national honorary societies on campus.

Institutional and Financial Assistance Information

The following information concerning student financial assistance may be obtained from Thomas R. Pearson, Financial Aid, CL-122, 286-6326.

1. Student financial assistance programs available to students who enroll at San Diego State University;

2. The method by which such assistance is distributed among student recipients who enroll at San Diego State University;
3. The means, including forms, by which application for student financial assistance is made; the requirement for accurately preparing such applications; and the review standards employed to make awards for student financial assistance; and
4. The rights and responsibilities of students receiving financial assistance.

The following information concerning the cost of attending San Diego State University is available from Thomas R. Pearson, Financial Aid, CL-122, 286-6326. This information includes:

1. Tuition fees;
2. Estimated costs of books and supplies;
3. Estimates of typical student room and board costs or typical community costs; and
4. Any additional costs of the program in which the student is enrolled or expresses a specific interest.

Information concerning the refund policy of San Diego State University for the return of unearned tuition and fees or other refundable portions of costs is available from Grant L. Nielsen, Controller, Business Affairs, AD-320D, 286-6301.

Information concerning the academic programs of San Diego State University may be obtained from the Office of the Vice President for Academic Affairs, AD-206, 286-6881. This information may include:

1. The current degree programs and other educational and training programs;
2. The instructional, laboratory, and other physical plant facilities which relate to the academic program;
3. The faculty and other instructional personnel; and
4. Data regarding student retention at San Diego State University and, if available, the number and percentage of students completing the program in which the student is enrolled or expresses interest.

University Library

The centrally located Malcolm A. Love Library, with its open stacks, adjoining study areas, and many individual carrels, has been designed to facilitate study, research and reading. It has some three thousand reader stations and will ultimately accommodate over a million volumes.

The collection comprises some 691,000 volumes including books and bound periodicals, and 8,385 linear feet of government documents. Additional resources include 1.3 million microfiche and microopaque cards, 38,000 reels of microfilm, 7,800 college catalogs, 29,000 scientific reports, 3,500 phonograph records, 1,500 linear feet of curriculum materials and 1,250 linear feet of archival papers. The library receives 11,000 periodical and serial titles, excluding government documents. It is a depository for United States and California government publications. It receives all United Nations and Organization of American States publications, as well as many publications of other national and international bodies.

Significant research collections in the social sciences and humanities include: Asian studies; business; American, Civil War, California, Latin American, Mexican history; British, European, Asian, African, American, English (sixteenth and eighteenth centuries) and German literatures; music, with special strength in the Middle Ages and the nineteenth century; philosophy, especially medieval and American; and public administration. Research collections held in the physical sciences include: chemistry, biochemistry, ecology, biology, mathematics, physics, astronomy, the history of astronomy, anthropology, entomology, paleontology, geology, the geological history of Pacific Ocean invertebrate fauna, the geology of San Diego County and Baja California. The San Diego History Research Center's extensive archival collections from the San Diego area support original research.

The library provides general reference service and specialized service in business and the social sciences as well as separate reference service for sciences and engineering, government publications, and media and curriculum resources. Reference librarians assist students and faculty in their research and study, and librarians with advanced degrees in various subject areas are available for reference consultation. Computerized information retrieval service is also available.

Among conveniences provided library patrons are: a locational information desk in the main lobby; current periodicals reading room and microforms and newspaper center;

inexpensive photocopying machines, including several for microfiche and microfilm; ditto machine; typing rooms with coin-operated electric and manual typewriters; coin-operated electronic calculators; listening equipment for cassettes, discs and open-reel tape; and a special facility for the visually handicapped.

Research

The importance of research in graduate instruction is recognized by the faculty and all graduate programs contain provisions for research experience on the part of the graduate student. Among the facilities for research which may be utilized by students are those provided in organized bureaus, centers, and institutes located on the campus.

University Center on Aging

The University Center on Aging is a program designed to (1) provide a multidisciplinary educational program and curriculum; (2) undertake research and evaluation activities in the aging area; (3) provide technical assistance and agency consultation for the community; and (4) provide settings for field learning experience and community involvement for students.

The courses offered through the University Center on Aging do not lead to a degree in gerontology but give students an opportunity to take a variety of gerontology-related courses across a number of schools or departments. Identified schools or departments which offer such courses are Psychology, Health Science and Safety, Biology, Sociology, Family Studies and Consumer Sciences, Social Work, Nursing, Physical Education, Education, and Recreation.

Students who are organizing these series of courses to meet their needs in the area of gerontology, are encouraged to contact the chairs or deans of the noted schools and departments for more specific information on course offerings.

The Edwin C. Allison Center For the Study of Paleontological and Geological Sciences Richard H. Miller, Director

The Allison Center seeks to encourage research in paleontology, geology, and related sciences, especially as they relate to the history of the earth around the Pacific Ocean. The Center provides a library which excels in reprint collections, and a working and storage collection of invertebrate fossils and modern molluscs. The Center provides office space for visiting scholars and a research working space for graduate and undergraduate students.

Asian Studies

Alvin D. Coox, Director

The Center for Asian Studies is an interdisciplinary organization in the College of Arts and Letters. Drawing upon faculty members from many fields campus wide, it performs such services as (1) securing and administering grants and other support for research and development in Asian studies; (2) coordinating and publicizing the activities of faculty engaged in Asian-centered studies; (3) developing and administering the Asian studies program and relevant curricula at the undergraduate and graduate levels; (4) responding to campus and community requests for information and services; (5) fostering campus and community interest in Asian studies. The center's reading room and study facility, located in LE-471, contains Asian periodicals, books, pamphlets, dictionaries and maps.

Business and Economic Research

The Bureau of Business and Economic Research is an organized research facility located in the College of Business Administration. The Bureau facilitates research activities of the faculty of the College of Business Administration and coordinates other campus resources for multidisciplinary projects. The Bureau is a full service member of the National Association of University Bureaus of Business and Economic Research and maintains a national survey research network.

The principal objectives of the bureau are to (1) secure and administer grants and other support for conducting research in the areas of economics and business; (2) facilitate research in those areas by the faculty and students; (3) seek cooperative arrangements with outside individuals and organizations for conducting specific research projects; (4) respond to campus and community requests for information and services; (5) publish the results of its investigations and aid faculty in publication of their research.

Graduate students and faculty are encouraged to make use of bureau facilities.

Counselor Education

Raymond Howard, Director

The Center for the Study of Counselor Education is an interdisciplinary task force under the administrative jurisdiction of the Dean of the College of Education; fiscal matters are coordinated through the San Diego State University Foundation. The center is designed to draw together faculty members from relevant disciplines such as anthropology, economics, education, psychology, social welfare, social work, sociology, and the University Counseling Center for such purposes as (1) securing and administering grants and other support for research and development in counselor education and guidance and (2) conducting programs or rendering services related to counselor education and guidance through contractual agreements with public or private agencies or organizations.

Economics Research Center

Walter Vogt, Director

The Economics Research Center collects research materials, publishes occasional monographs, and encourages research of special interest to faculty and students in economics and related areas. The center's facilities are located in the Social Science Research Laboratory, and are currently utilized by the Economics Department Center for Research in Economic Development, the Institute of Labor Economics, and the local chapter of Omicron Delta Epsilon.

Bureau of Educational Research and Evaluation

Peggy M. Hawley, Director

The Bureau of Educational Research and Evaluation operates within the College of Education. The objective of the bureau is to improve the quality of education through research by (1) assisting departments within the College of Education in their evaluation of courses and student performance, (2) serving faculty graduate advisers and their students as a resource in research design and statistical techniques, (3) assisting the research activities of individual faculty members who wish to make use of its services, (4) assisting those directing cooperative studies established between the College of Education and other educational communities, and (5) keeping faculty informed about current and potential bureau research activities and services.

European Studies Center

Leon Rosenstein, Director

The European Studies Center coordinates and supports teaching and research related to the European area. It supervises the major in European studies for the A.B. degree. It sponsors the annual San Diego State University Summer Seminar and Travel Study Tour to Europe. It administers the European Studies Center Laboratory in LE-470 which contains books, pamphlets, English and foreign language periodicals, and a slide collection on European art and geography. The laboratory room is open several hours each day for study and research by students and instructors in courses dealing with any aspect of European studies. The center also assists in the development of the university library's holdings in the European area and has created a special collection of library materials on European integration and unification which is being steadily and systematically expanded.

San Diego History Research Center

Stephen A. Colston, Director

The San Diego History Research Center is a professional archives and research institute that has as its principal objectives the acquisition, conservation, and processing for use of materials documenting the development of the San Diego Region primarily during the twentieth century. The Center's archives contains personal papers and records of public, business, labor, cultural, religious and social service organizations, and includes oral history and pictorial materials. While providing resources for the study of regional history, the archives is also well suited for supporting multidisciplinary research on business, economic, political, social and urban topics. The Center serves as a teaching laboratory for students and community groups through programs which promote the utilization of archival materials in the research, writing and teaching of local history. The Center is administratively a part of the University Library and is located in LL-363.

Institute of Labor Economics**Adam Gifford, Director**

The Institute of Labor Economics is a facility of the Department of Economics to encourage research by students and faculty in all phases of labor problems, collective bargaining, labor legislation and social security. The center is designed to complement the curricular and degree programs in the Department of Economics and to be of service to related disciplines. Publications are exchanged with 75 similar institutes at other universities. Research materials and facilities to assist research and publications in the area of labor economics are maintained in the Social Science Research Laboratory, located on the lower level of the West Commons. A technical assistant is available to help you from 8:30 a.m.—4:30 p.m., Monday through Friday.

Latin American Studies**Philip F. Flemlon and Ernst C. Griffin, Co-Directors**

The Center for Latin American Studies seeks to encourage teaching and research related to Latin America. It has primary responsibility for the administration of the Latin American undergraduate and graduate degrees. In 1976, the U.S. Office of Education designated the Center as one of the nation's 10 Latin American language and area centers. In conjunction with this award, the center administers programs that focus on: (1) initiation of a problem-oriented approach to Latin American studies through the creation of courses dealing with urbanization and modernization of the area; (2) development of innovative methods of instruction in Spanish and Portuguese; (3) provision of services for the general public through the sponsorship of conferences, workshops, lectures and films. The Center also assists in the development of the University library's Latin American holdings and has created a special collection of Latin American materials which is available in the Center's reading room, SS-146.

Center for Marine Studies**Richard F. Ford, Director**

The primary functions of the Center for Marine Studies are to coordinate and represent the multidisciplinary Marine Studies Program offered by departments within the University, to aid in the development of instructional, research, and public services aspects of the program, and to provide special supporting services to those involved. The Center is operated as a special unit of the College of Sciences. Supporting services sponsored by the Center include advising students concerning marine studies, assistance to faculty and students in research and publication, operation of the University's marine laboratory at Mission Bay, a boat operations program, and the University Diving Safety Program. The Center is administered by a director, associate directors, and an executive committee consisting of faculty members elected from participating departments in the College of Arts and Letters, the College of Business Administration, the College of Engineering, the College of Professional Studies and the College of Sciences. Additional information about the Marine Studies Program and student advising is available from the Center for Marine Studies office.

Paleobiology Council**Richard D. Estes, Director**

The Paleobiology Council is an interdisciplinary research and teaching group concerned with exploration of the fossil record. It is composed of faculty members from the departments of Anthropology, Geology, Natural Science and Zoology and professional paleontologists in other research and educational institutions in the greater San Diego area. Students interested in pursuing an interdisciplinary Special Major leading to an M.A. in Paleobiology may do so under the direction of the committee.

Public and Urban Affairs**W. Richard Bigger, Director**

The Institute of Public and Urban Affairs is a part of the School of Public Administration and Urban Studies, San Diego State University, organized to conduct research into community and governmental problems. It also sponsors institutes and conferences related to community and governmental activities. It is staffed by members of the faculty of San Diego State University. Closely associated with the institute is the Public Administration Center with a specialized and growing collection of research materials. The institute

engages in cooperative or joint research efforts with the various departments of instruction, institutes, and research centers of the university.

Public Economics**George Babbitt, Director**

The Center for Public Economics is a facility of the Department of Economics to encourage research by students and faculty in all phases of nonmarket economic decision making, encompassing the following areas: (1) the functioning of federal, state and local fiscal systems, including the provision for and financing of public goods at each level; (2) the economic factors involved in environmental changes, in particular, their bearing on urban and local economic problems; (3) the economic dimensions of social decision making. The center is designed to complement the curricular and degree programs in the Department of Economics and to be of service to related disciplines. It maintains research materials and facilities to assist research and publications in the area of public economics. Fiscal matters are coordinated through the San Diego State University Foundation. Financial support in the form of student assistance is available for faculty research projects on subjects in public economics. The center funds a number of student scholarships which are administered through the Scholarship Office. The Center for Public Economics is located in OL-307.

Regional Environmental Studies

The Center for Regional Environmental Studies coordinates and encourages interdisciplinary research, educational and public service programs related to environmental quality and improved use of environmental resources. Physical, biological, social and institutional aspects of environmental problems are emphasized. The center endeavors to serve as a point of contact between the University and governmental and private institutions concerned with environmental quality. Although the San Diego region receives primary attention, the center's activities include statewide, national and international environmental programs.

Research in Economic Development**M. C. Madhavan, Director**

The Center for Research in Economic Development (CRED) is part of the Economics Department's effort to assist and encourage research related to the problems and processes of economic development. CRED provides information and limited assistance to students and faculty and is now located in the Social Science Research Laboratory, WC-101.

Social Science Research Laboratory**Richard Hofstetter, Director**

The Social Science Research Laboratory (SSRL) supports and facilitates research and instruction in the social sciences. Organized in four functional Sections—Computational, Survey Research, Data Resources, and Maps—the Laboratory offers a variety of support capabilities and instructional services in the areas of statistical design and computer analysis of social data, survey research and polling activities, data documentation and access to a wealth of machine readable and published data sets, and cartographic products. SSRL maintains an active program of instructional demonstrations and consultation for faculty and students, as well as offering bundled and unbundled contract services in each of its Sections.

Survey Research**Oscar Kaplan, Director**

The Center for Survey Research was established to encourage nonprofit research in the sample survey field. The center is prepared to undertake surveys requested by government or nongovernment organizations, and to do field work on a local, state or national basis. Faculty members who wish to submit applications for off-campus support in survey research in the name of the center may do so, upon approval of the project by the center's advisory committee. The center is administered by a director.

Computer Center**Harold K. Brown, Director**

The Computer Center houses computing equipment and personnel which support the instructional, research, and administrative activities of the University. The equipment consists of a DEC PDP 11/45 computer, used primarily for instructional timesharing

activities; an IBM 1130 computer, which supports the APL and FORTRAN languages and operates a CALCOMP 1039 plotter; and an IBM 360 model 50 computer with a large array of peripherals. The 360/50 handles batch processing at the main site as well as three remote-job-entry sites strategically located on campus where jobs can be submitted for processing.

A dual CDC 3300 computer located at the Chancellor's Office for statewide usage is also available to campus batch users via a high speed data link. Over 70 timesharing terminals are located throughout the campus and are available via dial-up telephone lines to either the 11/45 on campus or the CDC CYBER 174 at the Chancellor's Office for statewide timesharing. Both the 3300 and the 174 offer large statistical programming packages to their users.

Courses related to some specialized applications of computers, in addition to programming and data processing courses, are offered by several departments within the University. Many of these courses have special purpose minicomputers devoted to their area.

Residence Halls

Accommodations for 1709 single students are available in six residence halls on campus. Five of the halls are three-story red-brick buildings accommodating 223 students each; the sixth is a high-rise building which accommodates 594 students. All of the halls provide sleeping and study facilities on a two-students-per-room basis. Student governments and staff in each of the halls recommend standards for basic behavior in the residence halls. Participation in campus activities is encouraged.

Currently, the cost for room rental is approximately \$818 to \$986 per academic year. Two food service plans (10 or 14 meals per week) are offered in the Commons at additional charges presently ranging from approximately \$285 to \$446 per semester.

IT IS THE RESPONSIBILITY OF EACH STUDENT TO CONTACT THE HOUSING AND RESIDENTIAL LIFE OFFICE IF ONE WISHES TO OBTAIN ON-CAMPUS HOUSING. APPLICATIONS ARE GIVEN PRIORITY IN DATE ORDER AS DEMAND EXCEEDS THE NUMBER OF SPACES ON THIS CAMPUS. To apply for housing, the student should send a self-addressed envelope to the Housing and Residential Life Office. When the application is completed, it should be accompanied by a deposit and mailed to the Cashier's Office at the University. A request for a room is confirmed after the student is admitted to the University, when a contract is received, and the first payment is received as specified. A student may apply as early as a year in advance. Though consideration will be given to a student's request for an individual hall and roommate, a specific assignment cannot be guaranteed.

No reservation can be confirmed until the student is accepted for admission to San Diego State University. Receipt of a housing contract does not mean that the University is committed to admitting the student. The deposit will be refunded if a student, after having submitted his housing application, is denied admission to the University.

During the Summer Sessions, rooms are available on receipt-of-check date priority. A refundable security deposit must accompany a request for reservation.

OFF-CAMPUS HOUSING

Listings of apartments, houses, rooms and students seeking roommates are available adjacent to the Housing and Residential Life Office. In addition, advice for students signing leases, with landlord conflicts, etc., is available in the Housing and Residential Life Office.

Adjacent to the campus is a nine-story privately owned and operated coeducational residence hall for San Diego State University students. Room and board are available for 568 students. For information apply directly to El Conquistador, 5505 Montezuma Road, San Diego 92115.

Center for Counseling Services and Placement

The Center for Counseling Services and Placement provides without charge, an array of services to students, faculty, and staff to include: 1) life planning and decision making, 2) educational and vocational assistance through counseling on career choice and curriculum selection, 3) counseling with regard to problems of personal and social development, and 4) consultation with student groups, faculty, staff, and administration. Transitional programs in work experiences are provided through cooperative education, student employment, summer and part-time employment, campus recruiting program, skill development, resume writing, interviewing, and job search strategy. Additionally, an extensive resource library is

available to aid in this process. Supervised graduate training is available for students in a variety of related disciplines on campus. Alumni may receive placement assistance through extensive job mailings, maintaining an updated individual placement file, utilizing current resources in the library, and participating in training sessions.

The Center's services are available on a walk-in basis or by appointment, from 8:00-7:00 p.m., Monday through Thursday and 8:00-4:30 p.m. on Friday. The Center is coordinated by Dr. Marvalene Styles, director and Ms. Judy Gumbiner and Dr. David Nesvig, associate directors.

Health Services

As part of the program of student services, the University provides health services for the protection and maintenance of student health. These services are funded by the student service fee and are administered by a Medical Director.

Services include full time physicians in general and family practice, internal medicine and gynecology. In addition, there are specialists including dermatology, orthopedic surgery, psychiatry, otolaryngology and simple general surgery not requiring hospitalization. A radiology group reviews X-rays taken here for diagnostic purposes.

Nurse practitioners are an integral component of the health services, providing consultation, treatment and assistance in emergencies. Full-time nursing, X-ray and laboratory staff are also on duty when school is in regular session. The entire staff numbers over sixty persons.

Student Health Services is available to all regularly registered students, whether for emergency care, acute illness or chronic illness care. Non-acute illness treatment is available by appointment. Student Health Services also provides emergency care to all faculty, staff and visitors.

Many special programs enhance the services, providing special clinics in family planning, weight control, nutrition, health education topics, sexuality workshops, cold prevention—to name only a few.

A health history is required from all students prior to admission, and remains in the student's medical chart. In addition to the health history, students must show proof of having had a tuberculin test at some time during the preceding year. This procedure may also be completed without charge at Health Services. A physical examination is recommended for all entering students but is not required.

Student participation is encouraged through membership on the Student Health Advisory Board, sponsored by Associated Students. Board members are involved in numerous health education projects and their advice is sought on program evaluation.

INSURANCE: The Associated Students offer a student health insurance program that is strongly recommended to students having no private medical insurance coverage. This insurance includes hospitalization benefits and specified medical and surgical services, and may be purchased by the semester or by the year through Aztec Shops. An open enrollment period is available the first 30 days of each semester.

Career Placement Information

The campus will furnish, upon request, information concerning the subsequent employment of students who graduate from programs or courses of study which have the purpose of preparing students for a particular career field. This information includes data concerning average starting salary and the percentage of previously enrolled students who obtained employment. Interested prospective students may request copies of the published information from the School Relations Officer.

Catalogs and Bulletins

The *General Catalog*, published annually in May, may be obtained from the Aztec Shops Bookstore on the campus. The catalog carries information on admissions, fees and tuition, programs and degrees, courses, scholarships, residence halls, student services and activities, and a faculty directory.

The *Graduate Bulletin*, published annually in May, may be obtained from the Aztec Shops Bookstore on the campus.

The *Summer Session Bulletin*, issued each April, includes an application form, information on admissions and registration, fees, living accommodations, courses, institutes, workshops and study tours. It may be obtained free upon request to the Summer Sessions Office.

The *Class Schedule* with instructions for registration is published prior to the opening of each semester and may be purchased at the Aztec Shops Bookstore on the campus.

Cost of Living

Each student should plan his budget based on individual needs. The wide range of financial resources of students in a university as large as ours makes it difficult to give specific information on costs. At San Diego State University, it is possible to live simply and participate moderately in campus life on a modest budget. The following table is based on systemwide figures provided for the purpose of determining maximum financial aid.

Estimated Expenses for the Academic Year

	Living Off Campus	Living On Campus	Commuting From Home
Materials, service, student activity, student union fee, facilities fee	\$ 205	\$ 205	\$ 205
Books and supplies	225	225	225
Personal	610	510	510
Room, board, health	2520	1850	---
Board, incidentals	---	---	900
Transportation	400	250	510
Total	\$3960	\$3040	\$2350

In addition, full-time (15 units per semester) foreign students and out-of-state students pay an annual tuition of \$1710. Typical expenses for married students without children average \$6260 for a nine-month period.



College of Extended Studies

Functions

The College of Extended Studies serves as the principal University liaison with the adult community and provides a wide variety of traditional and nontraditional, credit and noncredit, quality educational experiences designed to fit the lifestyle and expectations of mature adults. In addition, it provides a range of academic and special programs for students and groups during the summer months, in the evenings, and between semesters. Under the direction of the Dean of the College, programs are developed and carried out within six divisions—Summer and Conferences, Extension and Professional Programs, International Programs, Academy for Theatre Arts, Institute for Brazilian Programs and Retired Adult Programs. The majority of the programs are operated on a self-support basis since state funds are not provided for Continuing Education activities.

Summer and Conferences

The College of Extended Studies administers a comprehensive summer program for San Diego State University. Approximately 400 regular courses, workshops, short courses, interdisciplinary and experimental offerings, and special programs are available for matriculated students, students from other institutions, and special groups. Selected degrees and certificate programs are available for individuals who can only attend school during the summer. Credit earned during the summer is applicable to graduation and residence requirements; however, admission to the University is not required for summer attendance.

Three sessions are scheduled each summer; two 3-week terms during which four units of credit may be earned and one 6-week term in which students may earn seven units of credit. The summer program is offered from the first of June through the middle of August each year. A graduate student may earn credit in residence which may be used to satisfy the requirements for an advanced degree or for credentials. If a student plans to offer work taken in a summer session to satisfy the requirements for an advanced degree, he must make early application for admission to the University with classified graduate standing at the Office of Admissions.

Students planning to attend the University during the fall semester must be cleared for admission through the Office of Admissions.

A preliminary schedule of summer session terms and class offerings will be available just prior to spring semester. The regular *Summer Sessions Bulletin*, which includes the registration form and all necessary information about the summer sessions, is available for distribution the end of March.

The Conference Office designs, implements and administers a comprehensive, year-round, University operation for on- and off-campus conferences, meetings, seminars, and workshops.

Military and External Degree Programs

In addition to its role of administering external degree programs for the civilian population, Military and External Degree Programs serves as the liaison with the military installations in the University service area for the purpose of developing higher educational opportunities for military personnel. The College of Extended Studies, which has been designated by the Department of Defense as a Servicemen's Opportunity College, offers external degree and certificate programs designed specifically for mature military and civilian personnel, including a Master of Arts degree in Vocational Education, a Master of Public Administration, a Master of Arts in Education with a Concentration in Educational Administration and Supervision, a Bachelor of Science degree in Health Care Administration and a Bachelor of Arts degree in Liberal Arts. Many classes are held on base for the convenience of the students, some are scheduled on the University campus to take advantage of laboratories and other resources. This unit also administers special certificate programs for the military including human resources management, and women's studies.

For additional information contact the Director of Military and External Degree Programs.

International Programs

American Language Institute

Two non-credit intensive English programs are offered by the ALI throughout the year. These are:

Academic English for the University Bound—a semester-long course for students planning to enter San Diego State or other colleges or universities. Classes are offered in reading, writing, grammar, research skills, English for special purposes (e.g. English for Science and Economics, English for Business Education) and cultural orientation.

American Language and Culture—a quarter-long course focusing upon oral skills. Classes include: American culture, conversation, pronunciation and comprehension and usage.

Summer Language Institutes—a number of special short-term language programs are offered by the ALI each summer (e.g., American Business English).

All students at the institute are offered housing assistance, counseling for university entrance and orientation to university life.

Information about and applications for the institute can be obtained from the Director or Admissions Counselor, American Language Institute.

The California State University and Colleges (CSUC) offers opportunities for students to pursue their studies at a distinguished foreign university or special program center. Under the auspices of the CSUC Office of International Programs, participants in this program are concurrently enrolled at their home campus, where they earn academic credit and maintain campus residence, and at an overseas institution of higher education.

Cooperating universities abroad include the University of Provence, France; the Universities of Heidelberg and Tübingen, Germany; the Hebrew University of Jerusalem in Israel; the University of Florence, Italy; the Universidad Ibero-Americana, Mexico; the Universidad Católica, Peru; the Universities of Granada and Madrid, Spain; the University of Uppsala, Sweden; Lincoln University College of Agriculture and Massey University, New Zealand; and Waseda University of Japan. In the United Kingdom, cooperating universities (which may vary from year to year) include, among others, Aberdeen, Edinburgh, Bangor, Heriot-Watt, Leicester, London, Manchester, Oxford, Liverpool, Lampeter, Sheffield, and Strathclyde. In addition, CSUC students may attend a special program in Taiwan, Republic of China, or an architecture program in Copenhagen, Denmark.

Eligibility for application is limited to those students who will have upper division or graduate standing by September 1980 at a CSUC campus; who have demonstrated the ability to adapt to a new cultural environment; and, who, in the cases of France, Germany, Mexico, Peru and Spain, will have completed at least two years of college-level study in the language of instruction at the host university, or possess equivalent knowledge of the language. At the time of application, students must have a minimum cumulative grade point average (g.p.a.) for all college-level work of 2.75, except for the programs in Israel, New Zealand, Peru, and the United Kingdom where a minimum g.p.a. of 3.0 is required. Selection is competitive and is based on home campus recommendations and the applicant's academic record. Final selection decisions are made by a statewide committee of faculty members, except for the programs in New Zealand and the United Kingdom where final selections are made by the respective host universities.

The International Program supports all tuition and other academic and administrative costs overseas for each of its participants to the same extent that such funds would be expended to support similar costs in California. Students assume costs for predeparture orientation, insurance, transportation, housing and meals. Home campus registration and other fees and personal incidental expenses or vacation travel costs while abroad are also paid by the student. Nonresident students are subject to nonresident fees. The Office of International Programs collects and administers funds for those items which the program must arrange or can negotiate more effectively, such as home campus fees, orientation costs, insurance, outbound transportation, and, in some centers, housing. International Programs participants may apply for any financial aid available at their home campuses, except for campus work-study.

Applications for the 1980-81 academic year must be submitted before February 9, 1980, except for New Zealand and the United Kingdom. Applications for the New Zealand program must be submitted by May 11, 1980, for participation during calendar year 1981. (The

academic year in New Zealand begins in February and ends in October.) United Kingdom applications must be submitted by January 5, 1980.

Detailed information and application materials may be obtained from the College of Extended Studies; further information may also be obtained by writing to The California State University and Colleges International Programs, 400 Golden Shore, Suite 300, Long Beach, California 90802.

In addition to the international programs sponsored by CSUC, San Diego State University has special institutional arrangements for student exchange with three prominent Japanese Universities: Yokohama National University, Yokohama; Aoyama Gakuin University, Tokyo; and Seinan Gakuin University, Fukuoka. Information about student exchange opportunities in Japan may be obtained from the International Center.

San Diego State University also is a member of the Latin American Scholarship Program of American Universities (LASPAU). The purpose of LASPAU is to help strengthen university teaching, research, and administration in Latin America and the Caribbean. To this end, San Diego State offers tuition scholarships for graduate study to promising LASPAU scholars sponsored by institutions of higher learning in Latin America and the Caribbean.

International Faculty Exchanges

In order to enhance the international character of instruction and research, San Diego State University has developed a continuing program of faculty exchange with foreign universities. Since 1964, more than fifty exchanges of faculty members have been arranged with various universities in Europe, Asia, and South America. Currently, San Diego State University has formal arrangements to exchange professors periodically with four French universities: the Universities of Angers, Nice, Clermont Ferrand, and Aix-en-Provence.

Retired Adults Education Program

The Educational Growth Opportunities Program (EGO) is sponsored by the College of Extended Studies at San Diego State University, and operates out of two locations—downtown San Diego and Rancho Bernardo.

EGO's programs are planned for and taught by senior adults who are interested in furthering the educational growth of their peers.

For further information, contact the Director of Retired Adult Education Programs.

Foreign Travel/Study Programs

Each summer the College offers a variety of travel/study programs which are designed to give students and community members an opportunity to travel abroad and earn extension units of credit. Programs range from two to five weeks in length, with a maximum of six units of credit offered for the longer programs. Units of credit earned through travel/study may be used to satisfy the Human Experiment section of the General Education requirements. However, participants need not be regularly matriculated students at SDSU. Independent study credit is available for study abroad. Students must select an instructor and prepare a plan of study to satisfy the requirements for units earned. For further information contact the Coordinator of Foreign Travel/Study Programs.

Extension and Professional Programs

In order to meet the needs of the adult community, as well as matriculated students, the Division of Extension and Professional Programs administers a variety of extension courses and workshops, concurrent enrollment, a wintersession, certificate, and external degree programs. For the convenience of adult students most courses are scheduled in the evenings or on weekends; on campus or at convenient learning extension centers throughout the service area. The following categories of programs are offered through this division.

Extension

Extension courses are offered each semester in a number of areas including education, business administration, public administration, and the arts and sciences. Many courses and programs are developed in cooperation with off-campus organizations and groups who have identified specific needs. The usual class carries three units of extension credit, although

many one-unit weekend workshops are also offered throughout the year. These courses are listed in a special Extended Studies Program Bulletin (Portals) published each semester.

The amount of extension course credit acceptable on master's degree programs is limited to a total of nine units for the Master of Arts, the Master of Science, the Master of Business Administration, the MFA in Drama, the Master of Public Administration, the Master of City Planning, and the Master of Social Work degrees. To be accepted as a part of the requirements for these degrees, all credit earned in other colleges or in extension courses must be approved by the appropriate graduate adviser and the Dean of the Graduate Division. It is the responsibility of the student to determine prior to enrollment in an extension course whether that course has been approved by the Graduate Council for inclusion on a master's degree program. Credit earned by correspondence or by examination is not accepted as satisfying degree requirements.

Certificate Programs

Professional Certificate Programs are coordinated by the Extension Division. Educational services are provided for a wide variety of groups and professional organizations. Certificate Programs are offered in the following areas:

- Construction Practices
- Fire Protection Administration
- Labor Relations
- Materials Management
- Personnel Administration

The Division also coordinates the activities of the Center for Continuing Education in Business and Engineering, in cooperation with the College of Business Administration and the College of Engineering.

Concurrent Enrollment

A limited number of regular, on-campus classes are open to qualified extension students by special permission of the department and the instructor. Students who take advantage of "Concurrent Enrollment" are required to pay regular extension fees. They are permitted to enroll only after matriculated students have completed their registration. Consult the Extension Division or the current class schedule for complete details on Concurrent Enrollment qualifications and registration procedures. Credit earned through one semester of concurrent extension enrollment at the University may be considered to be residence credit for students who subsequently matriculate at the University in an advanced degree program.

Wintersession

The College of Extended Studies administers a special academic program during the winter recess period titled "The Wintersession." This special session provides students an opportunity to earn resident academic credit through participation in concentrated and interesting course work.

External Degree Programs

Purpose

External degree programs have been established by the Board of Trustees of The California State University and Colleges to increase educational opportunities for adults who characteristically have not had access to traditional academic programs, and to aid them in expanding their job and career potential or in pursuing personal enrichment goals.

External degree programs are designed for mature adults who by reason of geography, employment, family responsibilities or other personal circumstances find it difficult to spend extensive periods of time "in residence" on a university campus, or who are employees of particular firms, agencies or institutions, or occupational groups for whom an external curriculum is appropriate.

The extended degree programs described below are administered by the College of Extended Studies for the Consortium of the CSUC.

Admission Requirements

Master of Public Administration (M.P.A.)

Students may be admitted to the program who hold a baccalaureate degree or who are unusually qualified and who have an appropriate academic background in the collective opinion of the student's adviser and the Regional Academic Program Coordinator.

The adviser and coordinator may require the applicant for admission to take courses in addition to those listed as requirements for the degree in order to remove background deficiencies. The program is designed to serve those who are administrative practitioners in the public service; however, others may be admitted whose educational and professional background warrant the conclusion that the program would be educationally and professionally appropriate for them.

Application for admission must be submitted prior to the time a student has completed nine semester units of academic credit.

Master of Arts Degree in Vocational Education (M.A.V.E.)

Students may be admitted to the program who:

1. Have a baccalaureate degree from an accredited institution;
2. Hold a valid California Teaching Credential in a vocational subject;
3. Have completed their last 60 transferable semester units of academic work with a grade point average of 2.5 or higher;
4. Are individuals whose maturity, experience, previous academic background and scholastic aptitude indicate a probability of success in the program;
5. Are persons who by reasons of geography, employment, family responsibility, or other personal circumstances would find it difficult to spend extensive periods of time in residence on a college campus.

Master of Arts Degree with a Concentration in Educational Administration and Supervision

This External Degree Program in Education with a Concentration in Educational Administration and Supervision is offered by San Diego State University in cooperation with the U.S. Navy and has been developed primarily for U.S. Naval Officers who are preparing for career assignments in Education and Training Commands. Naval Officers stationed at San Diego, Memphis, Pensacola, and Norfolk will apply for admission to this program at one of four participating institutions: San Diego State University, Old Dominion University, Memphis State University, and University of West Florida.

Application for Admission

Application for admission to external degree programs may be obtained from the College of Extended Studies. An application fee of \$20 must be submitted with the application.

The application for admission must be supported by:

1. Official transcripts of all previous academic work;
2. Employment history (M.P.A.);
3. Verification of current professional experience (M.P.A.).

Enrollment Procedures

Students may enroll in courses without having been admitted to the program. Priority will be given to those persons who have applied for admission and have been accepted into the degree program. Students who have not been admitted to the program may enroll in courses upon the recommendation of their adviser, and with the approval of the campus program coordinator. Such enrollments shall be on a "space available" basis following enrollment of all students who have been admitted to the program. A maximum of nine semester units of work taken in this program under the nonadmitted status may be counted toward the degree.

Instruction and Scheduling

The quality of instruction in external degree programs is maintained at the same high level as that in campus programs. While the length of the instructional term for external degree programs may vary from 5 to 16 weeks, depending on the time constraints of the student population being served, the contact time per unit of credit is the same as required in campus programs. All courses offered in external degree programs earn semester units and resident credit.

Fees

Since Continuing and External Degree programs do not receive state support, they are required to be financially self-supporting. Fees for external degree courses range from \$45 to \$65 per semester unit.

Degree Requirements

The following is a description of the specific requirements for graduate external degree programs administered by the College of Extended Studies for the Consortium of the CSUC.

Master of Arts Degree in Vocational Education

The external program in vocational education is designed for adult Californians employed in education, business and industry whose job mobility, geographic location, personal circumstances, or work schedules limits their ability to complete a graduate program in residence at one of the campuses of The California State University and Colleges. The program combines philosophy and theory of vocational education with the specific skills of administration, curriculum development, and evaluation.

It is offered through the Consortium of The California State University and Colleges in conjunction with San Diego State University. The degree is awarded by the Consortium in the name of the Board of Trustees of The California State University and Colleges.

The program of study totals 30 semester units. Requirements are:

1. Four core courses (12 units)
 - a. I.A. 795A Introduction to Vocational Education (3)
 - b. I.A. 795B Elements of Vocational Education Administration (3)
 - c. I.A. 795O Implementing Change in Vocational Education (3)
 - d. I.A. 795P Program Evaluation of Vocational Education (3)
2. An area of specialization (6 units) selected from:
 - a. Program Administration and Management
 1. I.A. 795E Administration and Management of Vocational Program and Personnel (3)
 2. I.A. 795G Budget Development and Fiscal Management (3)
 - b. Curriculum Development
 1. I.A. 795H Curriculum Design (3)
 2. I.A. 795J Curriculum Development (3)
 - c. Research and Evaluation
 1. I.A. 795L Research Procedures in Vocational Education (3)
 2. I.A. 795N Data Collection and Research Analysis (3)

3. Electives (6 units). Courses selected will be relevant to the various areas within vocational education, and will relate to the area of specialization selected.
4. I.A. 796 Field Study (3)
5. I.A. 600 Integrative Seminar (3)
6. I.A. 795R Graduate Directed Study (1-2). Maximum 2 units.

Master of Public Administration

The program is designed for practicing public administrators whose job mobility, geographic location, personal circumstances, or work schedule limits their ability to complete a graduate program in residence at one of the campuses of The California State University and Colleges. It offers flexibility in content and delivery/methodology—an educational experience suited to the public administrator's experience, knowledge, time commitments, and lifestyle.

It is offered through the Consortium of The California State University and Colleges in conjunction with San Diego State University. The degree is awarded by the Consortium in the name of the Board of Trustees of The California State University and Colleges.

Program Requirements

The course of study will consist of 10 classes (30 semester units) and a thesis or graduate project. Students will usually take five core seminars (one in each of five areas of public administration) plus an integrative seminar. The five areas of concentration and core seminars are:

1. The Environment of Public Administration
P.A. 600 Scope of Public Administration (3)
2. Analytical Processes
P.A. 605 Seminar in Empirical Approaches to Public Administration:
Qualitative Analysis (3)
3. Organizational Behavior
P.A. 643 Seminar in Administrative Behavior (3)
4. Administrative Processes
P.A. 606 Seminar in Empirical Approaches to Public Administration:
Quantitative Analysis (3)
5. Public Policy Processes and Analysis
P.A. 660 Administration and Public Policy Development (3)
6. Integrative Seminar
P.A. 792 Problem Analysis (3)
Graduate Project or Thesis
P.A. 799A Thesis (3)
P.A. 799B Thesis Extension (0)

Elective Courses

- P.A. 630 Seminar in Public Personnel Administration (3)
P.A. 650 Seminar in Public Financial Management (3)

The remaining four courses are professional electives which may be taken as Advanced Tutorial studies (Directed Study) with participating faculty, or as graduate courses at San Diego State University. Students must take Advanced Tutorials (or approved equivalents) in at least three of the five core areas.

Credit may be granted toward the MPA degree for three relevant graduate courses taken prior to admission to this program.

Advanced Tutorial Series

- Core Area I**
P.A. 798A-798B Special Study in Political, Societal and Economic Environment of Public Administration (3)
- Core Area II**
P.A. 798C-798D Special Study in Measurement and Computation in Public Administration (3)
- Core Area III**
P.A. 798E-798F Special Study in Organizational Theory and Human Behavior (3)
- Core Area IV**
P.A. 798G-798H Special Study in Analytical Processes in Public Administration (3)

Core Area V

P.A. 7981-798J Special Study in Analysis of Public Policy (3)

Credit may be granted toward the degree for three relevant graduate courses taken prior to admission to the program.

Contact the Director of Extension for additional information on Extension, External Degrees, The Wintersession, Concurrent Enrollment, and International Programs.

Master of Arts Degree in Education**Concentration in Educational Administration and Supervision**

The general objectives of this program are to prepare student:

1. To develop basic principles of resources and personal management.
2. To develop the knowledge for planning and budgeting quality instructional programs.
3. To possess the knowledge of organizations and their development.
4. To understand the principles and applications of instructional systems development.
5. To develop the basic knowledge of the theory of educational philosophy.

All participating students must hold an acceptable baccalaureate degree from a regionally accredited institution and meet San Diego State University admission requirements as described in this bulletin.

Program Requirements

The professional courses required are as follows:

A matrix of required and elective courses which will satisfy the requirements of each ETMS competency area is provided.

The professional courses required for the Master of Arts in Education with a concentration in Educational Administration and Supervision are as follows:

Professional Core Courses (15 semester units)

Educational Administration 600 Principles of School Administration (3)

Educational Administration 680 Seminar in Educational Administration (1-6)

Education 690 Procedures of Investigation and Report (3)

Education 795A Seminar (3)

Education 795B Seminar (3)

Electives: A total of 15 semester units will be selected from the following list with an adviser to insure all ten areas of competency have been satisfied.

Electives selected under advisement (15 semester units)

Educational Administration 610 Educational Leadership (3)

Educational Administration 720 Seminar in Educational Personnel Management (3)

Educational Technology and Librarianship 540 Educational Technology (3)

Education 593 Workshop in Adult Education (1-3)

Education 686 Educational Sociology (3)

Education 660 Advanced Educational Psychology (3)

Business Administration 673 Seminar in Organizational Development (3)

Business Administration 611 Behavior in Organizations (3)

Business Administration 769 Seminar in International Marketing (3)

Business Administration 650 Seminar in Business Finance (3)

Imperial Valley Campus, Calexico**Offered by the Imperial Valley Campus****Teaching Credentials****Basic**

- Multiple subject (elementary)
- Single subject (secondary)

Specialist

- Special education—in conjunction with the College of Education
- Bilingual/cross-cultural—in conjunction with the College of Education

A master's program is offered in conjunction with the College of Education of San Diego State University.

General Information

The Imperial Valley Campus is a two-year upper division campus of San Diego State University serving the desert area of southeastern California. It is accredited as an integral division of SDSU and operates under the same academic calendar. Established in 1959 by an act of the State legislature, the campus is located on the Mexican border in Calexico in the Imperial Valley. Offering only the last two years of undergraduate education as well as a fifth year credential program for teacher preparation, the campus accepts transfer students from either community colleges or other colleges who have at least 56 units. As a small campus with a low faculty/student ratio, Imperial Valley Campus offers students the advantages of small classes and individual contact with the faculty. The campus schedules its classes to meet once a week in three-hour blocks so that students who work full time can earn 9-12 units a semester by attending classes one or two times a week. Classes are also offered on the weekends.

The location on the Mexican border provides the opportunity for involvement in a bicultural environment. There are many opportunities to participate in the cultural life of Mexicali, just across the border, a city of more than 400,000 people. There are also many opportunities on the U.S. side of the border to be involved in a bilingual/cross-cultural setting. There is an exchange program for students between the Imperial Valley Campus and the two universities in Mexicali (Universidad Autonoma de Baja California and Centro de Enseñanza Tecnico y Superior) which allows students to take classes at either of the participating universities and receive credit at their home institution. Among the faculty are professors with Latin American emphases in history, geography, sociology, Spanish, art and anthropology. The faculty is also augmented with other Latin American specialists from Mexico and from the San Diego campus.

The Imperial Valley is one of the richest agricultural centers in the country. It has a desert climate with mild winters and little rainfall. Because of this, the area has a great potential for the development of alternative energy sources. Geothermal energy is already being developed in the area and solar and wind energy are both potentially important sources for future development. The desert also offers the opportunity to study a fragile ecological environment. Highly significant archaeological discoveries have been made in the area and there is continuing archaeological fieldwork.

Facilities

The campus is housed in buildings of early Spanish style architecture on an eight-acre campus. The buildings are those built and used as the Calexico High School from 1927 to 1953 and are historically significant, since they are among the oldest buildings in Calexico. The library supports the curriculum of the campus, but, with its 28,000 volumes, provides also a good basic collection for general use. It subscribes to over 200 periodicals and maintains a microfilm collection of other periodicals. The library is part of a CSUC system-wide Intrasystem Lending and Borrowing Service which provides quick interlibrary loan services and makes the library resources of all campuses in the system available to our students.

The media center provides professional assistance to the faculty in the application of

educational technology to instructional situations. The center has a wide range of equipment for use in the classroom as well as a photo lab and TV studio capabilities. The media center (1) provides consultation on selection, acquisition, preparation, utilization, and evaluation of instructional media and equipment; (2) organizes, equips, and maintains instructional media facilities and resources; (3) provides and maintains instructional media and equipment for instruction; and (4) prepares materials required for instruction.

Admission, Registration, and Commencement

To apply for admission to the Imperial Valley Campus, students must file a complete application and transcripts as outlined elsewhere in this catalog. Both completed application forms and transcripts should be sent to the Admissions Office, San Diego State University, Imperial Valley Campus, 720 Heber Avenue, Calexico, California 92231. Applications for admission to the campus are accepted through the week before registration for both the fall and spring semesters. Because of the size of the campus, the registration process is easily accomplished in a short period of time with little chance of classes closing.

The Imperial Valley Campus holds its own commencement exercises each spring, the day before commencement exercises on the San Diego campus.



The Graduate Division

PART THREE

Graduate Division

The Graduate Division Admissions Regulations

Requirements for Doctoral Degrees Requirements for Master's Degrees

- Aerospace Engineering
- Astronomy
- Biology
- Business Administration
- Chemistry
- Civil Engineering
- Computer Science
- Electrical Engineering
- Geology
- Industrial Engineering
- International Business Administration
- Law
- Liberal Studies
- Mathematics
- Mass Communication
- Physics
- Psychology
- Sociology
- Urban Planning
- Visual Arts
- Public Administration
- Social Work

The Graduate Division

The Graduate Division is composed of all departments and academic units of the University that offer graduate study and programs leading to advanced degrees. The Graduate Council is delegated University-wide jurisdiction over all matters relating to graduate studies, subject only to the right of review by the Senate. The Council's responsibility is broad and includes, but is not limited to, the development of University-wide policy on graduate programs, graduate student affairs, graduate research and scholarship, and the participation of faculty in graduate programs.

The Dean of the Graduate Division and Research is the chief administrative officer of the Graduate Division, and is assisted by two Associate Deans and a half-time Assistant Dean. The Graduate Dean takes general responsibility for the development improvement and administration of all postbaccalaureate and graduate study at the University, as well as for the research activities of faculty and graduate students.

Graduate study is highly exacting and requires in-depth study and scholarship and not merely the completion of a prescribed set of courses. Further, thesis and dissertation research requires the development of intellectual skills and the demonstration of creativity which can only be achieved through dedicated and persistent scholarship. The University has the necessary faculty and facilities to offer such opportunities in over fifty different areas of knowledge.

Authorized Graduate Degrees

DOCTOR OF PHILOSOPHY

Chemistry Ecology Education Genetics

MASTER OF ARTS

American Studies	Health Science	Russian
Anthropology	History	Social Science
Art	Industrial Arts	Sociology
Asian Studies	Latin American Studies	Spanish
Biology	Linguistics	Special Major
Chemistry	Mathematics	Speech Communication
Drama	Music	Speech Pathology and
Economics	Philosophy	Audiology
Education	Physical Education	
English	Physics	
French	Political Science	
Geography	Psychology	
German	Radio and Television	

MASTER OF SCIENCE

Aerospace Engineering	Home Economics
Astronomy	Mass Communications
Biology	Mathematics
Business Administration	Mechanical Engineering
Chemistry	Microbiology
Civil Engineering	Physics
Computer Science	Psychology
Counseling	Radiological Physics
Criminal Justice Administration	Rehabilitation Counseling
Electrical Engineering	Special Major
Geology	Statistics

MASTER OF BUSINESS ADMINISTRATION

MASTER OF CITY PLANNING

MASTER OF FINE ARTS IN DRAMA

MASTER OF PUBLIC ADMINISTRATION

MASTER OF SOCIAL WORK

Non-Degree Postbaccalaureate Study

In addition to specific programs of graduate study, the Graduate Division offers to individuals holding a bachelor's degree the opportunity to pursue post-baccalaureate study for reasons other than acquiring an advanced degree or credential. By selecting from the variety of academic experiences provided by the seven colleges of the University, the postbaccalaureate student may seek to satisfy intellectual curiosity and enhance personal growth, to upgrade professional skills, or perhaps to prepare for a change in career.

Not bound by a prescribed course of study or a time limit, the postbaccalaureate student is eligible to enroll in all but advanced graduate level courses for which he or she meets the prerequisites. Additionally, the minimum grade point average requirement as well as greater choice in the selection of grading system (such as opting for "credit" grades or "audit") gives the postbaccalaureate student more academic flexibility than students seeking degrees.

Enrollment in postbaccalaureate status does not necessarily preclude a student from later admission to a degree program. Often some of the course work completed as a postbaccalaureate student can be applied toward an advanced degree, subject to the requirements of the particular degree program and the regulations of the Graduate Division.

Further information about non-degree postbaccalaureate study may be obtained by contacting the Graduate Division Office.

Graduate Teaching Assistantships

Graduate teaching assistantships may be obtained by qualified graduate students in the areas of anthropology, art, astronomy, biology, business administration, chemistry, drama, economics, educational technology, engineering, English, French, geography, geological sciences, health science and safety, family studies and consumer sciences, industrial arts, mathematical sciences, microbiology, natural science, physical education, physics, psychology, sociology, Spanish, speech communication, and telecommunications and film.

Qualifications for appointment include admission to San Diego State University with classified graduate standing for the purpose of obtaining an advanced degree, and enrollment in not less than six units each semester on the official program of study, except during the terminal semester.

Appointment to a graduate teaching assistantship is for a period of either one semester or the academic year. Reappointment following an appointment of one semester or one year, and continuation for a second semester of a one-year appointment, is dependent upon satisfactory performance in graduate studies, as prescribed by the Graduate Division, and upon departmental need for the continued service in the department.

The combined teaching assignment and course work permitted during one semester is 15 units unless an excess of this amount is authorized by the Dean of the Graduate Division.

Information concerning an appointment as a graduate teaching assistant may be obtained from the head of the department, school, or college in which the applicant wishes to obtain the master's degree. A *Handbook for Graduate Teaching Assistants* is published annually by the Graduate Division Office.

Graduate Assistantships

Graduate assistantships not involving teaching duties and requiring 20 hours of service per week for full-time appointment are available in several departments and schools. Applicants for graduate assistantships must be admitted to San Diego State University with classified graduate standing, and enroll in and complete at least six units each semester on the official program of study.

Appointment to a graduate assistantship is for a period of either one semester or the academic year. Reappointment following an appointment of one semester or one year, and continuation for a second semester of a one-year appointment, is dependent upon satisfactory performance in graduate studies, as prescribed by the Graduate Division, and upon departmental need for the continued service in the department.

Information concerning an appointment as a graduate assistant may be obtained from the head of the department, school, or college in which the applicant wishes to obtain the master's degree.

Graduate Scholarships and Awards

Graduate students interested in scholarships and awards may obtain application forms and further information from the Scholarship Office, CLS-4J.

Stipends for Social Work

Graduate students admitted to the School of Social Work and to the University may be considered for a stipend if they need financial help to undertake the program for the Master of Social Work degree. Eligibility for such stipends differs and it is, therefore, best if the student applying for admission to the School of Social Work indicates on his application whether he is in need of a stipend and the amount required. The School of Social Work will then initiate action necessary for consideration of the request as soon as appropriate.

Fellowships

The San Diego State University Scholarship Office receives the annual announcements on the Fulbright, Marshall, Danforth, Kent, and other similar fellowship programs. Since limitations are placed on each college and university as to the number of applications it may endorse, students interested in fellowships of this type are encouraged to discuss their applications with the Scholarship Officer and members of the University faculty who have themselves in the past received these fellowships. Since scores from the Graduate Record Examination Aptitude Test are required in applying for most fellowships, students should take this examination no later than the early fall of their senior year. The examination may be scheduled through the University Test Office.

California State Graduate Fellowship Program

State Fellows may attend any California college or university accredited by the Western Association of Schools and Colleges and offering recognized graduate or professional degrees in the academic areas approved by the California State Scholarship and Loan Commission. Fellowships may be used for graduate or professional work. Entering and currently enrolled students in graduate and professional schools are eligible to receive a State Graduate Fellowship. Fellowships are in the amount of tuition and/or required fees at the graduate or professional school the student will attend and may not be used for books, supplies, room, board, or other college expenses. Fellowships may be less than the full amount of tuition and fees in instances where the Commission determines that the student has need for less than a full tuition award because of his own or other resources. State Graduate Fellowships will range from \$300 to full fees at the University of California; from \$500 to full tuition and/or fees at independent colleges; and are in the amount of fees charged at state universities and colleges, usually approximately \$196. State Fellowships are granted for one academic year (September through June). They are awarded after consideration of both academic and financial characteristics and critical manpower needs. In determining whether or not financial need exists and in what amount, the Commission has developed standards of financial need assessment of each applicant as an individual in his own right. Financial need is determined by comparing the applicant's own estimate of his resources for the academic year with an annual college cost estimate developed by the Commission for each graduate and professional school. Budgets vary for single and married students and do give consideration for special factors which pertain to each applicant. Original application forms are available from the Scholarship Office between October 1 and December 15. State Fellowships are renewable for up to three additional years. Renewal applications are automatically mailed to each State Graduate Fellowship recipient in mid-April.

Scholarships and Fellowships Administered by Departments

During the 1978-79 academic year, about 300 graduate students received scholarships, fellowships, grants, or stipends totaling approximately \$425,000 through the various departments. Students should check with the department of their major to determine what scholarship, fellowship, grant or stipend might be available to them.

Financial Aid

At San Diego State University every effort is made to see that students who wish to attend are not prevented from doing so because of inadequate financial resources. To this end, financial aid in the form of loans and opportunity for part-time employment on or off campus is made available to qualified applicants. In a majority of cases, a student will be offered a package financial aid plan which may include a loan and part-time employment. The programs explained below are administered by the Financial Aid Office located in the Campus Laboratory School.

San Diego State University Foundation Loan Program

Through the generosity of a number of individuals and groups, funds have been established to assist students with emergency loans. The student borrower must also be currently in full-time attendance. The amount that may be borrowed, based on college-related need, is normally \$100 or less but may not exceed \$200. Repayment is generally made during the semester. Most loans under this program are free of interest. Applications are available throughout most of the academic year.

National Direct Student Loan Program

National Direct Student Loans under the National Defense Education Act of 1958 are available to entering and continuing students who can meet the specific qualifications. The amount that may be borrowed, based on college-related need, generally may not exceed \$2,000 per year for a graduate student. The interest rate is three percent simple interest per year starting nine months after the student ceases to carry at least one-half the normal full-time work load. The repayment period may be interrupted when a borrower enters the military service, Peace Corps, VISTA, or continues as a student at an institution of higher education. This loan program may provide a borrower with partial cancellation of his loan each year for service as a full-time teacher in certain public or other nonprofit elementary or secondary schools.

Federally Insured Loan Programs

These long-term loans are made by participating banks and credit unions and provide deferred payment until graduation or the termination of higher education. Graduate students may borrow up to \$5,000 per academic year. Interest at the rate of seven percent per year begins when the loan is made. This interest, however, is subsidized by the federal government during the period of full-time attendance and for nine months thereafter. Repayment is over a period of three to ten years depending on the amount borrowed. Application forms are available at the Financial Aid Office. Students from other states may also secure forms from their home town banks.

College Work-Study Program

Students demonstrating financial need may be employed in positions for up to an average of twenty hours per week when classes are in session and up to a maximum of forty hours per week during vacation periods. The rate of pay for such employment, based upon individual skills, is from \$2.90 to \$4.17 per hour. Job opportunities are available both on campus and with selected community and government agencies in the San Diego area.

Eligibility for Aid

All the above aid programs, except the San Diego State University Foundation Loan Program, are available only to United States citizens or persons who are in the United States on an immigrant basis.

Applying for Aid

All applicants must file the Student Aid Application for California. When these have been initially processed, further documents will be requested. Students planning to enter San Diego State University should follow the instructions pertaining to financial aid that are contained in the Application for Admission packet. Students currently enrolled may obtain applications, beginning December 1, at the Financial Aid Office, CLS-122.

A publication, SDSU Financial Aid Facts, is available on request from the Financial Aid Office.

Graduate Study in the Summer Sessions

In San Diego State University summer sessions, a graduate student may earn credit in residence which may be used to satisfy the requirements for an advanced degree or for credentials. If a student plans to offer work taken in a summer session to satisfy the requirements for an advanced degree, he must make early application for admission to the University with classified graduate standing at the Office of Admissions.

Students planning to attend the University during the fall semester must be cleared for admission through the Office of Admissions.

The acceptance of courses taken in the summer sessions by other colleges or by a teacher's local school board for salary schedule purposes is entirely optional with the college or school board concerned.

A preliminary schedule of summer session terms and class offerings will be available before the spring semester begins. The regular *Summer Sessions Bulletin*, which includes the application form and all necessary information about the summer sessions, is available for distribution after April 1.

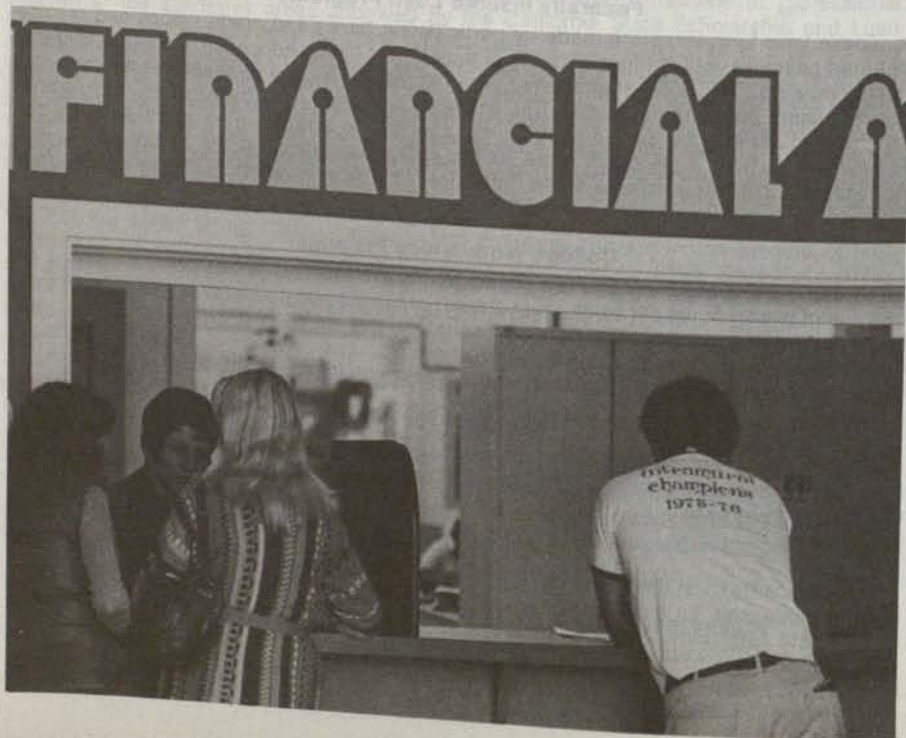
Graduate Study for Foreign Students

The facilities of San Diego State University for graduate study are available to qualified graduates of foreign universities on the same basis and under the same regulations as apply to graduates of colleges and universities in the United States.

Admission procedures for foreign graduate students are stated in the section on Admission of Graduate Students in this bulletin.

Veterans and Graduate Study

San Diego State University is approved to train Veterans under the G.I. Bill. Veterans who are interested in graduate work should visit the campus Veterans Affairs Office at 5525 Hardy Avenue for information and counseling regarding veteran's benefits, prior to the date of registration.



Admission to Postbaccalaureate and Graduate Study

Admission to San Diego State University for postbaccalaureate study is on a controlled basis and limited to those applicants judged by the University to be fully qualified and to those who can benefit from the experience. The requirements listed below are the minimum required for admission to the University. For many programs, the departments have established additional requirements. Potential applicants should refer to the Graduate Division Bulletin under the departmental listings. Students are also advised to contact the departmental offices as soon as graduate work is contemplated in the final baccalaureate year for advice as to how to proceed. Some departments stop reviewing applications earlier than others because of the limited space available.

Application Procedures

All applicants for any type of postbaccalaureate study (e.g., advanced degree applicants, those seeking credentials, and those interested in taking courses for personal or professional growth) must file a complete application within the appropriate filing period. **Second baccalaureate degree candidates should apply as undergraduate degree applicants and need not complete form B.** A complete application for postbaccalaureate study includes all of the materials required for undergraduate applicants plus the supplementary graduate admissions application. Postbaccalaureate applicants who completed undergraduate degree requirements and were graduated from this University are also required to complete and submit an application and the \$20.00 nonrefundable application fee. Since applicants for postbaccalaureate programs may be limited to the choice of a single campus on each application, redirection to alternative campuses or later changes of campus choice will be minimal. In the event that a postbaccalaureate applicant wishes to be assured of initial consideration by more than one campus, it will be necessary to submit a separate application (including fee) to each. Applications may be obtained from the Admissions and Records Office or the Graduate Division Office of any California State University or College campus.

General Admission Requirements

All applicants for any type of postbaccalaureate study at San Diego State University must: (a) hold an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or have completed equivalent academic preparation as determined by the Dean of the Graduate Division; (b) have attained a grade point average of at least 2.5 (when A equals 4) in the last 60 semester (90 quarter) units attempted; and (c) have been in good standing at the last college attended. An applicant who does not qualify for admission under provisions (a) and (b) may be admitted by special action of the Dean of the Graduate Division if on the basis of other evidence (such as the GRE Aptitude Test) he/she is judged to possess sufficient academic, professional, and other potential pertinent to his/her educational objectives to merit such action.

Members of the faculty of San Diego State University holding appointments at or above the rank of instructor or lecturer may not be admitted to the University as matriculated students.

NOTE: Beginning with the fall semester, 1977, students being graduated with an advanced degree in or after the fall semester, 1977, will be required to file an application for readmission in order to return to the University and enroll in courses.

Admission Categories

All applicants seeking admission to postbaccalaureate study at San Diego State University must apply and be accepted in one of the following categories:

Postbaccalaureate Standing (Unclassified)

A student wishing to enroll in courses at the University with a personal or professional growth objective, but not necessarily with an objective of an advanced degree or credential, may be considered for admission with postbaccalaureate standing (unclassified) when the

student meets the criteria specified under General Admission Requirements. Students admitted in this category may enroll in 500-numbered courses, but are ineligible to enroll in 600- and 700-numbered courses. Admission with postbaccalaureate standing (unclassified) does not constitute admission to, or assurance of consideration for admission to, advanced degree curricula.

Postbaccalaureate Standing (Classified)

A student wishing to be admitted to a program leading to a credential **only** (not an advanced degree) must meet the criteria specified under General Admission Requirements. Additionally, all students in advanced credential programs must achieve a satisfactory score on the GRE Aptitude test. (Students holding an advanced degree from an institution that is a member of the Council of Graduate Schools are exempted from this requirement.) A student must also meet the professional, personal, scholastic, and other standards prescribed by the appropriate department. The applicant should contact the department involved for information concerning specific admission requirements, and should submit a departmental application during the appropriate filing period. Admission with postbaccalaureate standing (classified) does not constitute admission to, or assurance of consideration for admission to, advanced degree curricula.

Graduate Standing (Classified)

A student wishing to be admitted to a program of study leading to an advanced degree must meet the criteria specified under General Admission Requirements, and, in addition, must:

- (a) Achieve a satisfactory score on the Graduate Record Examination Aptitude Test. (Students holding an advanced degree from an institution which is a member of the Council of Graduate Schools are exempted from this requirement; students applying to the College of Business Administration will take the Graduate Management Admissions Test.)
- (b) Have completed an undergraduate major appropriate to the field in which he/she desires to earn an advanced degree.
- (c) Satisfy the special departmental or college requirements as stated in Part Five of the Graduate Bulletin under "Fields of Study and Courses of Instruction."
- (d) Meet the professional, personal, and scholastic standards for graduate study established by the Graduate Council.

Students admitted with graduate standing (classified) are admitted to authorized advanced degree curricula and may enroll in 600- and 700-numbered courses. Such admission does not imply that a student will be advanced to candidacy for an advanced degree.

Conditional Graduate Standing (Classified)

A student wishing to be admitted to a program of study leading to an advanced degree and meeting the criteria specified under General Admission Requirements but having deficiencies in the criteria for graduate standing (classified) may be granted conditional graduate standing (classified), if the deficiencies can be met by specific additional preparation, including qualifying examinations. Not more than 15 semester units may be assigned to satisfy undergraduate deficiencies in the major and all course conditions must be met within five semesters from the time of initial enrollment. Students admitted with conditional graduate standing (classified) are admitted to authorized advanced degree curricula and may enroll in 600- and 700-numbered courses. Once the conditions established by the department or college have been met, the student will be accorded full graduate standing (classified).

Continuing Students

A student who is enrolled in the University with postbaccalaureate standing may request acceptance into an advanced degree curriculum with graduate standing (classified). Applications for such continuing students are available at the Graduate Division Office. Score reports of the GRE Aptitude Test must be on file at the University before continuing students may apply for graduate standing (classified).

Required Official Forms

The following official forms must be submitted to the Admissions Office:

1. Application for admission or readmission, accompanied by a \$20 nonrefundable application fee. Make check or money order payable to San Diego State University. (Fee may be waived for readmission application if student was regularly enrolled as a graduate student in either of the two semesters immediately preceding the semester for which the application is submitted, unless such student was enrolled at another institution in a regular session subsequent to such previous semester.)
2. Health history record
3. Residency statement

These forms may be obtained from the Admissions Office. Letters from applicants signifying intention to enroll will not be considered as applications for admission. The official forms must be filed.

Applicants are required to include their social security number in designated places on applications for admission pursuant to the authority contained in Title 5, California Administrative Code, Section 41201. The social security number will be used as a means of identifying records pertaining to the student as well as identifying the student for purposes of financial aid eligibility and disbursement and the repayment of financial aid and other debts payable to the institution.

Filing of Records

The applicant must file promptly with the Admissions Office transcripts from EACH college attended (including all extension, correspondence, summer session, or evening courses). Graduate students must file transcripts in duplicate if they plan to enter an advanced degree program.

A transcript will be considered official and accepted to meet the regulations governing admission only if forwarded directly to San Diego State University by the institution attended. The applicant must request the school or college to send the transcript to the Admissions Office, San Diego State University. All records or transcripts received by the University become the property of the University and *will not be released nor will copies be made.*

Timely filing of official transcripts is absolutely essential. Failure to furnish such records will delay or preclude consideration for admission to postbaccalaureate and graduate study at the University.

Applicants are advised to send additional copies of transcripts to the school or department in which they are seeking an advanced degree to facilitate early departmental consideration.

Residency Determination

New and returning students of The California State University and Colleges are classified for the purpose of determining the residence of each student for nonresident tuition purposes. The Residence Questionnaire and, if necessary, other evidence furnished by the student is used in making these determinations. Students may not register and enroll in classes until their residency questionnaire has been received by the Admissions Office.

The following statement of the rules regarding residency determination for nonresident tuition purposes is not a complete discussion of the law, but a summary of the principal rules and their exceptions. The law governing residence determination for tuition purposes by The California State University and Colleges is found in *Education Code* Sections 68000-68090, 90403, 89705-89707.5 and 68122, 68124 and 68121, and in Title 5 of the *California Administrative Code*, Article 4 (commencing with Section 41900) of Subchapter 5 of Chapter 1, Part V. A copy of the statutes and regulations is available for inspection at the campus Admissions Office.

Legal residence may be established by an adult who is physically present in the state while, at the same time, evidencing intent to make California his permanent home. Steps must be taken at least one year prior to residence determination date to evidence the intent to make California the permanent home with concurrent relinquishment of the prior legal residence. Some of the relevant indicia of an intention to establish and maintain California residence are registering to vote and voting in elections in California; satisfying resident California state income tax obligations on total income; ownership of residential property or

continuous occupancy or letting of an apartment on a lease basis where one's permanent belongings are kept; maintaining active resident memberships in California professional or social organizations; maintaining California vehicle plates and operator's license; maintaining active savings and checking accounts in California banks; maintaining permanent military address and home of record in California if one is in the military service, etc.

The student who is within the state for educational purposes only does not gain the status of resident regardless of the length of his stay in California.

In general, the unmarried minor (a person under 18 years of age) derives legal residence from his parents, or, in the case of permanent separation of the parents, from the parent with whom the minor maintains his place of abode. The residence of a minor cannot be changed by act of the minor or that of the minor's guardian, so long as the minor's parents are living.

A man or a woman may establish his or her residence; marriage is not a governing factor. The general rule is that a student must have been a California resident for at least one year immediately preceding the residence determination date in order to qualify as a "resident student" for tuition purposes. A residence determination date is set for each academic term and is the date from which residence is determined for that term. The residence determination dates for the 1979-80 academic year are September 20, 1979 and January 25, 1980. If you have any questions regarding the applicable date, the campus Admissions Office can give you the residence determination date for the term for which you are registering.

There are several exceptions for nonresident tuition. Some of the exceptions provide for:

1. Persons below the age of 19 whose parents were residents of California but who left the state while the student who remained, was still a minor. When the minor reaches age 18, the exception continues for one year to enable the student to qualify as a resident student.
2. Persons below the age of 19 who have been present in California for more than a year before the residence determination date, and entirely self-supporting for that period of time.
3. Persons below the age of 19 who have lived with and been under the continuous direct care and control of an adult, not a parent, for the two years immediately preceding the residence determination date. Such adult must have been a California resident for the most recent year.
4. Dependent children and spouses of persons in active military service stationed in California on the residence determination date. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for a year. The exception, once attained, is not affected by transfer of the military person directly to a post outside the 50 states and District of Columbia.
5. Military personnel in active service stationed in California on the residence determination date for purposes other than education at state-supported institutions of higher education. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for a year.
6. A student who is an adult alien is entitled to residence classification if the student has been lawfully admitted to the United States for permanent residence in accordance with all applicable provisions of the laws of the United States; provided, however, that the student has had residence in California for more than one year after such admission prior to the residence determination date. A student who is a minor alien shall be entitled to residence classification if both the student and the parent from whom residence is derived have been lawfully admitted to the United States for permanent residence in accordance with all applicable laws of the United States, provided that the parent has had residence in California for more than one year after acquiring such permanent residence prior to the residence determination date of the term for which the student proposes to attend the University.
7. Certain refugees.
8. Certain credentialed, full-time employees of school districts working toward a credential.
9. Full-time State University and Colleges employees and their children and spouses. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for a year.
10. Certain exchange students.
11. Children of deceased public law enforcement or fire suppression employees, who were California residents, and who were killed in the course of law enforcement or fire suppression duties.

12. A person in continuous full-time attendance at an institution who had resident classification on May 1, 1973, shall not lose such classification as a result of adoption of the uniform student residency law on which this statement is based, until the attainment of the degree for which currently enrolled.

Any student, following a final decision on campus on his residence classification, may make written appeal to:

Office of General Counsel
400 Golden Shore
Long Beach, California 90802

within 120 calendar days of notification of the final decision on campus of his classification. The Office of General Counsel may make a decision on the issue, or it may send the matter back to the institution with instructions for a further review on campus. Students classified incorrectly as residents or incorrectly granted an exception from nonresident tuition are subject to reclassification as nonresidents and payment of nonresident tuition in arrears. If incorrect classification results from false or concealed facts, the student is subject to discipline pursuant to Section 41301 of Title 5 of the *California Administrative Code*. Resident students who become nonresidents, and nonresident students qualifying for exceptions whose basis for so qualifying changes, must immediately notify the Admissions Office. Applications for a change in classification with respect to a previous term are not accepted. The student is cautioned that this summation of rules regarding residency determination is by no means a complete explanation of their meaning. The student should also note that changes may have been made in the rate of nonresident tuition, in the statutes, and in the regulations between the time this bulletin is published and the relevant residence determination date.

Admission as an International (Foreign) Student

An international (foreign) student holding the equivalent of a U.S. baccalaureate degree from a recognized foreign university and wishing to engage in graduate study at San Diego State University should write directly to the Director of Admissions and Records, San Diego State University, San Diego, California 92182 for information on admission requirements and procedures.

The admission of international (foreign) students is governed by separate requirements. Prospective applicants from abroad should consult the individual campus catalogs and international (foreign) student informational brochures available from the campuses. Health insurance coverage is mandatory for international (foreign) students. Present acceptable health insurance is available on campus at \$125 per year. Applicants for admission as either graduates or undergraduates whose education has been in a foreign country should file an application for admission, official certificates and detailed transcripts of record from each secondary school and collegiate institution attended several months in advance of the opening of the semester in which the applicant expects to attend. International students from outside the United States will be considered for admission only for the fall semester. Only those foreign students already in the United States will be considered for the spring semester. If certificates and transcripts are not in English, they should be accompanied by certified English translations. Credentials will be evaluated in accordance with the general regulations governing admission to San Diego State University.

An applicant whose education has been in a language other than English must take the Test of English as a Foreign Language (TOEFL). Minimum score of 500 is required. This test is administered in most foreign countries and test scores must be received by the University before admission to the University can be granted. Information as to the time and place at which this test is given may be obtained by writing to: Educational Testing Service (TOEFL), Princeton, New Jersey, 08540, U.S.A. Upon arrival at San Diego State University, a further test of English will be given for the purpose of placing students in an English language program commensurate with their linguistic ability in English, and for use by advisers to assist students in planning an appropriate course of study. All students, undergraduate and graduate, are required to take one or more of the following courses, depending upon performance on the placement test: Study Skills 131, 132, 133, or English 100. These courses must be taken in consecutive semesters, with first required course being taken during the student's first semester at San Diego State University. Foreign students transferring from another U.S. college may be required to take an English placement test.

Arrangements for housing should be completed before the student's arrival on the campus. Detailed information regarding housing may be obtained from the Director of Housing, San Diego State University. Scholarship aid for entering students is limited; no scholarships are specifically reserved for students from another country. Further information regarding scholarships will be found in the section of this bulletin on Financial Aid.

Upon arrival at San Diego State University the student should obtain an appointment as early as possible with the International Student Adviser.

Limitation of Enrollment

Admission to the University must be restricted in relation to the number of students for whom an adequate education can be provided by the staff and facilities available. Since spring 1976, San Diego State University has been limiting graduate enrollment on the basis of field and aptitude of the applicant.

Members of the faculty of San Diego State University holding appointments at or above rank of instructor or lecturer may not be candidates for degrees on this campus. Faculty may register for courses outside their own departments or schools by means of concurrent enrollment through the College of Extended Studies at a reduced fee.

Registration

San Diego State University students are afforded the opportunity to participate in an Advanced Registration system. On-campus registration is also held just prior to the beginning of each semester. The class schedule, issued each semester and obtainable at the University bookstore prior to the registration period, contains specific information on registration, the courses offered for the term, and a listing of the fees required for registration. Fees are payable at the time registration materials are submitted and depend on the number of units selected. Late registration at San Diego State University is permitted only in cases for which there is demonstrable justification.

Postbaccalaureate (Unclassified) Enrollment

A postbaccalaureate student (unclassified) is not eligible to enroll in 600- and 700-numbered courses. All credit earned by a postbaccalaureate student (unclassified) is subject to evaluation as to its acceptance for graduate credit in a master's degree curriculum.

Changes in Class Schedule

Students are responsible for any change in their semester's schedule of classes after the official study list has been filed. Forms for changes in the official study list may be obtained at the Office of Admissions and Records.

A change in schedule of classes includes the following: withdrawal from a class; adding a class; adding or reducing units to a class for which the student is already registered; changing sections of the same course. Consult calendar for deadline dates for change of schedule.

Concurrent Master's Degree Credit

A senior who is within 12 units of completing requirements for the bachelor's degree and whose grade point average in the last 60 semester units attempted is 3.0 or above may petition the Graduate Council to take for concurrent master's degree credit 500-numbered courses listed in the Graduate Bulletin as acceptable for master's degree programs, and certain 600- and 700-numbered courses approved by the department, with the remaining requirements for the bachelor's degree. Petitions must be submitted before the end of the first week of classes (or the first week of summer term II) of the semester (or term) in which the concurrent credit is earned. The bachelor's degree must be completed at the end of the semester or term in which the concurrent credit is earned. The maximum number of units which may be earned as concurrent master's degree credit is determined by the difference between the number of units remaining for the bachelor's degree and 15.

Second Master's Degree

A student desiring to work for a second master's degree must petition the Graduate Council for permission to enter a curriculum leading to the second master's degree. A student may be admitted into only one master's degree program at a time.

Regulations of the Graduate Division

Graduate students are individually responsible for complying with the procedures, regulations, and deadlines as set forth in the General Catalog of the university and in the Graduate Bulletin. All questions concerning graduate study at San Diego State University should be referred to the Graduate Division Office.

All graduate students admitted to San Diego State University after August, 1978 will be required to follow the procedures and regulations stated in the 1979-80 edition of the Graduate Bulletin. A student who was admitted to a graduate degree curriculum at this university prior to that date and who has been enrolled in one or more courses during each consecutive semester since first enrolling as a graduate student, or whose attendance has not been interrupted by more than two consecutive semesters, will be held responsible for the regulations in effect at the time his official master's degree program was approved.

Student Responsibility for Catalog Information

Students are held individually responsible for the information contained in the bulletin. Failure to read and comply with university regulations will not exempt students from whatever penalties they may incur.

Changes in Rules and Policies

Although every effort has been made to assure the accuracy of the information in this bulletin, students and others who use this bulletin should note that laws, rules, and policies change from time to time and that these changes may alter the information contained in this publication. Changes may come in the form of statutes enacted by the Legislature, rules and policies adopted by the Board of Trustees of The California State University and Colleges, by the Chancellor or designee of The California State University and Colleges, or by the President or designee of the institution. Further, it is not possible in a publication of this size to include all of the rules, policies, and other information which pertain to the student, the institution, and The California State University and Colleges. More current or complete information may be obtained from the appropriate department, or school, or administrative office.

Nothing in this bulletin shall be construed, operate as, or have the effect of an abridgement or a limitation of any rights, powers, or privileges of the Board of Trustees of The California State University and Colleges, the Chancellor of The California State University and Colleges, or the President of the campus. The Trustees, the Chancellor, and the President are authorized by law to adopt, amend, or repeal rules and policies which apply to students. This bulletin does not constitute a contract or the terms and conditions of a contract between the student and the institution or The California State University and Colleges. The relationship of the student to the institution is one governed by statute, rules, and policy adopted by the Legislature, the Trustees, the Chancellor, the President and their duly authorized designees.

Privacy Rights of Students in Education Records

The federal Family Education Rights and Privacy Act of 1974 (20 U.S.C. 1232g) and regulations adopted thereunder (45 C.F.R. 99) and California Education Code Section 67100 et seq., set out requirements designed to protect the privacy of students concerning their records maintained by the campus. Specifically, the statute and regulations govern 1) access to student records maintained by the campus, and 2) the release of such records. In brief, the law provides that the campus must provide students access to official records directly related to the student and an opportunity for a hearing to challenge such records on the grounds that they are inaccurate, misleading or otherwise inappropriate; the right to a hearing under the law does not include any right to challenge the appropriateness of a grade as determined by the instructor. The law generally requires that written consent of the student be received before releasing personally identifiable data about the student from records to other than a specified list of exceptions. The institution has adopted a set of policies and procedures concerning implementation of the statutes and the regulations on the campus. Copies of these policies and procedures may be obtained at the Office of the

Dean of Student Affairs. Among the types of information included in the campus statement of policies and procedures are: 1) the types of student records and the information contained therein; 2) the official responsible for the maintenance of each type of record; 3) the location of access lists which indicate persons requesting or receiving information from the record; 4) policies for reviewing and expunging records; 5) the access rights of students; 6) the procedures for challenging the content of student records; 7) the cost which will be charged for reproducing copies of records, and 8) the right of the student to file a complaint with the Department of Health, Education and Welfare. An office and review board have been established by the Department to investigate and adjudicate violations and complaints. The office designated for this purpose is The Family Educational Rights and Privacy Act Office (FERPA), Department of Health, Education and Welfare, 330 Independence Avenue, SW, Washington DC 20201.

The campus is authorized under the Act to release public directory information concerning students. Directory information includes the student's name, address, telephone listing, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, the most recent previous educational agency or institution attended by the student and any other information authorized in writing by the student. The above designated information is subject to release by the campus at any time unless the campus has received prior written objection from the student specifying information which the student requests not be released. Students shall be given an opportunity to restrict the release of directory information about themselves at the time of registration.

The campus is authorized to provide access to student records to campus officials and employees who have legitimate educational interests in such access. These persons are those who have responsibilities in connection with the campus' academic, administrative or service functions and who have reason for using student records connected with their campus or other related academic responsibilities.

Nondiscrimination on the Basis of Sex

The California State University and Colleges does not discriminate on the basis of sex in the educational programs or activities it conducts. Title IX of the Education Amendments of 1972, as amended, and the administrative regulations adopted thereunder prohibit discrimination on the basis of sex in education programs and activities operated by San Diego State University. Such programs and activities include admission of students and employment. Inquiries concerning the application of Title IX to programs and activities of San Diego State University may be referred to the Affirmative Action Officer, the campus officer assigned the administrative responsibility of reviewing such matters or to the Regional Director of the Office of Civil Rights, Region 9, 760 Market Street, Room 700, San Francisco, California 94102.

Nondiscrimination on the Basis of Handicap

The California State University and Colleges does not discriminate on the basis of handicap in violation of Section 504 of the Rehabilitation Act of 1973, as amended, and the regulations adopted thereunder.

More specifically, The California State University and Colleges does not discriminate in admission or access to, or treatment or employment in, its programs and activities. The Office of Student Affairs has been designed to coordinate the efforts of San Diego State University to comply with the Act and its implementing regulations. Inquiries concerning compliance may be addressed to this office at AD-231, 286-5211.

Numbering of Courses

Courses numbered from 100 to 299 are lower division (freshman or sophomore) courses; those numbered 300 to 499 are upper division (junior or senior) courses intended for undergraduates; those numbered 500 to 599 are upper division courses also acceptable for advanced degrees; those numbered 600 to 799 are graduate courses; and those numbered 800 through 899 are doctoral courses. Courses numbered X-900 to X-999 are those courses offered exclusively in the extension program to meet the professional needs of specific

community groups and are listed in the Extension Bulletin only. These courses are not acceptable on advanced degree programs.

In addition, courses below the 500 level are not acceptable for advanced degree programs.

Grading System

At the end of each semester or summer session in which a student is enrolled, a report of courses taken showing units and grades earned, is sent to the student. Grades and grade points per unit used in reporting are as follows: Grade of **A** (outstanding achievement; available only for the highest accomplishment), 4 points; **B** (praiseworthy performance; definitely above average), 3 points; **C** (average; awarded for satisfactory performance; the most common undergraduate grade), 2 points; **D** (minimally passing; less than the typical undergraduate achievement), 1 point; **F** (failing), 0 points; **I** (authorized incomplete), counted as units attempted after one year, 0 points; **SP** (satisfactory progress), not counted in the grade point average; **W** (withdrawal), not counted in the grade point average; **AU** (audit), no credit and not counted in the grade point average; **Cr** (credit), signifying units earned, but not counted in the grade point average; **NC** (no credit), no credit earned and not counted in the grade point average; **U** (unauthorized incomplete), counted as "F" for grade point average and progress point computation.

Plus/Minus Grading

A plus/minus grading system is utilized at San Diego State University. Plus/minus grading is not mandatory but is utilized at the discretion of the individual instructor. A plus entails the addition of .3 grade points to the letter grade value (e.g., B+ = 3.3 grade points); assigning a minus entails the subtraction of .3 grade points (e.g., B- = 2.7 grade points). The grades of A+, F+ and F- are not issued. The decimal values of plus and/or minus grades are utilized in the calculation of grade point averages as follows:

A - 4.0	C+ - 2.3	D- - 0.7
A- - 3.7	C - 2.0	F - 0
B+ - 3.3	C- - 1.7	U - 0
B - 3.0	D+ - 1.3	I - 0 (when counting as an "F")
B- - 2.7	D - 1.0	

Credit / No Credit Courses

Only those courses designated in the Graduate Bulletin as being offered for credit / no credit only will be approved for implementation.

The symbol "Cr" is used to report the satisfactory completion of Courses 797, 798, 799A, and certain 600- 700- and 800-numbered courses specifically designated in the Graduate Bulletin and class schedule. Failure to complete satisfactorily such courses will result in the assignment of "NC." No other 600-, 700-, or 800-numbered courses may be taken for credit/ no credit. No 500-numbered courses graded credit/no credit are acceptable on a master's degree program.

A grade of "Credit" is awarded for work equivalent to all grades which earn 2.0 or more grade points (A through C). "No Credit" is awarded for work equivalent to all grades which earn less than 2.0 grade points (C- through F).

Some specified sections of graduate level topics courses may be offered for credit/no credit provided the following statement is included in the course description in the Graduate Bulletin: "Specified sections of this course may be offered for credit/no credit. Refer to the class schedule."

Grade Point Averages

Grade point averages are determined by dividing the total number of grade points earned by the total number of units attempted in courses in which letter grades are assigned. For details see the section of this bulletin under Basic Requirements for the Master's Degree.

Authorized Incomplete Grade

The symbol "I" (Incomplete Authorized) indicates that a portion of required course work has not been completed and evaluated in the prescribed time period due to unforeseen, but fully justified, reasons and that there is still a possibility of earning credit. It is the responsibility of the student to bring pertinent information to the instructor and to reach

agreement on the means by which the remaining course requirements will be satisfied. The conditions for removal of the Incomplete shall be reduced to writing by the instructor and given to the student with a copy placed on file with the department chair until the Incomplete is removed or the time limit for removal has passed. An Incomplete shall not be assigned when it is necessary for the student to attend a major portion of the class when it is next offered. A final grade is assigned when the work agreed upon has been completed and evaluated.

An Incomplete must be made up within one calendar year immediately following the end of the term in which it was assigned. This limitation prevails whether or not the student maintains continuous enrollment. Failure to complete the assigned work within one calendar year will result in an Incomplete being counted as equivalent to an "F" (or an "NC") for grade point average and progress point computation.

Candidates for graduation whose record carries a grade of Incomplete will be graduated provided they are otherwise eligible for graduation. However, the Incomplete cannot be made up after the degree has been granted. If students do not wish to be graduated with the grade of Incomplete on their record, they must officially cancel their application for graduation.

Students desiring to have their names listed on the May Commencement Program must have removed all incomplete grades received in courses listed on official master's degree programs before the deadline date listed in the Academic Calendar of this bulletin.

Satisfactory Progress Grade

The "SP" symbol is used in connection with courses that extend beyond one academic term. It indicates that work is in progress and has been evaluated and found to be satisfactory to date, but that assignment of a precise grade must await completion of additional work. Cumulative enrollment in units attempted may not exceed the total number applicable to the student's educational objective. Work is to be completed within a stipulated time period. This may not exceed one year. Any extension of time limit must receive prior authorization by the Dean of Undergraduate Studies (for undergraduate courses) or the Dean of the Graduate Division and Research (for graduate courses).

Withdrawal Grade

The symbol "W" indicates that the student was permitted to drop the course after the fourth week of instruction with the signature of the instructor and the approval of the College Dean or designee. It carries no connotation of quality of student performance and is not used in calculating grade point average or progress points.

Unauthorized Incomplete Grade

The symbol "U" indicates that an enrolled student did not withdraw from the course but failed to complete course requirements. It is used when, in the opinion of the instructor, completed assignments or course activities or both were insufficient to make normal evaluation of academic performance possible. For purposes of grade point average and progress point computation this symbol is equivalent to an "F."

Uncompleted Theses

A student who registers for Course 799A, Thesis, but does not complete the thesis by the end of the semester or summer session in which he registers for it will, upon the recommendation of the Thesis Committee Chairman, receive an SP (satisfactory progress) grade. This grade symbol will remain on the student's record until the thesis is completed. **A second registration in Course 799A, Thesis, is expressly prohibited.**

A student who has been assigned the grade symbol SP for the thesis is required to register for Course 799B (0 units, Cr/NC) in any semester or term in which the student expects to use the facilities and resources of the university; also he must be registered in the course when the completed thesis is granted final approval.

Withdrawals

A graduate student who has been admitted to a graduate degree curriculum but has completed no courses at this university within the last calendar year is considered to have withdrawn from the curriculum. He may be required to file application for readmission to the Graduate Division if he wishes to resume his graduate study. A student who withdraws from a graduate curriculum will be required to comply with regulations and requirements in effect at the time he gains readmission to the Graduate Division.

Any student who was not in attendance during the semester preceding the semester in which he wishes to enroll and was not granted a leave of absence for that period must apply for readmission to San Diego State University.

Official Withdrawal

Students who wish to withdraw from the University must initiate action formally through the Admissions and Records Office. Failure to file will result in a failing grade in all courses. Under certain circumstances, complete withdrawal is possible up to three weeks preceding the last day of the semester; however, refunds are obtainable only for the first 14 days after the semester begins. A student withdrawing during the refund period is no longer considered a continuing student and is required to apply for readmission.

Withdrawal from a course, or courses, or from the University, is permitted without restriction or penalty before the end of the fourth week of classes. No courses will appear on the permanent record.

Withdrawal from a course, or courses, after the fourth week of classes and prior to the last three weeks of instruction is permissible only with the signature of each instructor and the approval of the college dean or designee. Withdrawal from the University after the fourth week of classes and prior to the last three weeks of instruction is permissible only with the signature of each instructor and the approval of the college dean or designee of each student's major. Postbaccalaureate (unclassified) students must have the signature of each instructor and the approval of the Dean of the Graduate Division or his designee. To be permitted to withdraw from a course or courses, or from the University during this period, the student must have serious and compelling reasons and documentation of those reasons must be provided. Poor academic performance is not an acceptable reason for withdrawal.

Withdrawal shall not be permitted during the final three weeks of instruction except in cases such as accident or serious illness where the cause of withdrawal is due to circumstances beyond the student's control and the assignment of an Incomplete is not practicable. Ordinarily, withdrawals in this category will involve total withdrawal from the University, except where sufficient work has been completed to permit an evaluation to be made. Requests for permission to withdraw under these circumstances must be approved by the Dean of the Graduate Division or his designee.

Improper Registration in Graduate Courses. The unauthorized registration of undergraduate students in all courses numbered in the 600 and 700 series, and the registration of graduate students who have not met the stated prerequisites for Course 799A, Thesis, at the time of registration, will be cancelled.

Unofficial Withdrawal

Students withdrawing unofficially from class or from the University will receive failing grades in all courses which they stop attending. An unofficial withdrawal is one in which a student stops attending classes without filing official withdrawal forms within the established deadlines.

Veterans unofficially withdrawing will have veteran's allowances immediately suspended and will be subject to full repayment of allowances received after date of unofficial withdrawal.

Educational Leave of Absence

Students are permitted to take a total of two semesters of approved leave of absence during their matriculation at San Diego State University *if it can be clearly established that the leave will contribute directly to a student's educational objective at this University.* No fees are involved.

At least five weeks prior to the registration period for the semester during which he/she wishes a leave, a student must file application for the leave at the Admissions and Records Office. Deadlines for filing may be obtained at that office. Requests will be reviewed by appropriate officials designated by the Vice President for Academic Affairs. Leaves cannot be revoked once granted, and no student will be permitted to register for a semester for which he has filed application for leave.

Approval for leaves of absence will not be granted to students who have been admitted but will not have completed at least one semester before the leave of absence period, or to students who are disqualified. To be eligible for leave an undergraduate must be eligible to return as an undergraduate; students qualifying for change in status from undergraduate to graduate are not eligible.

Readmission

A student who withdraws from the University must file application for readmission if a full semester elapses between his withdrawal and his return. A \$20 application fee for readmission is required if the applicant was not regularly enrolled in either of the two semesters immediately preceding the semester for which the application is submitted, or if the student was enrolled at another institution subsequent to the last attendance at San Diego State University.

Repeated Courses

Ordinarily a graduate student may not repeat courses which have been taken as part of the official master's degree program. A graduate student may, with prior written permission of the graduate adviser, repeat one course on the official program of study in which a grade of C, D or F has been received. Both grades will remain on the student's permanent record, and both grades will be calculated in the grade point average.

Probation and Disqualification

Scholastic Probation

A student who is enrolled in a graduate degree program in conditionally classified or classified standing shall be placed on academic probation if he/she fails to maintain a cumulative grade point average of at least 3.0 in all units attempted subsequent to admission to the program.

A student who is enrolled in any postbaccalaureate status other than in conditionally classified or classified standing shall be placed on academic probation if he/she fails to maintain a cumulative grade point average of at least 2.5 in all units attempted subsequent to admission to the University.

A graduate or postbaccalaureate student shall be subject to disqualification if, while on probation, he/she fails to earn sufficient grade points to remove himself/herself from probationary status. Disqualification may be either from further registration in a particular program or from further enrollment at the University, as determined by the Dean of the Graduate Division.

Scholastic Disqualification

Any postbaccalaureate student who has been admitted to a graduate degree curriculum and whose performance therein is judged to be unsatisfactory with respect to scholastic or professional standards as judged by the Graduate Council will be required to withdraw from all graduate degree curricula and his official status will be changed from classified graduate standing to unclassified postbaccalaureate standing.

Departments or Schools of the University may recommend that the Dean of the Graduate Division and Research dismiss from the University any graduate student whose performance in a degree, credential, or certificate program is judged unsatisfactory with respect to the academic or professional standards of the program.

Administrative-Academic Probation

A student may be placed on administrative-academic probation by action of appropriate campus officials for any of the following reasons:

1. Withdrawal from all or a substantial portion of a program of studies in two successive terms or in any three terms.
2. Repeated failure to progress toward the stated degree objective or other program objective (when such failure appears to be due to circumstances within the control of the student).
3. Failure to comply, after due notice, with an academic requirement or regulation which is routine for all students or a defined group of students (example: failure to take placement tests, failure to complete a required practicum).

Administrative-Academic Disqualification

A student who has been placed on administrative-academic probation may be disqualified from further attendance if:

1. The conditions for removal of administrative-academic probation are not met within the period specified.

2. The student becomes subject to academic probation while on administrative-academic probation.
3. The student becomes subject to administrative-academic probation for the same or similar reason for which the student has been placed on administrative-academic probation previously, although not currently in such status.

Petition for Readmission

A postbaccalaureate student disqualified from the University under the foregoing regulations may be readmitted to the University by the Dean of the Graduate Division and Research. Application for readmission must be made on forms available at the Office of Admissions.

Student Discipline and Grievances

Article 1.1, Title 5, *California Administrative Code*, reads as follows:

41301. Expulsion, Suspension and Probation of Students. Following procedures consonant with due process established, pursuant to Section 41304, any student of a campus may be expelled, suspended, placed on probation or given a lesser sanction for one or more of the following causes which must be campus related:

- (a) Cheating or plagiarism in connection with an academic program at a campus.
- (b) Forgery, alteration or misuse of campus documents, records, or identification, or knowingly furnishing false information to a campus.
- (c) Misrepresentation of oneself or of an organization to be an agent of a campus.
- (d) Obstruction or disruption, on or off campus property, of the campus educational process, administrative process, or other campus function.
- (e) Physical abuse on or off campus property of the person or property of any member of the campus community or of members of his or her family or the threat of such physical abuse.
- (f) Theft of, or nonaccidental damage to, campus property, or property of, or owned by, a member of the campus community.
- (g) Unauthorized entry into, unauthorized use of, or misuse of campus property.
- (h) On campus property, the sale or knowing possession of dangerous drugs, restricted dangerous drugs, or narcotics as those terms are used in California statutes, except when lawfully prescribed pursuant to medical or dental care, or when lawfully permitted for the purpose of research, instruction or analysis.
- (i) Knowing possession or use of explosives, dangerous chemicals or deadly weapons on campus property or at a campus function without prior authorization of the campus president.
- (j) Engaging in lewd, indecent or obscene behavior on campus property or at a campus function.
- (k) Abusive behavior directed toward, or hazing of, a member of the campus community.
- (l) Violation of any order of a campus president, notice of which had been given prior to such violation and during the academic term in which the violation occurs, either by such violation and during the academic term in which the violation occurs, either by publication in the campus newspaper, or by posting on an official bulletin board designated for this purpose, and which order is not inconsistent with any of the other provisions of this Section.
- (m) Soliciting or assisting another to do any act which would subject a student to expulsion, suspension or probation pursuant to this Section.
- (n) For purposes of this Article, the following terms are defined:
 - (1) The term "member of the campus community" is defined as meaning California State University and Colleges Trustees, academic, nonacademic and administrative personnel, students, and other persons while such other persons are on campus property or at a campus function.
 - (2) The term "campus property" includes:
 - (A) real or personal property in the possession of, or under the control of, the Board of Trustees of The California State University and Colleges, and
 - (B) all campus feeding, retail or residence facilities whether operated by a campus or by a campus auxiliary organization.
 - (3) The term "deadly weapons" includes any instrument or weapon of the kind of commonly known as a blackjack, slingshot, billy, sandclub, sandbag, metal knuckles, any dirk, dagger, switchblade knife, pistol, revolver, or any other

firearm, any knife having a blade longer than five inches, any razor with an unguarded blade, and any metal pipe or bar used or intended to be used as a club.

- (4) The term "behavior" includes conduct and expression.
- (5) The term "hazing" means any method of initiation into a student organization or any pastime or amusement engaged in with regard to such an organization which causes or is likely to cause, bodily danger, or physical or emotional harm to any member of the campus community, but the term "hazing does not include customary athletic events or other similar contests or competitions.
- (o) This Section is not adopted pursuant to Education Code Section 89031.
- (p) Notwithstanding any amendment or repeal pursuant to the resolution by which any provision of this Article is amended, all acts and omissions occurring prior to that effective date shall be subject to the provisions of this Article as in effect immediately prior to such effective date.

41302. Expulsion, Suspension or Probation of Students: Fees and Notification.

The President of the campus may place on probation, suspend, or expel a student for one or more of the causes enumerated in Section 41301. No fees or tuition paid by or for such student for the semester, quarter, or summer session in which he or she is suspended or expelled shall be refunded. If the student is readmitted before the close of the semester, quarter, or summer session in which he or she is suspended, no additional tuition or fees shall be required of the student on account of the suspension. In the event that a student who has not reached his or her eighteenth birthday, and who is a dependent of his or her parent(s) as defined in Section 152 of the Internal Revenue Code of 1954 is suspended or expelled, the President shall notify his or her parent or guardian of the action by registered mail to the last known address, return receipt requested.

During periods of campus emergency, as determined by the President of the individual campus, the President may, after consultation with the Chancellor, place into immediate effect any emergency regulations, procedures, and other measures deemed necessary or appropriate to meet the emergency, safeguard persons and property, and maintain educational activities.

The President may immediately impose an interim suspension in all cases in which there is reasonable cause to believe that such an immediate suspension is required in order to protect lives or property and to insure the maintenance of order. A student so placed on interim suspension shall be given prompt notice of charges and the opportunity for a hearing within 10 days of the imposition of interim suspension. During the period of interim suspension, the student shall not, without prior written permission of the President or designated representative, enter any campus of The California State University and Colleges other than to attend the hearing. Violation of any condition of interim suspension shall be grounds for expulsion.

Standards and procedures of discipline at San Diego State University are determined by these regulations and are coordinated by the Office of Judiciary Procedures.

Student Grievances

If a student believes that a professor's treatment of him is grossly unfair or that a professor's behavior is clearly unprofessional, he may bring his complaint to the proper university authorities and official reviewing bodies by following the *Procedures for Handling Student Grievances Against Members of the Faculty*, adopted by the Faculty Senate. A copy of the procedures may be obtained from the Ombudsman's Office in Aztec Center.

Transcripts of Record

A student may obtain an official transcript of his record by filing an application at the Registrar's Office. A fee of \$1 is charged for all transcripts and must be paid in advance. One week should be allowed for the processing and mailing of the transcript. Transcripts from other schools or colleges become the property of this university and will not be released nor will copies be made.

Auditors

Enrollment as an auditor is subject to permission of the instructor provided that enrollment in a course as an auditor shall be permitted only after students otherwise eligible to enroll on a credit basis have had an opportunity to do so. Auditors are subject to the same fee structure as credit students and regular class attendance is expected. Once enrolled as an auditor, a student may not change to credit status unless such a change is requested prior to the end of the fourth week of instruction. A student who is enrolled for credit may not change to audit after the fourth week of instruction.

Final Examinations

No final examination shall be given to individual students before the regular time. Any student who finds it impossible to take a final examination on the date scheduled must make arrangements with the instructor to have an incomplete grade reported and must take the deferred final examination within the time allowed for making up incomplete grades.

Transfer or Extension Course Credit

Subject to lower limitations for individual programs, as indicated in Part Four of this bulletin, the maximum amount of transfer and San Diego State University extension course credit acceptable on master's degree programs is nine units. Exceptions are the Master of City Planning degree, which permits 26 units (including a maximum of nine units of extension credit), the Master of Fine Arts in Drama, which permits 15 units (including a maximum of nine units of extension credit), and the Master of Social Work which permits 35 units (including a maximum of nine units of extension credit). All credit earned in other colleges or in San Diego State University extension courses is subject to approval by the appropriate graduate adviser and the Dean of the Graduate Division and Research. Credit earned by correspondence, by examination, or by extension at other institutions is not accepted as satisfying advanced degree requirements.

Credit earned through one semester of concurrent extension enrollment at this University may be considered residence credit for the master's degree. Concurrent extension enrollment allows nonmatriculated students who have completed individual course prerequisites and who meet the standards for regular enrollment to enroll in regular campus classes on a space available basis with the approval of the course instructor, department chairperson, graduate adviser, and Dean of the Graduate Division and Research.

Study List Limits in the Graduate Division

Section 40601 (j) of the Administrative Code defines the term "full-time student" to mean any student whose program while in attendance at a college averaged twelve or more semester units per semester, or the equivalent.

Graduate students are advised that 12 units of 600- and 700-numbered courses or 15 units of a combination of 500-, 600- and 700-numbered courses are the recommended maximum programs for one semester. Graduate students who are employed full time should not attempt to earn more than six units per semester.

Graduate students who are employed as graduate teaching assistants at San Diego State University are limited to 15 units of combined teaching assignments and coursework unless a request for excess load is approved by the Dean of the Graduate Division and Research. Graduate teaching assistants who enroll for more units than authorized will not receive credit on their official degree programs for the excess number of units completed.

Graduate students employed as graduate assistants are limited to 20 hours of work per week combined with a maximum of eight units of course work. Any excess load must be approved by the department chair and the Dean of the Graduate Division. Graduate assistants who enroll for more units than authorized will not receive credit on their official programs for the excess number of units completed.

Graduate teaching assistants and graduate assistants are advised to consult the *Graduate Teaching Assistant's Handbook* for further information on unit limitations.

General Requirements for Doctoral Degrees

The degree Doctor of Philosophy (Ph.D.) is offered jointly in four disciplines by San Diego State University and cooperating universities in chemistry with the University of California, San Diego; in ecology with the University of California, Davis, in education with the Claremont Graduate School, and in genetics with the University of California, Berkeley. The general requirements in these programs are identical; however, each program has some specific requirements which will be found in Part Four of this bulletin under Chemistry, Ecology, Education, and Genetics.

Students who wish to become candidates for the degree Doctor of Philosophy in Chemistry, Ecology, Education or Genetics should realize that the degree is granted for the capacity for original, independent, imaginative, and self-critical research rather than for the fulfillment of residence or course requirements alone. For those candidates who wish to prepare for a career in an academic institution the degree is also oriented toward excellence and enthusiasm in teaching. Students with acceptable baccalaureate degrees will normally spend at least three years of full-time study in earning the degree.

Admission to Graduate Study

An applicant for admission to a doctoral program must first be admitted to regular graduate standing in the appropriate campus of the University of California or the Claremont Graduate School, Claremont and to San Diego State University. Fees and regulations governing the doctoral programs are found in the Graduate Division Bulletin of San Diego State University and in the Graduate Studies Bulletins of each of the cooperating campuses of the University of California and/or of Claremont Graduate School.

Admission to the Programs

After a student has been formally admitted to the two Universities with appropriate graduate standing, he/she must declare his/her intention to enter the doctoral program by filing an application with the graduate adviser. The application must be approved and signed by the graduate adviser on each campus and forwarded to the graduate deans for formal certification of admission to the doctoral program. Entry occurs when the student is formally accepted by the graduate deans of each of the two Universities. The graduate adviser on each cooperating campus is the person consulted by the student for assessment of background and research interests and for planning of his program.

Residency Requirements

After formal admission to a doctoral program, the student must spend at least one year in full-time residence on each of the two campuses. The definition of residence must be in accord with the regulations of the University cooperating with SDSU. At San Diego State University the minimum of one year of full-time residence consists of registration in and completion of at least seven semester units each semester of the required year's residence.

Foreign Language Requirements

Candidates for the Doctor of Philosophy degree in Ecology must demonstrate a reading knowledge of at least one foreign language. This requirement must be satisfied before the student takes his qualifying examination. In Genetics foreign language preparation will usually be required for students whose area of research necessitates extensive reading of foreign language papers.

Qualifying Examinations, Advancement to Candidacy and the Dissertation

Although the procedural details of each doctoral program vary somewhat within the different programs, the general requirements are:

1. The student is examined by a committee representing the faculty of the cooperating institutions for his knowledge of the field in which he is enrolled. This examination, called a Qualifying Examination, ordinarily consists of written and oral parts. The

student must satisfy the cooperating departments that he is prepared in his field by passing this examination.

2. After passing the Qualifying Examination the student must apply to the graduate dean at the cooperating campus with which the student is associated for advancement to candidacy. After approval by both graduate deans, the student will be notified of advancement to candidacy by the graduate dean, University of California campus or Claremont Graduate School.
3. A dissertation (or thesis) on a subject chosen by the candidate and approved by a committee chosen by the Graduate Councils of the cooperating institutions is required of every candidate. Approval of the dissertation by this committee implies that the candidate has conducted an organized, independent investigation which has added significantly to the body of knowledge in the particular field and which has been reported in a satisfactory manner. Upon completion of the dissertation, the candidate must pass an oral examination conducted by a joint committee in which he is required to show the relationship of the dissertation to the general field in which the subject lies and to answer specific questions concerning his investigations.

Award of Degree

The degree Doctor of Philosophy in Chemistry, Ecology, Education or Genetics will be awarded jointly by the Regents or Trustees of the cooperating institution and the Trustees of The California State University and Colleges in the names of San Diego State University and the appropriate cooperating university campus.

Procedures

The time required for a student to complete the requirements for the degree is not expressed as units of credit or number of semesters completed but will ultimately depend upon the amount of time required to master the subject matter field and to complete a satisfactory dissertation.

Information on records, transcripts, fees, details of registration, petitions, and rules and regulations governing graduate students enrolled in the doctoral program is available from the Graduate Dean at each of the two cooperating institutions for each degree program.



Basic Requirements for the Master's Degrees

To receive the master's degree at San Diego State University, the candidate must have completed the following general requirements of the Graduate Division and the specific requirements listed in the appropriate sections of Part Four of this bulletin.

Examinations

As part of the admission procedure, all students desiring an advanced degree must take the Graduate Record Examination Aptitude Test, except for students holding a master's or higher degree from an institution which is a member of the Council of Graduate Schools of the United States.

Examinations required in the various subject matter fields of study are listed in the appropriate sections of Part Five, Courses and Curricula under Specific Requirements for the Master's Degree. (See below for the foreign language examinations and for the comprehensive examination required in lieu of thesis under Plan B.)

Official Programs of Study

Official programs of study are to be submitted to the Office of the Graduate Division and Research for approval after the student has been granted full classified graduate standing. The program must be submitted prior to the time the student wishes to be considered for advancement to candidacy. The bulletin governing the official program will be the bulletin in effect at the time the program is submitted to the Office of the Graduate Division and Research for approval.

Official master's degree programs of study, as signed or revised by the graduate adviser and approved by the Graduate Council, are binding unless the student withdraws from the University. Withdrawal is defined as having taken no courses during a calendar year.

A student who withdraws from the University and is later readmitted with classified graduate standing may, with the consent of the graduate adviser and the Graduate Council, continue his original official program of study or he may be required to submit a new program which complies with the requirements of the current *Graduate Bulletin*.

When courses listed on an official master's degree program deviate from the prescribed requirements as stated in the *Graduate Bulletin* a statement indicating justification for approval must be submitted to the Dean of the Graduate Division and Research by the department concerned.

It is the student's responsibility to complete the specific courses listed on the official program of study. No changes will be permitted unless approved by the graduate adviser and the Dean of the Graduate Division and Research. No course can be deleted from an official program of study after the course has been completed.

Foreign Language Requirement

When required to satisfy this requirement by passing the Graduate School Foreign Language Test in French, German, Russian, or Spanish, the student should make arrangements with the Test Office to take the appropriate test developed by the Educational Testing Service, 1947 Center Street, Berkeley, California 94704. Passing scores on these examinations are established by the Graduate Council.

Advancement to Candidacy

A student who holds classified graduate standing at San Diego State University and who meets its scholastic, professional, and personal standards may be considered for advancement to candidacy for the master's degree provided he has filed an official program of study approved by the graduate adviser and the Dean of the Graduate Division. For the Master of Arts, the Master of Science, the Master of Business Administration, and the Master of Public Administration degrees, a student may be advanced to candidacy after he has earned at least 12 units of postbaccalaureate study with a minimum grade point average of 3.0 (B); for the Master of City Planning degree, the student must have earned at least 24 units of postbaccalaureate study with a minimum grade point average of 3.0 (B); for the Master of Fine Arts in Drama degree, the student must have earned at least 30 units of

postbaccalaureate study with a minimum grade point average of 3.0 (B); for the Master of Science in Rehabilitation Counseling degree, the student must have earned at least 24 units of postbaccalaureate study with a minimum grade point average of 3.0 (B); and for the Master of Social Work degree, the student must have earned at least 24 units of postbaccalaureate study with a minimum grade point average of 3.0 (B).

In addition to having classified graduate standing and the grade point averages specified above, the student must (1) have maintained the grade point averages listed above in this section; (2) have completed all the undergraduate deficiencies and the special requirements of the department or school concerned; (3) have passed the foreign language examination if required; (4) have been recommended for advancement to candidacy by the department or school concerned; and (5) have been approved for advancement by the Graduate Council. Written notification of advancement to candidacy will be sent to the student from the Office of the Graduate Division and Research.

A minimum of nine units of courses listed on the official program of study must be enrolled in and completed *concurrent with or after* advancement to candidacy for the Master of Arts, the Master of Science, the Master of Public Administration, and the Master of Business Administration degrees. A minimum of 24 units on programs of study for the Master of City Planning, the Master of Fine Arts in Drama, the Master of Science in Rehabilitation Counseling, and the Master of Social Work degrees must be enrolled in and completed *concurrent with or after* advancement to candidacy. Removal of incomplete grades does not meet this requirement.

Unit Requirements

Credit earned by correspondence or by examination is not acceptable on advanced degree requirements. Courses applied toward one advanced degree may not be applied toward another advanced degree.

Master of Arts, Master of Science, and Master of Public Administration Degrees

Thirty units (36 units for the Master of Science in Counseling degree, the Master of Public Administration, and the Master of Science degree in Psychology with a concentration in clinical psychology) of approved 500-, 600- and 700-numbered courses earned in graduate standing, at least 21 of which must be completed in residence. At least 15 units must be in 600- and 700-numbered courses. Not more than a total of nine units in approved extension and transfer courses may be used to satisfy the minimum units required for the degree. Courses required to remove undergraduate deficiencies are in addition to the minimum 30 units required for the degree. *Not more than a total of six units in courses numbered 797 and 798 will be accepted for credit toward the degree.*

Master of Business Administration Degree

Between 30 and 60 units (depending upon the student's background) of 600- and 700-numbered courses specified by the College of Business Administration at least 21 of which must be completed in residence. Not more than nine units of approved transfer credit are acceptable for this degree. *Not more than a total of six units in Course 797, Research, and Course 798, Special Study, will be accepted for credit toward the degree.*

Master of City Planning Degree

Fifty-six units of approved 500-, 600- and 700-numbered courses earned in graduate standing, at least 30 of which must be completed in residence. Courses required to remove undergraduate deficiencies are in addition to the minimum 56 units for the degree. *Not more than a total of nine units in courses 797 and 798 will be accepted for credit toward the degree.*

Master of Fine Arts in Drama Degree

Sixty units of 500-, 600- and 700-numbered courses specified by the Department of Drama, at least 45 of which must be completed in residence. Courses required to remove undergraduate deficiencies are in addition to the minimum 60 units for the degree. *Not more than a total of six units in course 798 will be accepted for credit toward the degree.*

Master of Science in Rehabilitation Counseling Degree

Sixty units of 600- and 700-numbered courses specified by the Rehabilitation Counselor Program, at least 30 of which must be completed in residence. Courses required to remove

undergraduate deficiencies are in addition to the minimum 60 units for the degree. *Not more than a total of nine units in courses 740 and 750 will be accepted; not more than a total of nine units in courses 720 and 730 will be accepted.*

Master of Social Work Degree

Fifty-six units of 600- and 700-numbered courses specified by the School of Social Work at least 21 of which must be completed in residence. Courses required to remove undergraduate deficiencies are in addition to the minimum 56 units for the degree.

Degree Time Limitations

In all advanced degree curricula offered at San Diego State University, any course completed more than seven years prior to the date on which all requirements for the degree are completed cannot be used to satisfy unit requirements of the official program of study. The Graduate Council, on recommendation of the department or school concerned, may extend the time for students who pass a comprehensive examination in the relevant course or courses. With the approval of the graduate adviser and the Dean of the Graduate Division, an outdated course may be repeated, a more recently completed course substituted, or additional coursework of equal unit value assigned. Specifically required courses must either be repeated or validated by examination. In some instances, the graduate adviser and the Graduate Council may authorize students in Plan A to validate outdated courses by passing a comprehensive examination over the entire subject field of the degree.

A course completed prior to seven years of the date that the official master's degree program is approved cannot be listed on the program.

Thesis, Plan A and Non-Thesis, Plan B

Plan A, requiring a thesis, may be selected by a student seeking the master's degree provided the department or school concerned approves the listing of Course 799A, Thesis, on the official program of study. Three units of "Cr" are granted for the satisfactory completion of the thesis or project following its acceptance by the student's thesis committee, the department or school concerned, and the Graduate Council. Assigning of "Cr" grade for the thesis is the responsibility of the Graduate Division Office. Registration in Course 799A, Thesis, is required; however, students will not be permitted to register for this course until they have received official notification of advancement to candidacy from the Graduate Division Office and have an officially appointed thesis or project committee on file in the Graduate Division office.

Two microfiche copies and one bound copy of all master's theses or projects are accessioned by the library of San Diego State University and are subject to the regulations of the library with respect to the circulation or duplication of its cataloged materials. Students are advised to purchase a current copy of the *Manual of Instruction for the Preparation and Submission of the Master's Thesis or Master's Project* at the Aztec Shops.

Plan B, requiring a comprehensive examination in lieu of a thesis, may, with the approval of the department or school concerned, be followed in certain graduate degree curricula as indicated in Part Four of this bulletin. Dates on which comprehensive examinations in lieu of theses are given are determined by the department or school concerned. Results on comprehensive examinations must be reported to the Graduate Division Office by the department or school. Refer to the calendar in Part One of this bulletin for deadline dates.

Thesis Research Involving Human Subjects

University policy and procedures for research involving human subjects is published in *Policy and Procedures for the Protection of Human Subjects*, which is available in departmental offices and from the committee (Physics 343, 286-6622). Students should allow for a minimum of two weeks after a protocol statement has been submitted to the committee. Approval must be obtained from the committee prior to data collection. Approval is also required prior to submission of the completed thesis to the Graduate Division Office.

Grade Point Averages

Grade point averages of at least 3.0 (B) must be maintained in:

1. All programmed courses required for the removal of undergraduate deficiencies.

2. All programmed courses including courses accepted for transfer credit and courses taken concurrently with or subsequently to courses accepted for transfer.
3. All courses, 300-level and above, taken at San Diego State University concurrently with or subsequent to the earliest course listed on the official master's degree program.

No transfer or extension credit may be used to improve the grade point average of units completed at San Diego State University.

Grade Restrictions for Master's Degree Programs

No course in which a final grade below "C" (2.0) was earned may be used to satisfy the requirements for an advanced degree. No 500-numbered courses graded Credit/No Credit are acceptable on a master's degree program. No undergraduate courses graded Credit/No Credit may be assigned to the deficiencies and/or foreign language option(s) of a master's degree program. At least 70% of the units used to fulfill the minimum requirements on a master's degree program shall be graded on an A, B, C, D, F basis.

Final Approval

The student's official program of study as approved by the graduate adviser and the Graduate Council and all required examinations must be completed in a satisfactory manner before the student will be recommended for the degree by the Graduate Council.

Writing Competency

The University requires that all candidates for an advanced degree demonstrate writing competency in the English language. This requirement may be met by successful completion of the comprehensive examination in Plan B or final approval of a thesis or project in Plan A. In those instances in which a thesis or project is written in a language other than English, the student is required to pass a writing competency examination administered by the relevant department.

In cases of organic disorder that make it impossible for the student to fulfill the ordinary obligations of writing competency, alternative modes will be used. (Sec. 504 of the Rehabilitation Act.)

Application for Graduation

Graduation is not automatic on the completion of degree requirements. The student must file an application in the Graduate Division Office during the semester or term in which he expects to be graduated. Refer to the calendar preceding Part One of this bulletin for deadline dates.

In the event that the student does not graduate in the semester or term in which he applies, he must reapply (and pay the graduation fee) in the subsequent semester or term in which he expects to be graduated. Students being graduated with an advanced degree are required to file an application for readmission in order to return to the University and enroll in courses.

Award of Degrees

The Board of Trustees of The California State University and Colleges, upon recommendation of the faculty of San Diego State University, awards the appropriate diploma or degree to a student who has completed the prescribed course of study.

Diploma

The appropriate diploma is forwarded to the student by the Graduate Division Office.

Master's Degree in Special Major

General Information

When special needs and interests cannot be met adequately by any of the existing advanced degree programs, a student may propose a Master of Arts or Master of Science degree in Special Major. This degree provides the unusually well qualified student an opportunity for highly individualized graduate studies comprised of course work in two or more departments or colleges. The degree is administered by the Graduate Division Office and follows procedures established by that office.

The proposed program must be approved by the department chairs and deans concerned, and must not be substantially available in a current graduate program offered at this University; it must have adequate focus and coherence in cognate disciplines. Prerequisite courses will be required to support the courses in the student's program of study.

A graduate supervisory committee and the field of study shall be chosen subject to the approval of the Dean of the Graduate Division and Research, in consultation with the Graduate Council Curriculum Committee. The supervisory committee shall consist of not less than three full-time appropriate faculty, representative of the areas in which the student intends to pursue the degree. The graduate dean, or his designee, shall serve on the committee as an ex officio member.

Admission to Graduate Study

In addition to satisfying the requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin, the student must (1) possess an appropriate background for the program, consisting of undergraduate work with a minimum 3.0 GPA overall; and (2) complete the GRE Aptitude Test with a minimum score of 1100.

Advancement to Candidacy

In addition to satisfying the general requirements of the University for advancement to candidacy, as stated in Part Three of this bulletin, the student must satisfy the special requirements for advancement defined by the supervisory committee in the official program of study. These requirements will include demonstrated proficiency in at least one appropriate research tool, ordinarily the reading knowledge of a foreign language.

Requirements for the Master's Degree

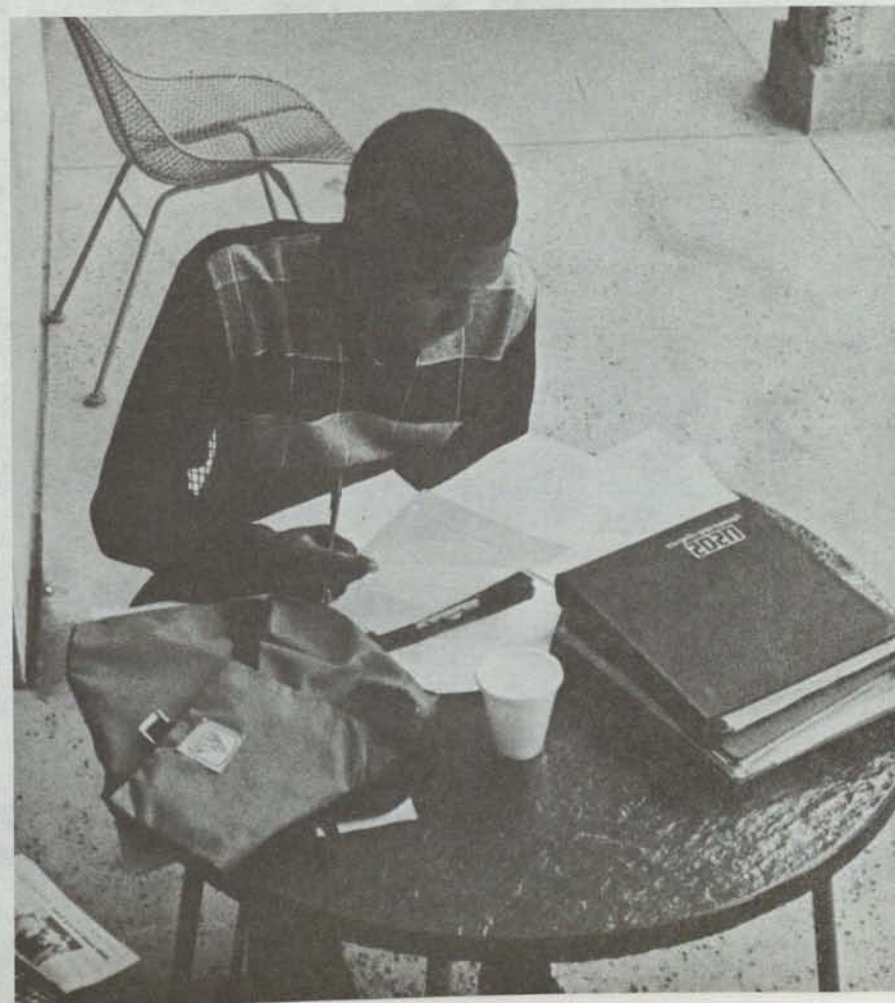
1. In addition to satisfying the requirements for classified graduate standing and the basic requirements for the master's degree, as described in Part Three of the Graduate Bulletin, the student must complete a graduate program of at least 30 units of courses acceptable for advanced degree credit.
2. The official program of study must reflect careful and deliberate planning. The selection and level of courses will be based on the best standards and practices of the disciplines involved. Normally no more than three units which have been taken prior to approval of the official program of study may apply on the degree.
3. The student, in consultation with the supervisory committee, will determine the subject of the research for a thesis which will be completed as the culminating experience in partial fulfillment of the requirements for the degree. Students will enroll for thesis in the department of the chair of the supervisory committee. Satisfactory completion of the thesis will be determined by the supervisory committee.

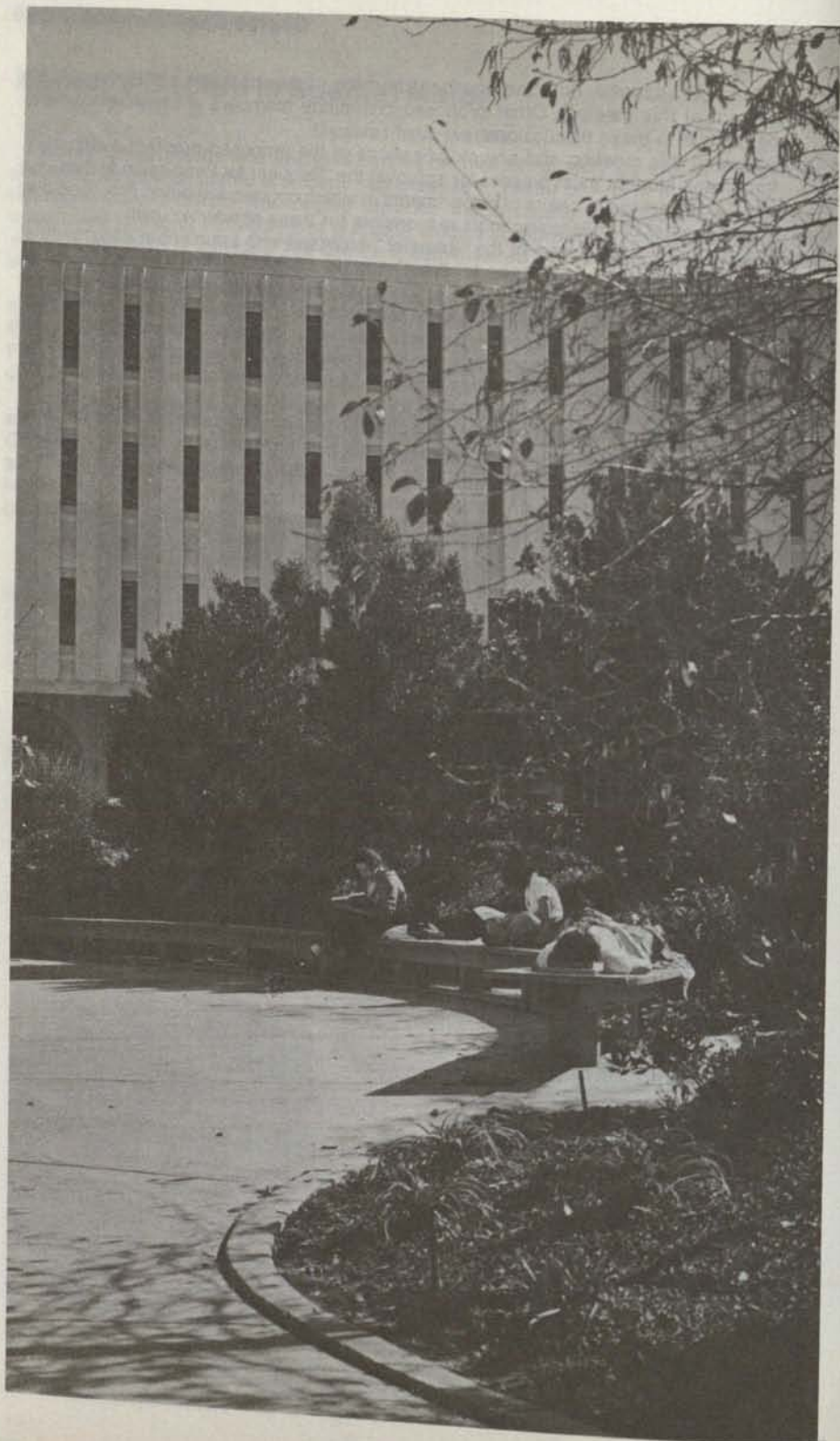
General Procedures for the Program

1. A prospective applicant interested in being considered for the Special Major program should carefully complete and follow the instructions on the form, "Request for Permission to Pursue a Special Major Master's Degree Program," which is available in the Graduate Division Office. This form specifies that the applicant must initially seek out a potential faculty adviser and two additional faculty members who have the expertise and interest in advising and supporting the applicant in the proposed program of study.
2. When the student's portion of the form has been completed, the major adviser selected, and other potential supervisory committee members contacted, an appointment with the Dean or Associate Dean of the Graduate Division and Research

should be arranged. Both the applicant and the proposed major adviser should be present at this meeting. Other proposed committee members are also welcome to participate in these discussions.

3. Following this meeting and any modifications of the proposed program eventuating from it, the student must present for approval the "Request for Permission to Pursue a Special Major" to the chairs of departments in which courses are being proposed and to the dean(s) of colleges/schools responsible for these academic units.
4. The student will then present the "Request," endorsed with appropriate departmental and college/school approvals, to the Graduate Division Office, where it will be reviewed by the Graduate Council Curriculum Committee. Upon the recommendation of that committee, the "Request" will be forwarded to the graduate dean, whose final endorsement will certify that the "Request" has been approved as an official program of study, that the supervisory committee has been formally appointed, and that the student has been granted classified graduate standing for the purpose of pursuing the special major.
5. Virtually all other requirements for the special major are the same as those for other master's degree programs, as specified in this bulletin. Special questions should be directed to the approved graduate major adviser and/or the Graduate Division Office.





Courses and Curricula

This section contains the specific requirements for all graduate courses administered by the University of California, San Diego. It is intended to provide a comprehensive overview of the program and to serve as a guide for students and faculty alike. The information is organized into several sections, including a general overview, a list of courses, and a detailed description of the curriculum. The general overview section provides a brief history of the program and its goals. The list of courses section provides a complete list of all courses offered, including their titles, numbers, and descriptions. The detailed description of the curriculum section provides a more in-depth look at the program, including information on the required courses, the elective courses, and the thesis or dissertation requirements. This section also provides information on the grading system, the honors program, and the options for students who wish to pursue a Ph.D. degree.

PART FOUR

Courses and Curricula

General Information

The Department of Education at the University of California, San Diego, is committed to providing a high-quality education for all students. Our courses are designed to be challenging and to provide students with the knowledge and skills they need to succeed in their careers. We offer a wide range of courses, from introductory courses to advanced courses. Our curriculum is designed to be flexible, allowing students to tailor their education to their interests and career goals. We also offer a variety of support services, including tutoring, writing centers, and career counseling, to help students succeed. Our faculty members are experts in their fields and are committed to providing the best possible education for their students. We encourage all students to take full advantage of the resources we offer and to strive for excellence in their studies.

Only those students who have been admitted to the University of California, San Diego, and who are currently enrolled in a graduate program may apply for admission to the Department of Education. Applicants must have a minimum GPA of 3.0 and must have completed a bachelor's degree from an accredited institution. The application process is competitive, and we receive a large number of applications each year. We encourage all qualified students to apply and to provide as much information as possible to help us evaluate their qualifications.

Thesis Extension (TEB)

The course is designed to provide students with the knowledge and skills they need to succeed in their careers. It is a required course for all students who are pursuing a Ph.D. degree. The course covers a wide range of topics, including the history of the field, the current state of research, and the methods used to conduct research. Students are expected to read and discuss a large number of articles and books, and to participate in class discussions. The course is taught by a faculty member who is an expert in the field. The course is designed to be challenging and to provide students with the opportunity to develop their critical thinking and writing skills. The course is a key component of the Ph.D. program and is essential for students who wish to pursue a career in research or in a related field.

Unit or Credit Hour

The course is designed to provide students with the knowledge and skills they need to succeed in their careers. It is a required course for all students who are pursuing a Ph.D. degree. The course covers a wide range of topics, including the history of the field, the current state of research, and the methods used to conduct research. Students are expected to read and discuss a large number of articles and books, and to participate in class discussions. The course is taught by a faculty member who is an expert in the field. The course is designed to be challenging and to provide students with the opportunity to develop their critical thinking and writing skills. The course is a key component of the Ph.D. program and is essential for students who wish to pursue a career in research or in a related field.

Courses and Curricula

This section contains the specific requirements for all graduate degrees authorized at San Diego State University by the Board of Trustees of The California State University and Colleges. These specific requirements of departments or schools supplement and are in addition to the basic requirements for the master's degree as stated in Part Three of this bulletin. All official master's degree programs must be prepared in conformity with the basic and specific requirements for the degree in question.

In addition, courses acceptable for credit toward a master's degree are listed under major fields and areas of concentration. Each course is listed by department number, title, and units. Not all courses are offered every semester or every year. Ordinarily each listed course will be offered not less than once during a two-year period. For courses offered in a semester, together with the time and place of meeting, consult the semester *Class Schedule*, which is available at the Aztec Shops prior to the date of registration of each semester, or the Summer Session Bulletin, which is available prior to the opening of summer session.

San Diego State University reserves the right to withdraw any course listed in the class schedule for which the enrollment is not sufficient to warrant the organization of a class.

Prerequisites for graduate courses

Graduate level (600- and 700-numbered) courses require, as general prerequisites, graduate standing, and competence in the specified field as indicated by a substantial amount of upper division study in the field or in a closely related field. Unless otherwise specified in the course description, graduate level courses are open to classified graduate students with the permission of the instructor. Undergraduate students are not permitted to enroll in 600- and 700-numbered courses except under special circumstances (see section "Concurrent Master's Degree Credit"). Unauthorized enrollment of undergraduate students in 600- and 700-numbered courses may be cancelled or, if the course is completed before graduate standing is attained, only undergraduate credit will be earned for the course.

Prerequisites for each course are stated in the course description.

The student should not register for any course for which he has not completed the indicated prerequisites. The one exception to this is that he may register for the course without having completed the stated prerequisites if he has secured the consent of the instructor.

Registration in Course 798, Special Study, must be arranged by the student through the instructor, the major adviser, and the chair of the department concerned. Forms for this purpose are available in the departmental offices.

Only those students who have been advanced to candidacy and who have an officially appointed thesis committee are permitted to register for Course 799A, Thesis. Clearance for registration in this course must be obtained by the student from the Office of the Graduate Division and Research.

Thesis Extension (799B)

This course is intended solely for those graduate students who have had prior registration in Thesis 799A, with an assigned grade symbol of SP. A student is required to register in TE799B (0 units, Cr/NC) in any semester or term following assignment of SP in Course 799A in which he expects to use the facilities and resources of the University; also he must be registered in the course when the completed thesis is granted final approval.

Unit or Credit Hour

In the listing of courses that follows, figures in parentheses indicate the unit value of the course. One unit or credit hour represents 50 minutes of recitation or lecture, together with the required preparation, or three hours of laboratory work or two hours of activities, each week for a semester of 18 weeks.

American Studies

Faculty

Graduate Advisers: Members of the American Studies Committee. Contact C.A.L. Student Advising Center, LE-469.

Faculty members in the departments participating in the degree program are listed in the American Studies Handbook, available from the C.A.L. Student Advising Center, LE-469.

Committee on American Studies

F. Foster	P. Vartanian
W. Johnson	C. Wall
H. J. Lewin	S. N. Weber
R. W. Redding	D. Weinberg
V. Rohrl	

General Information

The American Studies program at San Diego State University is one of thirty-three in the nation and one of six in California that offer an advanced degree. The Master of Arts degree in American Studies is an interdisciplinary degree administered by the American Studies Committee. Even though the American Studies idea is nearly fifty years old, its interdisciplinary approach has kept it flexible. Students are encouraged to accentuate courses which develop their experiences and their interests. While there are specific degree requirements, diversity characterizes the program and no one pattern or approach exists to which students are expected to conform.

The program is designed to offer systematic training for students desiring an interdisciplinary study of American Civilization. It is intended to meet the needs of students who (1) plan to continue their study in doctoral or other advanced programs in American Studies or in disciplines emphasizing areas of American orientation, (2) plan a career in secondary or junior college teaching, or (3) are seeking a broad background for professional degrees, or business or government service.

The student body is drawn from many states outside of California and lends the program a cosmopolitan atmosphere. An active student association publishes its own newsletter, provides its own activities, and participates in the administrative functions of the American Studies Committee. As a result, students in the academic program share a significant sense of identity and community.

Admission to Graduate Study

In addition to meeting the requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin, the student must present a Bachelor of Arts degree with a major in American Studies, or a Bachelor of Arts degree which includes a minimum of 24 upper division units in American culture. In addition, the American Studies program requires a GPA of 3.0 in the last 60 undergraduate units attempted. A student whose preparation is deemed insufficient by his graduate adviser or by the American Studies Committee will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Three of this bulletin. In addition, students will be required to pass an oral examination, details of which are available from the graduate adviser.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Three of this bulletin, the student must complete a minimum of 30 units, at least 24 of them from courses listed below

as acceptable on master's degree programs. At least 18 units must be in 600- and 700-numbered courses. Required courses are 501, Study of American Culture, at least two seminars, as well as methodological courses in one or more disciplines related to the study of American culture, as recommended by the American Studies Committee. The program must include a concentration of at least 12 (but not more than 15) units, excluding Thesis 799A, in one of the following fields:

American Literature and Philosophy
American History
Social Sciences and Education
Fine Arts

The remaining units must be chosen from the other fields, with approval of the adviser.

In addition, students will be required to (1) demonstrate a reading knowledge of language other than English, or (2) complete six units in linguistics, chosen from American English courses (Linguistics 510, 520, 524, 551 or 552), or (3) complete six units in quantitative techniques chosen from courses such as Geography 557 and 585, Political Science 515A-151B, or others chosen by the adviser. These courses are not to be included as a part of the minimum 30-unit program if completed by the student as the option for the fulfillment of the foreign language requirement.

The thesis requirement for Plan A may be met in one of several ways. The American Studies thesis may consist of a single extended work dealing with a problem interdisciplinary in nature or from an interdisciplinary perspective; or it may consist of three papers (one of which may be a project), bearing upon a cultural problem from a convergent or divergent focus. Exploration of these options should be taken up with the adviser.

All programs will be approved by the American Studies Committee.

Courses Acceptable on Master's Degree Programs in American Studies

UPPER DIVISION COURSES IN AMERICAN STUDIES

501. Study of American Culture (3) II

Prerequisite: Major in American studies; open to other students with permission of instructor.

American studies as a discipline, the critical methods of the field, the variety of materials for interdisciplinary study.

580. Topics in American Studies (1-3) I, II

Topics dealing with cultural images and myths, social protest, folklore; themes focusing upon fear, alienation and nationalism; problems around racism, minorities and counter-cultures. See Class Schedule for specific content. May be repeated once with new content; and with the approval of the adviser, more than once by American studies majors. Maximum credit six units applicable on a master's degree in American studies.

Literature and Philosophy:

American Studies Course

580. Topics in American Studies (3)

English Courses

521. Major and Minor Periods in American Literature (3)
522. Individual American Author (3)
523. Individual Movement in American Literature (3)
524. Individual Issues in American Literature (3)
525. Studies in American Fiction (3)
526. Studies in American Poetry (3)
527. Studies in American Drama (3)

Linguistics Courses

510. History of English (3)
520. Modern English (3)
524. American Dialectology (3)
551. Sociolinguistics (3)
552. Psycholinguistics (3)

Philosophy Course

564. American Philosophy (3)

History:

History Courses

530. Colonial America (3)
531. The American Revolution (3)
532. The United States, 1789-1828 (3)
533A-533B. Jacksonian Democracy, Civil War and Reconstruction (3-3)
534. The Rise of Modern America, 1868-1900 (3)
535A-535B. The United States, 1901-1945 (3-3)
536. The United States in the Nuclear Age (3)
537A-537B. The Westward Movement (3-3)
539A-539B. Black American Civilization (3-3)
540. Environmental History of the United States (3)
541A-541B. California (3-3)
543A-543B. The City in American History (3-3)
545A-545B. Constitutional History of the United States (3-3)
546A-546B. Development of American Capitalism (3-3)
547A-547B. Intellectual History of the American People (3-3)
548A-548B. Social History of the United States (3-3)
596. Selected Studies in History (when content relates to American Studies) (1-4)

Social Sciences and Education:

Anthropology Course

520. Ethnological Field Methods (3)

Geography Courses

566. Environment Perception and Spatial Behavior (3)
570. Land Use Analysis (3)
573. Geography as Human Ecology (3)
575. Geography of Recreational Land Use (3)

Journalism Courses

500. Current Problems in Mass Communications (3)
503. History of Mass Communications (3)
508. Mass Communication and Society (3)

Political Science Courses

522. Urban Politics (3)
531. Political Groups and Movements (3)
547A-547B. American Constitutional Law (3-3)

Sociology Courses

525. Minority Group Relations (3)
545. Sociology of Mass Communications (3)
546. Collective Behavior (3)
547. Sociology of Social Movements (3)
557. Urban Sociology (3)

Fine Arts:

Art Course

560. History of American Art (3)

Comparative Literature Course

570. Folk Literature
(when relevant to American Studies) (3)

Religious Studies Courses

520. Religious Consciousness in American Society (3)
522. Religion in America (3)

GRADUATE COURSES IN AMERICAN STUDIES**799A. Thesis (3) Cr/NC**

Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis, 799A, with an assigned grade symbol of SP. Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the University; also student must be registered in the course when the completed thesis is granted final approval.

Literature and Philosophy:**English Courses**

(The English courses listed are acceptable when content relates to American Studies.)

- 625. American Literature (3)
- 700. Seminar: A Major Author (3)
- 710. Seminar: A Cultural Period (3)
- 720. Seminar: Special Topics (3)
- 730. Seminar: A Literary Type (3)

American History:**History Courses**

- 630. Directed Reading in United States History (3)
- 635. Seminar in United States History (3)

Social Sciences and Education:**Education Course**

- 682. Social Foundations (2 or 3)

Geography Courses

(The geography seminars listed are acceptable when content relates to American Studies.)

- 620. Seminar in Regional Geography (3)
- 650. Seminar in Systematic Geography (3)

Political Science Courses

- 620. Seminar in American National Government (3)
- 625. Seminar in Political Participation (3)

Sociology Courses

- 700. Seminar in Social Theory (3)
- 730. Seminar in Social Institutions
(when relevant to American Studies) (3)

Fine Arts:**Art Courses**

(The art seminars listed are acceptable when content relates to American Studies)

- 760. Seminar in Modern Art (3)
- 767. Seminar in Primitive Art (3)

Drama Course

- 647B. Seminar in History of Theatre and Drama-American (3)

Music Course

- 652E. Seminar in Music History-American Music (3)

Speech Communication Course

- 780. Seminar in Public Address (3)

All 798 (Special Study) courses in named departments, when relevant, are also applicable upon approval of the Graduate Program Coordinator.

Anthropology**Faculty**

Chair, Department of Anthropology: L. L. Leach

Coordinator of Graduate Programs in Anthropology: D. D. Whitney

Graduate Advisers:

Archaeology: L. L. Leach

Physical Anthropology: L. K. Lippold, M. J. Moore, A. Sonek, Jr.

Ethnology: V. Goldkind, D. D. Whitney

Ethnohistory: J. W. Ball

Social Anthropology: W. C. Pendleton

Ethnolinguistics: P. J. Greenfeld, R. S. Himes

Professors: Goldkind, Leach, Lippold, Pendleton, Watson, Whitney

Associate Professors: Greenfeld, Henry, Himes, Moore, Pillsbury, Rohrl, Staniford

Assistant Professors: Ball, Bartel, Sonek

Assistantships

Graduate teaching assistantships in anthropology are available to a limited number of qualified students. Application blanks and additional information may be secured from the chairman of the department.

General Information

The Department of Anthropology, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Anthropology. For graduate study in connection with the Master of Arts degree in Social Science, refer to the section of this bulletin under Social Science. The Master of Arts degree with a major in Anthropology is designed to provide systematic advanced training for (a) students who anticipate additional work leading to the doctoral degree in anthropology, and also for (b) students who plan to terminate their graduate training at the master's level.

Research and special instructional facilities provided by the Department of Anthropology include laboratories for California Archaeology, Ethnology, Linguistics, Physical Anthropology, and World Prehistory. Additional facilities available in the community include the Museum of Man and the San Diego Zoo.

Admission to Graduate Standing

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, students seeking the Master of Arts degree in Anthropology must have completed or complete at least 15 upper division units including Anthropology 301, Principles of Physical Anthropology; Anthropology 302, Principles of Archaeology; Anthropology 303, Principles of Cultural Anthropology; Anthropology 304, Principles of Anthropological Linguistics; and Anthropology 305, History of Anthropological Theory, or the equivalent to those required for an undergraduate major in anthropology at San Diego State University. The student must have an overall 3.0 (B) grade point average in undergraduate courses or consent of the department.

Copies of transcripts and GREAT scores are to be sent to the Admissions Office. In addition to these and the University admission forms, students applying to the department are asked to submit (1) at least three letters of recommendation from persons in a position to judge academic ability; and (2) at least one typewritten example of their previous work (e.g., a term paper or an original experiment). Materials should be submitted by December 1 for admission for spring semester and May 1 for the fall semester.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Three of this bulletin. In addition, the students must: (1) satisfactorily complete two of the four core seminars (601, 602, 603, and 604) with a grade point average of 3.0 or better; (2) be recommended for advancement to candidacy by the faculty of the Department of Anthropology; and (3) according to the specific recommendation of the Department of Anthropology, pass either an examination demonstrating reading knowledge of an appropriate foreign language, or complete a sequence of at least one lower division and one upper division course (with a grade point average of 2.0 or better) in either: (a) a foreign language other than Spanish, German, French or Russian, or (b) Statistics.

Specific Requirements for the Master of Arts Degree

In addition to meeting the basic requirements for the Master of Arts degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units of which at least 24 units must be in 600- and 700-numbered courses in anthropology, to include:

1. Anthropology 601, 602, 603, and 604 (with a grade point average of 3.0 or better in these courses);
2. Anthropology 797, Research (3) (to be taken after advancement to candidacy);
3. Anthropology 799A, Thesis (3).

A final oral examination on the general field of the thesis must be passed as a requirement for the degree. Only Plan A, requiring the thesis, is permitted for the Master of Arts degree in Anthropology.

Courses Acceptable on Master's Degree Programs in Anthropology

UPPER DIVISION COURSES

500. Primate Social Behavior (3)

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 406.

Analysis of modes of primate socialization. Development of social behavior with emphases on communication, group structure, aggression, and sex. Various methods of analysis and observation practiced utilizing primate collection at the San Diego Zoo.

501. Human Paleontology (3)

Prerequisite: Anthropology 101 or 400A.

Comparative anatomy of fossil man and other primates; evolutionary relationships and cultural associations.

502. Microevolution (3)

Prerequisite: Anthropology 301.

The evolution of human populations over a short period of time. Interaction of the evolutionary forces of mutation, selection, drift and gene flow with the cultural systems of human populations.

503. Human Variation (3)

Prerequisite: Anthropology 101 or 400A.

Morphological, physiological and genetic aspects of human variability. Significance of this diversity in the biological adaptations of human populations.

504. Primate Anatomy (3)

Two lectures and three hours of laboratory.

Prerequisites: Anthropology 301 and 406.

Primate anatomy both regional and systemic, including skeletal, cardiovascular and digestive systems; the integument and otolaryngology of primates.

505. Human Osteology (3)

Two lectures and three hours of laboratory.

Prerequisites: Anthropology 301 and Zoology 108.

Identification of individual bones and teeth; sex, age, and racial variation; stature reconstruction; continuous and discontinuous morphological variations; paleopathology. Training in observations, measurements, and analyses.

506. Physical Anthropology of the Living (3)

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 301.

Theory and practice of techniques in measurement and description of biological variations in modern populations.

507. Blood Groups and Anthropology (3)

Two lectures and three hours of laboratory.

Prerequisites: Anthropology 301 and 503.

Human blood groups and their frequencies in populations, analyses of gene frequencies, methods of defining and selecting samples from human population, evolutionary significance of blood groups and species antigens.

511. Field Methods in Linguistics (3)

Two lectures and three hours of laboratory.

Prerequisites: Three units of linguistics or Anthropology 304, and consent of instructor.

Principles and techniques of linguistic analysis. Problems and methods in the phonetic transcription and analysis of unwritten, non-Indo-European languages. Emphasis on phonetics, phonemics, field techniques, and work with informants.

520. Ethnological Field Methods (3)

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 350.

The problems and techniques of obtaining data in ethnological and social anthropological field work; preparation, gaining and maintaining rapport, evaluating data, participant observation. A review of literature followed by work with informants.

522. Social Anthropology (3)

Prerequisite: Anthropology 350.

Development of social anthropology as a distinct subfield of cultural anthropology. Readings and analysis of functionalism as theory and methodology in the explanation of social and cultural processes. (Formerly numbered Anthropology 352.)

531. Applied Anthropology (3)

Prerequisite: Anthropology 426.

Application of anthropological concepts to solution of practical problems of culture change in community development, complex organizations, and interdisciplinary and cross-national programs.

532. Culture and Personality (3)

Prerequisite: Anthropology 102 or 400B.

The relationship of individual personality to culture in a variety of cultures. A consideration of various theories and studies in the social and personality sciences.

533. Evaluative Procedures in Culture and Personality (3)

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 102 or 400B.

Methods of eliciting and evaluating cross-cultural information about patterns of behavior. Such field methods as the interview and participant observation will be reviewed and evaluated.

560. Advanced Archaeological Field Methods (3)

One lecture and six hours of laboratory.

Prerequisite: Anthropology 302.

Advanced projects in excavation and stabilization of ruins, archaeological surveys, laboratory analysis and preparation of reports.

561A-561B. Archaeological Laboratory Methods (3-3)

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 560. Anthropology 561A is prerequisite to 561B.

Semester I: Application of palynology, paleontology and technologies. Semester II: Practical applications of materials from 561A. Individual laboratory research project required.

582. Regional Anthropology (3)

Prerequisite: Anthropology 102 or 400B.

In-depth study of a major geographical region of the world such as Africa, the Arctic, East Asia, Europe, Latin America, the Middle East, North America, Oceania, or South Asia. See Class Schedule for specific content.

583. Topical Anthropology (3)

Prerequisite: Anthropology 101 or 102 or 400A or 400B as appropriate depending on the topic.

In-depth study of a major subdiscipline such as Political Anthropology, Economic Anthropology, Social Anthropology, Psychological Anthropology, Cultural Ecology, Applied Anthropology, Anthropological Genetics, or Environmental Archaeology. See Class Schedule for specific content.

GRADUATE COURSES

600. Seminar (3)

An intensive study in advanced anthropology, topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

601. Seminar in Physical Anthropology (3)

Prerequisites: Anthropology 101 or 400A and 12 upper division units in anthropology.
History and theory in physical anthropology stressing the significant literature on such topics as functional anatomy, human paleontology, population genetics, and primatology.

602. Seminar in Archaeology (3)

Prerequisites: Anthropology 101 or 400A and 12 upper division units in anthropology.
History and theory in archaeological data collection, analysis, and interpretation.

603. Seminar in Ethnology (3)

Prerequisites: Anthropology 102 or 400B and 12 upper division units in anthropology.
History and theory in ethnology stressing the significant literature on such topics as cross-cultural comparison, structural-functional analysis and description, personality and culture, and sociocultural change.

604. Seminar in Linguistics (3)

Prerequisites: Anthropology 304 or 410 and 12 upper division units in anthropology.
History and theory of linguistics stressing the significant literature on such topics as cultural cognition, descriptive linguistics, lexicostatistics, and transformational analysis.

620. Seminar in Regional Anthropology (3)

Prerequisite: Twelve upper division units in anthropology.
Study of a major world region such as Africa, the Arctic, East Asia, Europe, Latin America, the Middle East, North America, Oceania, or South Asia. Maximum credit six units applicable on a master's degree. May be repeated with new content. See Class Schedule for specific content.

621. Seminar in Topical Anthropology (3)

Prerequisite: Twelve upper division units in anthropology.
Study of a major subdiscipline such as Political Anthropology, Economic Anthropology, Social Anthropology, Psychological Anthropology, Cultural Ecology, Applied Anthropology, Race and Variation, or Environmental Archaeology. Maximum credit six units applicable on a master's degree. May be repeated with new content. See Class Schedule for specific content.

630. Seminar in Historical Linguistics (3)

Prerequisite: Anthropology 304 or 511.
Principles and techniques of historical linguistics, with concentration on the dynamics of linguistic change, comparative linguistics, and historical reconstruction as applied to non-Indo-European languages.

635. Seminar in Ethnoscience (3)

Prerequisite: Twelve upper division units in anthropology.
Analysis and comparison of native categories, classifications, and bodies of systematic knowledge as demonstrated in preliterate and literate societies.

797. Research (3) Cr/NC

Prerequisite: Advancement to candidacy.
Independent investigation in the general field of the thesis.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study directed toward the preparation of a paper on a specific problem.
Maximum credit six units.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis, 799A, with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

Art**Faculty**

Chair, Department of Art: F. Orth
Graduate Coordinator: R. Berg
Credential Adviser: J. L. Tanzer
Professors: Baker, Berg, Bigelow, Covington, Fisch, Groover, Higgins, Hopkins, Hunter, Lingren, Longenecker, Miller, Orth, Rogers, Tanzer, Wallace
Associate Professors: Austin, Bowne, Frick, Hodge, Papworth, Ray
Assistant Professors: Cauley, Dumlao, Esser, Mansfield, Moaney, Perczel, Rigby, Roberts, Shipman, Shirk, Stoddard

Assistantships

Graduate teaching assistantships in art are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the department.

General Information

The Department of Art, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Art.

The Art Department is prepared to offer advanced study to graduate students in the fields of painting, environmental design, sculpture, crafts, printmaking, graphic communication, and the history of art. A new art building incorporating the existing facilities offers the student excellent studio space and equipment. In addition, the Fine Arts Gallery, the Putnam Foundation collection in the Timken Gallery and the Museum of Man in Balboa Park, and the La Jolla Museum of Contemporary Art in La Jolla offer valuable original materials as well as specialized libraries for research. In addition, there are numerous private galleries with a wide variety of offerings.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In general, the student must have completed an undergraduate major in art with a minimum of 24 upper division units, including two semesters' work in the general history of art, before he will be permitted to enter the graduate program. The student must also be able to show that he is adequately advanced to carry out projects which measure up to graduate standards. In studio areas this requirement will be measured by a formal presentation (the Graduate Review) to the Emphasis Area Faculty of a portfolio of examples of the candidate's undergraduate or postbaccalaureate work. The range should be great enough to give the committee a knowledge of the candidate's strengths and weaknesses. A statement of the candidate's objectives in the graduate program should accompany this presentation. If it is determined that the student is capable of doing graduate art work, he may be permitted to begin such work even though he has not completed an appropriate undergraduate major in art. Those students whose work is insufficiently advanced for classified graduate standing may enroll for courses, under guidance of the department, in order to meet the standard requirements. Applications for the Review may be obtained from the graduate coordinator of the department and should be returned by March 23 for the fall semester, and by October 23 for the spring semester. The portfolios must be submitted by April 1 and November 1.

In addition to meeting the requirements for admission to the University, students wishing to be admitted to the art history graduate program with a classified graduate standing must complete the equivalent of the graduation requirements of the specific 30 units of art history courses listed in the current *General Catalog*, as well as an additional six selected units of art history courses. A GPA of 3.00 on a 4.00 scale in the last 60 units attempted and a 950 score on the GRE Aptitude Test is required.

Art History applications, obtainable from the graduate coordinator, are due March 23 or October 23 for the following semester and should be accompanied by transcripts of all undergraduate or postbaccalaureate work.

Students who do not meet the requirements for admission to the graduate program in art history, but meet the requirements for graduate admission to the University, may, at the discretion of the art history faculty, be accepted with postbaccalaureate unclassified standing.

Advancement to Candidacy

In addition to meeting the requirements for advancement to candidacy as described in Part Three of this bulletin, all students will be required to pass a comprehensive examination covering the fields of history of art of western civilization, the principles of art appreciation, and the techniques and materials of the artist, or to have completed a year course in the history of art of western civilization and nine undergraduate units of art history.

Students working for a Master of Arts degree in Art in the field of art history must complete the following courses or their equivalents before advancement to candidacy Anthropology 102; Art 258, 259, 264, 265, 557, 568, 571, 573, 575; and six units in art history selected with the consent of the art history faculty. Students with an emphasis in art history must also pass a written and oral comprehensive examination in the field of art history. Before advancement to candidacy, graduate students in art history must have completed four semesters of French or German (or Italian for Renaissance majors only) with an average grade of "B" (3.0) or better. Alternatively, with the consent of the graduate adviser, students may demonstrate a reading knowledge of the appropriate language by passing either the Graduate School Foreign Language Examination or a proficiency examination administered by the respective language departments of the University when such an examination is offered.

Students with an emphasis in studio arts must have: (1) completed at least 12 units listed on his or her official program with a minimum grade point of 3.0 (B); and (2) been reviewed by the tenured and tenure-track faculty of the emphasis area and received approval of an acceptable body of graduate work completed since classified standing fulfilling the requirements of the area of specialization.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, all students must complete a graduate program of a minimum of 30 units which includes at least 24 units in art from courses listed below as acceptable on master's degree programs in art, of which at least 16 units must be in 600- and 700-numbered courses.

Studio Arts

Those electing studio arts must complete a minimum of 18 units in the area of specialization. One course in the Art 760 or 770 series or Art 690, Art 694, and Art 799A are required. Not more than a total of six units in Art 798 will be accepted. A creative project accompanied by a written report is required as fulfillment of Art 799A. In conjunction with this project, each candidate for the degree must present an exhibition of representative graduate work.

Art History

Those electing art history must take a written comprehensive examination in the field of art history during the first semester as a classified graduate in the program.

Students must complete a minimum of 26 units of art history courses, of which at least 17 units must be in 700-numbered courses. Art 790 and Art 799A are required. Not more than six units of Art 798 will be accepted. A written thesis and an oral thesis exam are required as fulfillment of Art 799A.

Thesis and Projects in Art

The thesis required for the Master of Arts degree in Art is a written document; the project is an original work of creative art, accompanied by a written report. All theses and written reports accepted in satisfaction of a requirement for the master's degree are cataloged and accessioned in the library; projects remain in the custody of the Department of Art. Color slides of the project must be provided by the candidate and are retained in the slide library. One copy of the thesis must be given to the Department of Art.

Courses Acceptable on Master's Degree Programs in Art

UPPER DIVISION COURSES

500. Advanced Drawing (3) I, II

Six hours.

Prerequisites: Art 203 and 204.

Drawing emphasizing the qualitative aspect of visual subject matter. Maximum credit six units.

502. Inter-Media (1-3) I, II

Two hours for each unit of credit.

Prerequisites: Art 102 and 103.

Process and materials in plane and space. Maximum credit six units.

503. Life Drawing and Painting (3) I, II

Six hours.

Prerequisites: Art 203, 204.

Drawing and painting from nude and costumed models. Maximum credit six units.

504. Advanced Painting (3) I, II

Six hours.

Prerequisite: Art 404.

Pictorial composition and painterly process. Maximum credit six units.

505. Advanced Waterbase Media (3) I, II

Six hours.

Prerequisite: Art 405.

Composition in watercolor and related media.

506. Design and Composition (3) I, II

Six hours.

Prerequisite: Art 406.

Structure in picture making.

509. Relief Printmaking (3) I, II

Six hours.

Prerequisite: Art 203.

Woodcut, wood engraving, gessocut, linoleum, collograph, and relief printmaking processes. Emphasis on fine print quality and technical development using mixed media. Maximum credit six units.

510. Intaglio Printmaking in Color (3)

Six hours.

Prerequisite: Art 410.

Advanced creative intaglio printmaking in color, including zinc and copper plate; etching, drypoint, aquatint, engraving, embossing and color variations. Emphasis on fine print quality and technical development in the color process unique to this medium. Maximum credit six units.

511. Lithography Printmaking in Color (3)

Six hours.

Prerequisite: Art 411.

Advanced creative lithography printmaking in color. Emphasis on fine print quality in color process and color technology unique to this medium. Maximum credit six units.

512. Serigraphy (3)

Six hours.

Prerequisite: Art 203.

Techniques of reproducing original prints by means of the silkscreen process. Maximum credit six units.

516. Advanced Sculpture (3) I, II

Six hours.

Prerequisite: Art 416.

The influence of art media, tools, and materials on aesthetic organization in sculpture in relief and in the round. Maximum credit six units.

- 517. Advanced Figurative Sculpture (3) I, II**
Six hours.
Prerequisites: Art 216 and 217.
Figurative study with emphasis on individual exploration. Maximum credit six units.
- 522. Design Crafts (3) Irregular**
Six hours.
Prerequisite: Art 220.
Exploration of a variety of materials and techniques. Development of the aesthetic and technical abilities of the artist craftsman. Maximum credit six units.
- 523. Advanced Furniture Design (3) I, II**
Six hours.
Total credit in Art 323, 423 and 523 limited to twelve units.
Prerequisite: Art 423.
Advanced individual design; exploration of materials, process and function. Maximum credit six units.
- 525. Ceramics (3) I, II**
Six hours.
Prerequisite: Art 425.
Study of ceramic design through creative projects of clay forms. Maximum credit six units.
- 526. Clay and Glaze Technology in Ceramic Design (3)**
Six hours.
Prerequisite: Art 425.
Experimentation and application of research concerning the use of ceramic materials and techniques as an integral part of the design process. Maximum credit six units.
- 529. Design in Enamels (3) I, II**
Six hours.
Prerequisite: Art 429.
Design and production of vitreous enamels. Maximum credit nine units; six units applicable on a master's degree.
- 531. Jewelry and Metalwork (3) I, II**
Six hours.
Prerequisite: Art 431.
Advanced individual problems in jewelry. Maximum credit six units.
- 532. Metalsmithing (3) I, II**
Six hours.
Prerequisite: Art 331.
Individual problems involving fabrication processes already studied in order to increase technical competence while exploring personal design statements. Individual and small group study of specialized techniques such as photoetching, electroforming, small-scale forging in iron and cut steel. Maximum credit six units.
- 534. Advanced Weaving (3) I, II**
Six hours.
Total credit in Art 234, 334 and 534 limited to nine units.
Prerequisite: Art 334.
Advanced individual problems in weaving. Maximum credit six units.
- 535. Advanced Nonwoven Textile Construction (3)**
Six hours.
Prerequisite: Art 435.
Advanced study in nonloom techniques. Techniques to include: looping, braiding, plaiting, and special fabricating techniques. Experimentation with new man-made fibers and with synthetic commercial dyes. Maximum credit six units.
- 541. Problems in Graphic Communication (3) I, II**
Six hours.
Prerequisite: Art 441.
Refinement of personally developed design concepts for visual communication with emphasis on individually directed solutions. The development of a portfolio of professional quality. Maximum credit six units.

- 543. Drawing and Illustration for Graphic Communication (3) I**
Six hours.
Prerequisite: Art 443.
The disciplines of realistic descriptive illustration including problems in imaginative, aesthetically refined painterly illustration. Media to include gouache, watercolor, scratch board, mixed media, and pen and ink.
- 544. Visual Communication Media (3) I, II**
Six hours.
Prerequisite: Art 444.
Experimental, creative and practical exploration of contemporary communication as related to magazine and editorial layout. Production of a student designed limited edition.
- 547. Environmental Theory (3)**
Prerequisite: Art 247 or 347.
Survey of alternative solutions to the problem of design of the physical environment.
- 550. Environmental Prototypes (3)**
Two lectures and four hours of laboratory.
Prerequisite: Art 450.
Research and development of creative architectural concepts with emphasis in space enclosure systems and cybernetics.
- 552. Professional Methods of Interior Design (3) Irregular**
Two lectures and two hours of activity.
Prerequisite: Art 451.
Techniques and analyses of specification writing, estimating, contractual agreements, budget studies and supervision of professional interior design projects.
- 553. Contract Interior Design (3) Irregular**
Six hours.
Prerequisite: Art 451.
Projects in nonresidential architectural interiors involving space planning systems analysis, specification writing, equipment and materials appropriate to commercial function. Maximum credit six units.
- 554. Proxemics and Interior Design (3) Irregular**
Prerequisites: Art 249, 251, and consent of instructor.
Lectures in proxemics and study of literature pertaining to relevant controlled experiments involving use and perception of enclosed spaces. Application of theories to field problems.
- 557. Art of the Nineteenth Century (3) I, II**
Prerequisites: Art 258 and 259.
Development of painting, sculpture, and architecture from the French Revolution to 1900.
- 558. Art of the Twentieth Century (3) I, II**
Prerequisite: Art 557.
Major movements in sculpture, painting, graphics and architecture from the beginning of this century to the present.
- 560. History of American Art (3) Irregular**
Prerequisites: Art 258 and 259.
Development of painting, sculpture, and architecture from the Native American Art and Colonial Period to the present.
- 561. Arts of the Pre-Hispanic Americas (3) I**
Prerequisite: Art 158.
Arts of ancient Meso-America, Central America, Caribbean and South America from earliest times until contact with Europe.
- 562. Colonial Art of Latin America (3) II**
Prerequisites: Art 258 and 259.
The art and architecture of Latin America from the colonial period to the present. Field trips included.
- 565. The Art of India and Southeast Asia (3) II**
Prerequisites: Art 258 and 259.
Painting, architecture and sculpture of India and Southeast Asia viewed through their cultural history and aesthetic values. Field/museum trips.

- 566. The Art of Persia and the Islamic World (3) I**
Prerequisites: Art 258 and 259.
Painting, architecture and sculpture and minor arts of Persia and the Islamic world which manifest cultural history and heritage. Field/museum trips.
- 567. Art of the Ancient Near East (3) I**
Prerequisite: Art 258.
Development of painting, sculpture, architecture and crafts from prehistoric times to the fourth century B.C.
- 568. Art of Crete, Mycenae, Greece, and Rome (3) II**
Prerequisite: Art 258.
Development of painting, sculpture, architecture, and crafts from prehistoric times to the fifth century A.D.
- 569. Art of Sub-Saharan Africa (3) I**
Prerequisite: Art 158.
Form and content of the arts of Sub-Saharan Africa viewed within a cultural context.
- 570. Art of Oceania (3) II**
Prerequisite: Art 158.
Form and content of the arts of Australia, Melanesia, Polynesia, and Micronesia viewed within a cultural context.
- 571. Medieval Art (3) II**
Prerequisites: Art 258 and 259.
Development of painting, sculpture and architecture from the time of Constantine through the Gothic period.
- 572. Coptic and Byzantine Art (3) I**
Prerequisites: Art 258 and 259.
The art of the Eastern Church from the reign of Justinian to the Russian Revolution.
- 573. Renaissance Art in Italy (3) I**
Prerequisites: Art 258 and 259.
Architecture, painting and sculpture of the Renaissance period in Italy.
- 574. Northern Renaissance Art (3) II**
Prerequisites: Art 258 and 259.
Architecture, sculpture, and painting north of the Alps during the Renaissance period.
- 575. Baroque and Rococo Art (3) II**
Prerequisites: Art 258 and 259.
Architecture, sculpture, and painting of the Baroque and Rococo periods.
- 576. Arts of Native North America (3) Irregular**
Prerequisite: Art 158 or American Indian Studies 265.
Form and content of the arts of Native North America viewed within a cultural context. Field trips.
- 577. History of Architecture (3) Irregular**
Prerequisites: Art 157, or 258 and 259.
Architecture from primitive times to the present.
- 578. History of Printmaking (3) Irregular**
Prerequisites: Art 258 and 259.
History of printmaking from its inception to the present.
- 579. Advanced History of Ceramics (4)**
Prerequisite: Art 479.
Three lectures and two hours of activity.
Emphasis on 20th century international ceramics. Philosophical approaches to historical heritage. Field trips and activities to verify findings of research.
- 580. History of Costume (3) Irregular**
Prerequisites: Art 258 and 259.
Historic origins of costume traced through aesthetic, social and political influences dominant during each period.
- 581. History and Theory of Environmental Design (3) Irregular**
Prerequisites: Art 258 and 259.
Environmental arts in the 19th and 20th centuries.

- 582. The Decorative Arts (3)**
Investigations into the arts of ceramics, enamelling, furniture, glass, jewelry, metalwork and textiles. Analyzing the aesthetic basis which determines their forms in various times and places. Field trips to museums and ateliers.
- 586. Art Practicum Seminar (3) Irregular**
Prerequisites: Twenty upper division units in art and concurrent assignment to student teaching.
Discussion, readings, and research study related to art presentation strategies.
- 590. Principles and Elements of Visual Aesthetic Organization (3) Irregular**
Three hours.
Prerequisites: Senior standing and Art 157.
Visual aesthetic materials and the psychological principles involved in aesthetic organization.
- 591. Gallery Exhibition Design (3) I, II**
Six hours.
Prerequisite: Fifteen units of art.
Fundamental art elements and principles applied to the theories and techniques of gallery exhibition design.
- 592. Gallery Exhibition Design (3) I, II**
Six hours.
Prerequisite: Art 591.
Advanced problems in the theories and techniques of gallery exhibition design.

GRADUATE COURSES

- 600. Drawing (3)**
Six hours.
Prerequisite: Art 500.
Projects synthesizing process and concept in visual field ordering. Maximum credit six units applicable on a master's degree.
- 604. Painting (3)**
Six hours.
Prerequisites: Art 405, 504 and 506.
Organization with visual subject matter. Maximum credit six units applicable on a master's degree.
- 609. Printmaking (1-3)**
Two hours for each unit of credit.
Advanced creative work in selected printmaking media based upon the analysis of the history and philosophies of printmaking from its inception through contemporary concepts. Maximum credit six units applicable on a master's degree.
- 616. Sculpture (3)**
Six hours.
Prerequisites: Art 516 and classified graduate standing.
Aesthetic organization of selected subject matter in the media of sculpture. Maximum credit six units applicable on a master's degree.
- 625. Crafts (1-3)**
Two hours for each unit of credit.
Prerequisite: Six units completed in upper division courses in sculpture or ceramics or printmaking or a combination of these courses.
Advanced creative work in selected craft media. Maximum credit six units applicable on a master's degree.
- 627. Advanced Clay and Glaze Technology in Ceramic Design (3)**
Six hours.
Prerequisite: Art 425.
Experimentation with the use of ceramic material and techniques as an integral part of the design process. Maximum credit six units applicable on a master's degree.

629. Enamel Workshop (3) I, II

Six hours.

Prerequisite: Art 529.

Workshop in enamel technology and its application to the craft. Maximum credit six units applicable on a master's degree. (Formerly numbered Art 628.)

631. Seminar in Jewelry and Metalwork (3)

Prerequisite: Art 331.

Problems in the design and execution of works in precious metals. Projects will be determined by the individual student in conference with the instructor. Maximum credit six units applicable on a master's degree.

634. Seminar in Textile Design (3)

Prerequisite: Art 334.

Problems in textile design and technology. Projects will be determined by the individual student in consultation with the instructor. Maximum credit six units applicable on a master's degree.

641. Graphic Communication (1-3)

Two hours for each unit of credit.

Prerequisite: Art 541.

Advanced individual study in graphic design. Maximum credit six units applicable on a master's degree.

650. Creative Environmental Design (1-3)

Prerequisite: Six upper division units in interior design, architecture or city planning.

Creative work in interior design, architecture and civic design. Maximum credit six units applicable on a master's degree.

690. Seminar in Art History (3)

Intensive investigation of specialized area of art history. May be repeated with new content. See class schedule for specific content.

694. Seminar in the Principles of Design in the Space Arts (3)

Prerequisite: A semester course in art appreciation.

An intensive study of the activity of creative expression and aesthetic appreciation in the area of visual experience. The aesthetic analysis of original works of art. Maximum credit six units applicable on a master's degree.

700. Studio Art Experience (3)

Six hours.

Independent research in specified areas, which may require the presentation of a paper with its oral defense.

Each course may be taken to a maximum of six units. Maximum credit six units of 700 applicable on a master's degree.

A. Studio Art in Painting

B. Studio Art in Sculpture

C. Studio Art in Printmaking

D. Studio Art in Ceramics

E. Studio Art in Crafts

F. Studio Art in Graphic Communication

G. Studio Art in Environmental Design

716. Individual Research Problems in Sculpture (3)

Prerequisite: Art 616 (six units).

Graduate research problems including independent research in sculpture. Projects will be determined by the individual student in conference with the instructor. Maximum credit six units applicable on a master's degree.

760. Seminar in Modern Art (3)

Prerequisite: Art 557.

Studies in problems of the development of art styles or important artists within broad limits of modern art.

761. Seminar in American Art (3)

Prerequisite: Art 560.

Problems in the development of art styles or important artists in America.

767. Seminar in Primitive Art (3)

Prerequisites: Art 158 and 258.

Studies in problems of the development of art styles or important artists within broad limits of primitive art.

769. Seminar in Ancient Art (3)

Prerequisites: Art 258 and 567 or 568.

Studies in problems of the development of art styles or important artists within broad limits of ancient art.

771. Seminar in Medieval Art (3)

Prerequisites: Art 258 and 259.

Studies in problems of the development of art styles or important artists within broad limits of medieval art.

773. Seminar in Renaissance Art (3)

Prerequisites: Art 258 and 259.

Studies in problems of the development of art styles or important artists within broad limits of renaissance art.

775. Seminar in Baroque and Rococo Art (3)

Prerequisites: Art 258 and 259.

Studies in problems of the development of art styles or important artists within broad limits of baroque and rococo art.

785. Seminar in Art Education (3)

Prerequisite: Fifteen upper division units in art.

Historic and current art education philosophies.

790. Seminar in Bibliography and Research Methods (2)

Introduction to research methods and materials, compiling of a specialized bibliography, preparatory to writing a master's thesis.

798. Special Study (1-3) Cr/NC

Individual study. Maximum credit six units.

Prerequisite: Consent of the staff; to be arranged with department chair and the instructor.

799A. Thesis or Project (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for a master's degree.

799B. Thesis or Project Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.



Asian Studies

Faculty

Graduate Coordinator: A. D. Coox, Director, Center for Asian Studies

Graduate Advisers:

- P. Chu, History
- T. J. Kahng, Political Science
- E. A. Keen, Geography
- D. D. Whitney, Anthropology

Faculty members in the departments participating in the degree program are listed in the appropriate sections of this catalog.

Members of the Center for Asian Studies

A.D. Coox, Director

- | | | |
|----------------|----------------|------------------|
| A. W. Anderson | T. J. Kahng | L. J. Shaw |
| P. Chu | E. A. Keen | R. T. Smith, Jr. |
| A. B. Cottrell | M. Longenecker | W. S. Snyder |
| T. R. Cox | M. C. Madhavan | A. L. Srbich |
| D. V. DuFault | D. D. McLeod | P. S. Staniford |
| F. A. Frick | W. H. Nam | Y. Tanaka |
| R. C. Gripp | H. Neyndorff | R. D. Wallace |
| E. Henry | R. A. Oades | D. D. Whitney |
| R. S. Himes | B. Pillsbury | C. Woo |
| K. Ima | D. Preston | C. C. Yahr |
| G. R. Jordan | S. Rabson | |

General Information

The Master of Arts degree in Asian Studies is an interdisciplinary degree offered by designated faculty members in the Departments of Anthropology, Art, Business Administration, Classical and Oriental Languages and Literatures, Comparative Literature, Economics, Education, English, Geography, History, Linguistics, Philosophy, Political Science, Religious Studies, and Sociology. It is administered by the Center for Asian Studies through a Graduate Committee consisting of the Director of the Center and representatives from the several departments.

The program is designed to offer systematic advanced training (a) for those planning to enter educational, business, government, or community service involving Asian Studies, and (b) for those in a specific academic discipline who have regional interest in Asian Studies and wish to promote more effective understanding of the cultures, societies, peoples, and social forces at work in the Asian/Pacific world. The program is also designed for those who plan to pursue further graduate study in Asian Studies beyond the Master of Arts degree.

Admission to Graduate Study

In addition to meeting the requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin, the student must present a Bachelor of Arts degree with a major in Asian Studies or its equivalent, as approved by a Graduate Committee of the Center for Asian Studies. A student whose preparation is deemed inadequate by the Graduate Committee will be required to complete specific courses in addition to the minimum of thirty (30) units required for the degree.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Three of this bulletin. In addition, all students must demonstrate a reading knowledge, at least at the intermediate level, of a relevant foreign language approved by the Graduate Committee of the Center for Asian Studies. If Chinese or Japanese is required, the requirement may be fulfilled by completing 16 units of course work in the particular language, the last four units with a grade of C (2.0) or better.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Three of this bulletin, the student must complete a minimum of 30 units from courses acceptable on master's degree programs, including Asian Studies 601, with not less than 24 units in courses of Asian content, distributed as shown below.

	600- and 700-numbered Courses	500-, 600- and 700-numbered Courses
Asian Studies	3 units	3 units
	(Asian Studies 601)	
Department A	6 units	3 units
Department B	3 units	3 units
	<hr/> 12 units	<hr/> 9 units

The remaining nine of the total of 30 units will be elective, selected from the above or other relevant departments, as approved by the Graduate Committee. The total program shall include a minimum of 18 units in 600- and 700-numbered courses. The student may elect Plan A (with thesis) or Plan B (comprehensive examination in lieu of thesis) in consultation with the graduate coordinator.

All programs will be approved by the Graduate Committee of the Center for Asian Studies.

Courses Acceptable on Master's Degree Programs in Asian Studies

UPPER DIVISION COURSES

Asian Studies Course

596. Selected Studies in Asian Cultures (3)

Topics on various aspects of Asian studies. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

Art Course

565. The Art of India and Southeast Asia (3)

Comparative Literature Course

530. Asian Literature (3)

History Courses

561A-561B. The Far East (3-3)

562. Civilization of India: The Great Traditions (3)

563. The Modern Indian Subcontinent (3)

564A-564B. Southeast Asia (3-3)

565. Revolution and Social Change in Asia (3)

566. Chinese Civilization (3) I

567A-567B. Modern and Contemporary Chinese History (3-3)

569. Japanese Civilization (3) I

570. Modern Japan (3)

571A-571B. Intellectual History of Modern Asia (3-3)

596. Selected Studies in History (1-4)*

*Acceptable when of relevant content.

Philosophy Courses

575. A Major Philosopher (3)*

596. Topics in Asian Thought (3)

*Acceptable when of relevant content.

Political Science Courses

561. Governments and Politics of the Developing Areas (3) I, II
 562. Governments and Politics of the Far East (3)

Religious Studies Courses

501. Religions of India (3)
 503. Religions of the Far East (3)
 506. Scriptures of India (3)
 508. Scriptures of Far Eastern Traditions (3)
 580. A Major Figure (3) I, II*
 581. A Metaphysical Doctrine (3) I, II*

Sociology Course

519. Topics in Comparative Societies (3)*

GRADUATE COURSES IN ASIAN STUDIES

- 601. Seminar in Interdisciplinary Methods (3)**
 Introduction to graduate research methods and presentation of findings.

- 690. Seminar in Asian Studies (3)**
 Intensive study of an aspect of Asian studies. Maximum credit six units.

- 797. Research (1-3) Cr/NC**
 Research in one of the aspects of Asian studies. Maximum credit six units applicable on a master's degree.

- 799A. Thesis (3) Cr/NC**
 Prerequisite: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

- 799B. Thesis Extension (0) Cr/NC**
 Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP. Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

Anthropology Courses

600. Seminar (3)*
 620. Seminar in Regional Anthropology (3)*
 630. Seminar in Historical Linguistics (3)*

Art Course

609. Printmaking (1-3)*

Business Administration Courses

654. Seminar in International Business Finance (3)*
 723. Seminar in Comparative Management (3)*
 765. Seminar in Marketing Channels and Physical Distribution (3)*
 769. Seminar in International Marketing (3)*

Economics Courses

635. Seminar in Economic History (3)*
 660. Seminar in International Economics (3)*
 665. Seminar in the Economics of Underdeveloped Countries (3)*
 728. Seminar in Development Planning (3)*

Education Course

683. Comparative Education (3)*

*Acceptable when of relevant content.

Geography Courses

610. Seminar in History of Geography (3)*
 620. Seminar in Regional Geography (3)*
 650. Seminar in Systematic Geography (3)*

History Courses

601. Seminar in Historical Method (3)**
 650. Directed Reading in Asian History (3)
 655. Seminar in Asian History (3)
 795. Area Studies in History (1-3)** Cr/NC

Linguistics Course

795. Seminar in Linguistics (3)*

Philosophy Courses

635. Seminar in Philosophy of Religion (3)*
 636. Seminar in Philosophy of Art (3)*
 795. Seminar in Selected Topics (3)*

Political Science Courses

655. Seminar in General Comparative Political Systems (3)*
 658. Seminar in Communist Political Systems (3)*
 661. Seminar in the Political Systems of the Developing Nations (3)*
 675. Seminar in International Relations (3)*
 685. Seminar in Theories of International Relations (3)*

Sociology Course

770. Seminar in Population and Demography (3)*

All 797 (Research) and 798 (Special Study) courses in named departments, when relevant, are also applicable upon approval by the Graduate Committee.

*Acceptable when of relevant content.

**Required of all students who offer history as Department A, except that Asian Studies 601 is an acceptable substitute.



Astronomy

Faculty

Chair, Department of Astronomy: B. Nelson
 Graduate Adviser: J.D. Schopp
 Professors: Angione, Daub, Nelson, Schopp, Young
 Associate Professors: Talbert

Assistantships

Graduate teaching assistantships in astronomy are available to a few qualified students. Application blanks and additional information may be secured from the chair of the department.

General Information

The Department of Astronomy, in the College of Sciences, offers graduate study leading to the Master of Science degree in Astronomy.

This degree is designed to augment the student's undergraduate training with three or four semesters of more advanced study in the field of astronomy and the associated fields of mathematics and physics. San Diego State University has excellent facilities. A 24-inch reflecting telescope and two 16-inch reflecting telescopes, equipped with photoelectric photometers and a spectrograph, are located at Mount Laguna Observatory 40 miles east of campus, at an elevation of 6,100 feet. An 8-inch photographic refractor of long focus and several other telescopes, ranging from 6 to 12 inches in aperture, are located on campus. Campus computing facilities include an IBM 360/50 and an IBM 1130 digital computer.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, the student must have an overall grade point average of at least 2.75 in the last 60 units of his undergraduate work and must have preparation in astronomy and related sciences substantially equivalent to that required for the bachelor's degree in astronomy at San Diego State University. Students transferring to San Diego State University must submit two letters of recommendation.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as specified in Part Three of this bulletin. In addition, students may be required to take a qualifying examination during their first semester of residence.

Specific Requirements for the Master of Science Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must also meet the following departmental requirements in his 30-unit program:

1. Complete at least 15 units of 600- and 700-numbered courses in astronomy not including 799A.
2. Complete at least nine units of graduate level or approved upper division courses in astronomy or related fields as approved by his departmental committee.
3. If a student elects Plan A, he must enroll in Astronomy 799A, Thesis. If a student, with the approval of the department, elects Plan B, he must complete at least three additional units of graduate level or approved upper division courses in astronomy or related fields and pass a final comprehensive examination in lieu of the thesis.
4. Complete six units of electives selected with approval of the adviser.
5. A reading knowledge of scientific French, German, or Russian is recommended. Facility with a scientific computing language is desirable.

Courses Acceptable on Master's Degree Programs in Astronomy

UPPER DIVISION COURSES

520. Solar System Astronomy (3)

Prerequisites: Astronomy 101 or 103 and Physics 197, 197L.

Study of the structures of the planets, their atmospheres and satellite systems, asteroids, comets, and meteoroids, and the interplanetary medium, including the sun's influence in the system.

596. Advanced Topics In Astronomy (2 or 3) I, II

Prerequisite: Consent of instructor.

Selected topics in theoretical astronomy or astrophysics. May be repeated with new content upon approval of instructor. See class schedule for specific content. Maximum credit six units.

GRADUATE COURSES

600. Seminar (2 or 3)

Prerequisite: Consent of instructor.

An intensive study in advanced astronomy. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

610. Binary Stars (3)

Prerequisite: Astronomy 312B.

An intensive study of visual, spectroscopic, and eclipsing binaries, including the determination of orbits.

617. Astronomical Photometry (3)

Prerequisites: Astronomy 304B and 312B.

Theory and techniques of photographic and photoelectric photometry in ground-based astronomy. Emphasis on problems of precise measurement and use of modern high speed equipment in photon counting and data acquisition systems.

620. Galactic Structure (3)

Prerequisite: Astronomy 312B.

Survey of basic observational data for determining the structure of the Milky Way Galaxy; luminosity functions, stellar distributions in and near the galactic plane, solar motion, kinematics and dynamics of stellar motions, and galactic rotation; introduction to stellar dynamics.

630. Stellar Interiors (3)

Prerequisite: Astronomy 312B.

Structure of the interior of stars including the details of the reactions by which energy is obtained and the evolution of stars.

640. Interstellar Matter (3)

Prerequisites: Astronomy 312B and Mathematics 530.

Interstellar absorption and polarization, theory of interstellar grains, physics of a low density gas in a dilute radiation field, nebulae, interstellar absorption lines, dynamics of the interstellar medium, and radio observations of the interstellar medium.

650. Stellar Atmospheres (3)

Prerequisite: Astronomy 312A.

Emission and absorption of radiation, continuous spectra, spectral lines, model stellar atmosphere calculations, and non-L.T.E. problems.

660. Extragalactic Structure (3)

Prerequisite: Astronomy 312B.

The individual and collective properties of normal and peculiar galaxies. Topics include classification, spectra, masses, luminosity distributions, distance indicators, clustering, and redshifts.

670. Astrophysical Spectroscopy (3)

Prerequisites: Mathematics 152 and credit or concurrent registration in Astronomy 312A.

Theory of atomic spectra and atomic structure leading to interpretation of astronomical spectra. Optics of spectrograph design; line identification, spectral classification, radial velocity measurement, and line profile analysis.

797. Research (1-3) Cr/NC

Prerequisite: Classified graduate standing.

Research in one of the fields of astronomy. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with department chair and instructor. Individual study. Maximum credit six units.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

**Biological Sciences****(Biology, Botany, Zoology Courses)****Faculty**

Chair, Department of Biology: B. Collier

Chair, Department of Botany: D. Rayle

Chair, Department of Zoology: M. D. Atkins

Coordinator, Master's Degree Programs: K. D. Johnson

Graduate Departmental Advisers for General Counseling:

Botany: H. L. Wedberg

Ecology: W. Hazen

Genetics: D. Futch

Invertebrate Zoology: N. McLean, Jr.

Physiology: W. Sloan

Vertebrate Zoology: R. Estes

Credential Adviser: Z. Hanscom

Professors: Atkins, Baer, Bohnsack, Brandt, Carpenter, Chen, Clark, Cohn, Collier, B.D., Collier, G., Cooper, C.F., Cox, Dexter, Ebert, Estes, Etheridge, Farris, Ford, Gallup, Hazen, Huffman, Hurlbert, Hunsaker, Johnson, A.W., Krisans, Kummerow, McBlair, McLean, Miller, Monroe, Neel, Olson, Paolini, Parsons, Ratty, Rayle, Rinehart, Schapiro, Shepard, Sloan, Wedberg, Wilson, Zedler, P.H.

Associate Professors: Alexander, Avila, Awbrey, Cooper, R.W., Daugherty, Diehl, Futch, Johnson, G., Johnson, K. D., Krekorian, Plymale, Thwaites, Zedler, J.B.

Assistant Professors: Barnett, Carmichael, Davis, Hanscom, McClenaghan, Novacek, Sabbadini, Weiss

Assistantships

Graduate teaching assistantships and graduate nonteaching assistantships in biology are available to a limited number of qualified students. Application blanks and additional information may be secured from the Coordinator of the Biology Graduate Program.

General Information

The departments of Biology, Botany, and Zoology, in the College of Sciences, offer graduate study leading to the degrees of Master of Arts and Master of Science in Biology. In addition, the ecology group offers a joint doctoral program with the Graduate Group in Ecology at the University of California, Davis, and the genetics group offers a joint doctoral program with the University of California, Berkeley.

A new Life Science building provides increased facilities for graduate study in the biological sciences. Additional facilities available in the community include the San Diego Zoo Hospital, the United States Department of Agriculture, Fish and Game Commission, Sea World, and the Naval Underseas Center. San Diego State University also has access to research sites in Descanso, Fortuna Mountain, and Temecula (Riverside County).

Section I: Master's Degree Programs

The Master of Arts degree is considered to be essentially an academic degree which is planned to serve as a stepping stone to a higher degree, if the student so desires. The Master of Science degree is an applied or more technical degree, but is also acceptable as preparatory to many more advanced degree programs. Study concentration for either of these degrees must be completed in one of the following six program areas: Botany, Ecology, Genetics and Developmental Biology, Invertebrate Zoology, Physiology, and Vertebrate Zoology.

Admission to Graduate Study

In addition to the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin, a student must satisfy the following requirements before he will be recommended for admission to a program with classified standing:

1. Meet the requirements of an undergraduate major in a biological sciences department at San Diego State University in which graduate work is contemplated.
2. Have a grade point average of 2.75 or better on work taken for the baccalaureate degree.
3. Have a grade point average of 3.0 or better in upper division courses (at least 24 units) in the biological sciences.
4. Have a score of 1100 or better on the Graduate Record Examination Aptitude Test.
5. Have a score above the 60th percentile rank on the Graduate Record Examination Advanced Test in Biology. The student should take this test during the last semester in his undergraduate major in biological sciences.
6. Be considered as capable of graduate work in the biological sciences by two references submitted to the Biology Coordinator of Master's Degree Programs.
7. Be accepted by a program area and be sponsored by a faculty member of the area.

NOTE: Admission to a program area within the biology graduate program will be limited to the number of students for which adequate facilities and faculty sponsorship are available. Students should, therefore, be as specific as possible in their indication of their research interests and career goals. Individual program areas will admit students solely on the basis of merit in relation to space and faculty availability.

Students who do not meet all of the above requirements for admission with classified graduate standing may be admitted with conditionally classified graduate standing at the discretion of the program area. Students so admitted will be advised as to the nature of their deficiency and the time to be allowed to achieve full classified graduate standing.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement, as stated in Part Three of this bulletin. Satisfactory progress on the thesis research will be prerequisite to obtaining departmental approval for advancement.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units of upper division and graduate courses selected, with the approval of the graduate adviser, from the biological sciences as listed below or from closely related fields. At least 15 of the units selected must be in 600- and 700-numbered courses including course 799A, Thesis. A maximum of six units of the required 30 units may be selected from acceptable courses offered in the College of Education. A reading knowledge of scientific French, German, Russian, or Spanish, and a final oral examination on the field of the thesis and its implications in the broad fields of biology are also required.

Specific Requirements for the Master of Science Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units of upper division and graduate courses selected, with the approval of the graduate adviser, from the biological sciences as listed below or from closely related fields. At least 15 of the units selected must be in 600- and 700-numbered courses including course 799A, Thesis. A maximum of six units of the required 30 units may be selected from acceptable courses offered in the College of Education. A final oral examination on the field of the thesis and its implication in the broad fields of biology is also required.

Master's Degree Program Areas

Botany: The areas of emphasis for graduate study in the botany program area include plant morphology, plant physiology, mycology, plant pathology, phycology, and plant evolution.

Ecology: The overall program emphasizes quantitative approaches to ecological research and the framing of problems within the general context of ecological theory. Faculty and student research currently falls into the areas of limnology, marine ecology, plant community ecology and primary productivity, physiological plant ecology, marine aquaculture and fisheries ecology, animal population ecology and energetics, ecosystems management, and systems ecology.

Genetics and Developmental Biology: The genetics program offers an opportunity for graduate study in population genetics, biochemical genetics, developmental genetics, cytogenetics, and mutagenesis.

Invertebrate Zoology: The emphasis of this program area is based on the study of invertebrates as whole organisms. Faculty and graduate student research interests are diverse but include such areas as the functional morphology and ecology of marine invertebrates, entomology and pest management, invertebrate behavior and navigation, invertebrate symbiosis and parasitology, and invertebrate embryology.

Physiology: The major subareas of interest represented by the faculty in the physiology program area include comparative cellular physiology (especially osmoregulation, immunology, nitrogen metabolism, and sensory reception), radiation biology and radioisotope techniques, nerve and muscle physiology, and biochemistry of nucleic acids.

Vertebrate Zoology: The emphasis of the vertebrate program area is to provide students with a broad background in all areas of vertebrate biology. The major subareas for graduate study include the general biology and natural history of vertebrates, vertebrate ecology, systematics, morphology, paleontology and evolution, vertebrate physiology, and vertebrate behavior.

Section II: Joint Doctoral Programs

Ecology

The ecologists at SDSU and UCD are involved in a wide spectrum of research including terrestrial, freshwater, and marine ecosystems, at the individual, population, community, and ecosystem levels.

At SDSU, the major areas of research and participating faculty include:

1. Analysis and modeling of the dynamics of terrestrial and aquatic ecosystems: B. Collier, P. Miller.
2. Physiological ecology of plants, particularly of the Mediterranean zone, desert and Arctic tundra: A. Johnson, P. Miller.
3. Population and community studies of terrestrial and aquatic plants and animals: B. Collier, G. Cox, S. Hurlbert, L. McClenaghan, P. Zedler.
4. Coastal marine systems and species, including aquaculture and thermal effluent studies: D. Dexter, T. Ebert, R. Ford, W. Hazen, J. Zedler.
5. Relations between ecological processes and the technological, social and economic factors affecting environmental quality: C. Cooper.

At UCD the Graduate Group in Ecology includes several dozen faculty members whose research interests go beyond those areas listed above. Students interested in seeking a dissertation adviser at UCD should write to the Chair of the Graduate Group at UC Davis, 95616, for more information.

Any member of the Ecology faculty at SDSU and UCD is eligible to serve as dissertation adviser in the Ecology Doctoral Program. Faculty participating will be those with interests of the students involved in the joint program.

Prerequisites

Normally a candidate for the Doctor of Philosophy degree in Ecology will be expected to have a bachelor's degree from an accredited institution with a major in the biological sciences. Courses taken should include one year of chemistry and of physics, introductory statistics, calculus, computer programming or other suitable mathematical training,

introductory ecology, and at least one advanced course in three of the following five categories: genetics, advanced basic biology, biology of species groups, ecology, and numerical techniques. An undergraduate grade point average of at least 3.2 is required, plus acceptance to both UCD and SDSU and agreement by a faculty member at either campus to act as a dissertation adviser.

Upon admission to the program, the student is guided by the requirements for the doctoral program given in Part Three of this bulletin. The student will spend at least one year at each campus and may elect to develop a research program with an adviser at either campus.

Staff

San Diego State University:

Coordinator: J. Zedler (write for further information)

Ecology Program Area Chair: W. Hazen

University of California, Davis:

Chair, Graduate Group in Ecology: R. Merton Love

Current Sponsors: C. Goldman, R. Loomis, J. Major, D. Munns

Genetics

Both San Diego State University and the University of California, Berkeley, cover a wide range of specialized fields in genetics in which the student may prepare himself for his qualifying examination or, in greater depth, for his research. At San Diego, the specific fields best represented are population genetics, radiation genetics, physiological and developmental genetics, and cytogenetics. At Berkeley, the fields are population genetics, evolution, biochemical and developmental genetics, human genetics, and cytogenetics.

An undergraduate major in genetics or its equivalent in biological sciences can be considered as standard preparation for admission to the doctoral program in genetics, although completion of additional courses in mathematics and statistics, language, physical chemistry and biochemistry, and in biology generally are helpful and will often reduce the time required for the doctoral program. Other majors in related fields may be considered for admission to the doctoral degree program in genetics.

On admission to the program, the student is guided by the requirements for the doctoral degree program given in Part Three of this bulletin. The student will normally spend his first year in the program completing his year of residency at the University of California, Berkeley. It is desirable for the student to complete his foreign language requirement, if any, and his qualifying examination during this year and to be advanced to candidacy.

Staff

The following faculty members of the genetics groups of the cooperating institutions will act as principals in the doctoral program, being available for direction of research and as members of doctoral committees.

University of California, Berkeley:

Graduate Adviser: J. Fristrom

Principals: Freeling, Fogel, Fristrom, Libby, Jr., Palmour, St. Lawrence, Spieth

San Diego State University:

Graduate Adviser: D. Futch

Principals: Awbrey, Baer, Barnett, Daugherty, Davis, Diehl, Futch, Johnson, Kelly, Ratty, Rinehart, Thwaites, Wedberg

Courses Acceptable on Master's Degree Programs

UPPER DIVISION COURSES

Biology Courses

501. Population Biology (4)

Two lectures and six hours of laboratory.

Prerequisites: Biology 411 and credit or concurrent registration in Biology 430.

Principles of population genetics and evolution, advanced topics in population and community ecology.

502. Cellular Physiology (4)

Two lectures and six hours of laboratory.

Prerequisites: Biology 215; Chemistry 230, 230L, or 231, 231L; Physics 125B and 194B.

Cellular structure, macromolecules, energetics, growth, division, transport, and response. (Formerly numbered Biology 560.)

503. Genetics (4)

Two lectures and six hours of laboratory.

Prerequisites: Biology 215; Chemistry 230, 230L or 231, 231L.

Principles of transmission and molecular genetics, mutation, population genetics and evolution. (Formerly numbered Biology 540.)

505. History of Biology (3) I, II

Prerequisite: A college course in biology.

Lectures and reports tracing scientific development of biology with emphasis on the influence of personalities and trends of the times.

519. Statistical Methods in Biology (3) I

Two lectures and three hours of laboratory.

Prerequisite: Biology 411 or 430.

Application of statistical techniques to biological data. Not open to students with credit for another upper division course in statistics except with written approval of the chairman of the department offering the student's major to be filed with the Evaluations Office.

525. Agricultural Ecology (3) I, II

Two lectures and three hours of laboratory.

Prerequisite: Biology 320 or 411.

Mechanisms controlling fertility, productivity and regulation in agricultural ecosystems. The ecological design and management of agroecosystems.

528. Ecology of Renewable Resources (3) I, II

Two lectures and three hours of laboratory.

Prerequisite: Biology 320, 411, or 420.

Ecological principles in exploitation and management of forest, range, watershed and recreation lands for sustained human benefit.

530. Limnology (4) I, II

Two lectures and six hours of laboratory.

Prerequisite: Biology 411.

Biological, chemical and physical considerations of inland waters.

531. Biological Oceanography (4) I, II

Two lectures and six hours of laboratory.

Prerequisite: Biology 411.

Ecological concepts as applied to pelagic and benthic marine organisms and their environment. Field and laboratory experience in oceanographic techniques, particularly the coastal environment.

532. Fisheries Biology (3) II

Two lectures and three hours of laboratory.

Prerequisite: Biology 411.

Fisheries of commercial importance. The dynamics of exploited populations.

535. Systems Ecology (4)

Three lectures and three hours of laboratory.

Prerequisites: Biology 411, Mathematics 122 or 150, and consent of instructor.

Theory and techniques of systems analysis and mathematical modeling as applied to ecological problems.

537. Advanced Systems Ecology (4)

Three lectures and three hours of laboratory.

Prerequisites: Biology 535 and consent of instructor.

Advanced topics in the application of mathematical modeling and simulation techniques to analyses of ecological problems.

541. Developmental Biology (4) I, II

Two lectures and six hours of laboratory.

Prerequisites: Biology 430 or 503.

Analysis of development with emphasis on embryonic differentiation.

- 544. Human Genetics (4) I, II**
Two lectures and six hours of laboratory.
Prerequisite: Biology 503.
Genetics as related to human biology, with consideration of the applied fields of medical genetics, genetic counseling, and population studies.
- 545. Cytogenetics (4) I**
Two lectures and six hours of laboratory.
Prerequisite: Biology 503.
The physical basis of heredity. Study of the chromosomes and chromosome behavior in relation to problems in heredity and evolution.
- 546. Mutagenesis (3)**
Prerequisite: Biology 503.
Basic principles and applications of mutation induction, expression, and detection at all levels of biological organization. Emphasis on mutation induction by chemicals and ionizing radiations.
- 547. Microbial Genetics (3) I, II**
Prerequisite: Biology 503.
Theory underlying microbial genetics.
- 548. Behavioral Genetics (3) I, II**
Prerequisite: Biology 503.
The genetic involvement of single and multiple gene systems in animal behavior.
- 549. Evolution and Population Genetics (3) I, II**
Prerequisite: Biology 503.
Theory of evolution and modeling of genetic systems.
- 550. Ecological Genetics (3) I, II**
Prerequisites: Biology 501 or 411 and 503.
Theory of adaptations of natural populations to their environments.
- 559. Advanced Genetics (3) I, II**
Prerequisite: Biology 503.
Current topics in molecular, organismal or population genetics. Maximum credit six units.
- 561. Advanced Topics in Cellular Physiology (3) I, II**
Prerequisite: Biology 502.
Current topics in cellular physiology. May be repeated with new content. Maximum credit six units.
- 562. Topics in Comparative Physiology (3)**
Prerequisite: Biology 502.
Selected topics from comparative aspects of endocrinology, feeding and digestion, blood and circulation, respiration, metabolism, excretion, osmoregulation, nerve conduction, muscle contraction, transport and sensory reception. May be repeated with new content. See class schedule for specific content. Maximum credit six units.
- 562L. Comparative Physiology Laboratory I (2)**
Six hours of laboratory.
Prerequisites: Biology 502; credit or concurrent registration in Biology 562.
Directed laboratory projects emphasizing the design of experiments in physiological research. Emphasis on topics presented in Biology 562. (Formerly numbered Biology 562A.)
- 566. Photobiology (3) II**
Prerequisite: Biology 502.
Principles underlying visible and ultraviolet radiation effects on plants and animals, including man. Topics include photosensitization, ultraviolet effects, environmental photobiology, photomedicine, chronobiology, extraretinal photoreception, vision, photomorphogenesis, photomovement, photosynthesis and bioluminescence.
- 568. Immunochemistry (3) I, II**
Prerequisite: Biology 502 or Microbiology 330.
Structure and function of the immunoglobulins and the chemical and physical nature of the antigen-antibody reaction.

- 570. Radiation Biology (3) I, II**
Prerequisites: Physics 125B and 194B; Zoology 200. Recommended: Biology 502; Chemistry 200, 200L, 201, 201L; and Physics 303.
Principles underlying radiological reactions of ionizing radiations. Effects of ionizing radiations at the biochemical, cell, organ, and organism levels.
- 570L. Radiation Biology Laboratory (2) I, II**
Six hours of laboratory.
Prerequisite: Credit or concurrent registration in Biology 570.
The laboratory determination of the effects of ionizing radiation on biological systems.
- 571. Radioisotope Techniques in Biology (3) I, II**
One lecture and six hours of laboratory.
Prerequisites: Physics 125B and 194B. Recommended: Biology 502.
The principles and application of radioisotopes in biology. Radionuclide measurement, safe handling, tracer and radioautography techniques.
- 572. Physiology of Human Systems (3) I, II**
Prerequisites: Physics 125B and 194B; Zoology 200.
Intended for students majoring in one of the natural sciences or engineering. Not open to students with credit in Biology 261 or 362.
Survey of basic themes in human physiology, presented at the cellular and organ system levels. Topics include membrane transport, nerve excitation, muscle contraction, hormone function, cardiovascular physiology, renal function, immunology, and sensory reception and integration.
- 580. Regional Field Studies in Biology (1-3)**
One- to three-week periods during vacations and summer sessions.
Prerequisites: At least twelve units in the biological sciences, including Zoology 200, and consent of instructor. Application for collecting permit must be made at least six weeks before class begins at the Center for Marine Studies (AS-111).
Extended field studies of the flora, fauna, and biotic communities of major natural regions of western North America. May be repeated with new content. Maximum credit six units.

Botany Courses

- 501. Phycology (4) I, II**
Two lectures and six hours of laboratory.
Prerequisite: Botany 200.
Morphology and phylogenetic relationships of the algae.
- 502. Mycology (4) I, II**
Two lectures and six hours of laboratory.
Prerequisite: Botany 200.
The structure, food relations, and classification of fungi.
- 503. Vascular Plants (4)**
Two lectures and six hours of laboratory.
Prerequisite: Botany 200.
Structure, development and phylogenetic relationships of the bryophytes and vascular plants.
- 511. Advanced Phycology (3)**
One lecture and six hours of laboratory.
Prerequisite: Botany 501.
Physiology, ecology, culture and economic aspects of the algae. Maximum credit six units with three units applicable on a master's degree.
- 514. Plant Taxonomy (4) II**
Two lectures and six hours of laboratory, field trips.
Prerequisite: Botany 200.
The study of variation, primarily in flowering plants; classification, identification, nomenclature, distribution.

526. Plant Pathology (4)

Two lectures and six hours of laboratory.

Prerequisite: Botany 200. Recommended: Botany 502.

A practical course dealing with the principles of disease in plants, control measures, and quarantine procedures. Emphasis is placed on the determination and control measures of those pathogenic organisms which affect crops, trees and shrubs and nursery stock.

530. Plant Physiology (4)

Two lectures and six hours of laboratory.

Prerequisites: Botany 200; Chemistry 200, 200L, 201, 201L, and either 230, 230L, or 231, 231L.

The activities of plants, including food manufacture, absorption, conduction, transportation, respiration, growth and movement.

532. Plant Metabolism (3)

Prerequisite: Botany 530 or Biology 502.

An examination of metabolic pathways in plants and their regulation and control.

540. Plant Anatomy (4) II

Two lectures and six hours of laboratory.

Prerequisite: Botany 200.

The arrangement of structural elements within plant organs, with emphasis on cell and tissue types.

562. Agricultural Botany (2)

Field trips to be arranged.

Prerequisite: Botany 200.

California crop plants, their general identification, cultural methods, and regional distribution.

572. Palynology (3) I

One lecture and six hours of laboratory.

Principles and methods of pollen and spore diagnosis, with reference to use in taxonomy, paleontology, anthropology, and medicine.

596. Selected Topics in Botany (2-3)

Prerequisite: Consent of instructor.

Selected topics in classical and modern botany. May be repeated with new content. See class schedule for specific content. Maximum credit six units with three units applicable on a master's degree.

Zoology Courses**503. Embryology (4) I, II**

Two lectures and six hours of laboratory.

Prerequisite: Zoology 200.

Studies in comparative gametogenesis, morphogenesis, and reproductive physiology.

506. Comparative Anatomy of the Vertebrates (4) I, II

Two lectures and six hours of laboratory.

Prerequisite: Zoology 200.

Dissection, study and comparison of organ systems of representative vertebrates.

508. Histology (4) I, II

Two lectures and six hours of laboratory.

Prerequisite: Zoology 200. Recommended: Microbiology 310 or Zoology 108.

Descriptive microscopic anatomy of cells, tissues and organs of mammals with special emphasis on humans.

510. Marine Invertebrate Zoology (4)

Two lectures and six hours of laboratory.

Prerequisites: Biology 411 and Zoology 450.

Ecology, morphology, behavior and physiology of marine invertebrates. Frequent field trips to local marine environments.

515. Ichthyology (4)

Two lectures and six hours of laboratory.

Prerequisite: Zoology 200.

Identification, systematics, evolution, structure, physiology, behavior and ecology of fishes.

516. Herpetology (4)

Two lectures and six hours of laboratory.

Prerequisites: Zoology 200 and consent of instructor.

The origin, evolution, distribution and systematics of amphibians and reptiles of the world.

517. Ornithology (4)

Two lectures, six hours of laboratory or field excursions, and a field project.

Prerequisites: Zoology 200 and consent of instructor.

The study and identification of birds, especially those of the Pacific Coast and the San Diego region.

518. Mammalogy (4) II

Two lectures and six hours of laboratory.

Prerequisites: Zoology 200 and either Zoology 506 or consent of instructor.

The evolution, systematics, distribution and ecology of mammals of the world.

521. General Entomology (4) I, II

Two lectures and six hours of laboratory.

Prerequisite: Zoology 200.

Structure, physiology, natural history and classification of insects.

522. Special Topics in Entomology (3-4)

Two lectures and three hours of laboratory.

Prerequisite: Zoology 521.

Treatment of some aspect of entomology, such as biological control, microbial control or forest entomology, not covered in regularly scheduled courses. See class schedule for specific content. Maximum credit nine units. Maximum credit six units applicable on a master's degree.

Format of course to vary according to the nature of the selected topics.

A. Lecture course.

B. Lecture and laboratory course.

523. Immature Insects (3)

Two lectures and three hours of laboratory.

Prerequisite: Zoology 521.

Collection, preservation, identification and biological study of the immature stages of the different insect orders. Course designed to meet the needs of students specializing in invertebrate zoology, agricultural and medical entomology, parasitology, and systematics.

524. Insect Ecology (3)

Prerequisites: Biology 411 and Zoology 521.

Ecological principles as applied to insects, including consideration of crop ecosystems in relation to insect and mite outbreaks.

525. Economic Entomology (4) II

Two lectures and six hours of laboratory.

Prerequisite: Zoology 521.

Course designed for students of entomology or agriculture and horticulture. Emphasis is placed on determination and control of insects affecting plants. Quarantine measures are also studied.

526. Medical Entomology (4) I, II

Two lectures and six hours of laboratory.

Prerequisites: Zoology 200 or Microbiology 310. Zoology 521 required for students in entomology.

The role of insects and other arthropods in the transmission and causation of human diseases and the important diseases of domesticated animals.

527. Biological Control (4)

Two lectures and six hours of laboratory.

Prerequisite: Zoology 521.

Theory and implementation of biological control of arthropods and weeds. Emphasis on role of natural enemies, including insect pathogens, in the regulation of pest populations. Recommended for students specializing in entomology, botany or applied ecology.

- 528. Insect Physiology (4) I**
Two lectures and six hours of laboratory.
Prerequisites: Zoology 521 or an upper division course in physiology, and Chemistry 230, 230L or 231, 231L.
Description, theory and experimental analysis of all major physiological processes in insects.
- 530. Advanced Invertebrate Zoology (3)**
One lecture and six hours of laboratory.
Prerequisite: Zoology 200.
Selected topics in advanced invertebrate zoology. May be repeated with new content. See class schedule for specific content. Maximum credit six units.
- 535. Parasitology (4) I, II**
Two lectures and six hours of laboratory.
Prerequisite: Zoology 200 or Microbiology 310.
Study of animal parasites with special reference to those of man. Laboratory including identification of important parasites of man, and collection and preservation of local forms.
- 540. Physiological Zoology (4) I, II**
Three lectures and three hours of laboratory.
Prerequisite: Zoology 200.
A comparative and evolutionary study of the functions of organ systems and their environmental significance.
- 555. Principles of Taxonomy, Systematics and Phylogeny (4)**
Two lectures and six hours of laboratory.
Prerequisite: Any one of the following: Zoology 200; Botany 501, 502, 503.
Basis for the classification of organisms. Modern concepts and their application in zoology. Specific problems in laboratory and field.
- 560. Lower Vertebrate Paleontology (4)**
Two lectures and six hours of laboratory.
Prerequisite: Zoology 506.
Advanced studies in the evolution of nonmammalian vertebrates, including relations to earth history and topics in paleoecology and functional morphology. Field and laboratory techniques and exercises in identification are included.
- 561. Mammalian Paleontology (4)**
Two lectures and six hours of laboratory.
Prerequisite: Zoology 506.
Advanced studies in the evolution of mammals, including relations to earth history and topics in paleoecology and functional morphology. Field and laboratory techniques and exercises in identification are included. Zoology 561 need not follow in sequence with Zoology 560.
- 570. Animal Behavior (4) I, II**
Two lectures and six hours of laboratory.
Prerequisites: Biology 215; Zoology 200 or Psychology 210 and 260 for psychology majors.
Biological bases of animal behavior with emphasis on the ethological approach, including the evolution and adaptive significance of behavior.
- 571. Hormonal Aspects of Behavior (3)**
Prerequisites: Biology 430 or 502, or Zoology 540.
Chemoregulatory mechanisms operating within multicellular organisms will be discussed; the structural and chemical components of regulatory systems will be examined in terms of their behavioral effects on the organism.
- 580. Aquaculture (3)**
Prerequisites: Biology 411 or 501, plus either Zoology 200 or 506.
Principles and practices of the farming of aquatic organisms.

GRADUATE COURSES IN BIOLOGY

- 600. Seminar (2-3)**
Prerequisite: Consent of instructor.
An intensive study in advanced biology. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.
- 620. Population and Community Ecology (3)**
Two lectures and three hours of laboratory.
Prerequisite: Biology 411.
Formulation, analysis and experimental testing of the theories of the structure and dynamics of ecological systems at the population and community level.
- 621. Physiological Ecology (3)**
Two lectures and three hours of laboratory.
Prerequisites: Biology 411 and consent of instructor.
The comparative physiological characteristics of natural plant and animal populations in relation to their habitats and environments.
- 622. Behavioral Ecology (3)**
Two lectures and three hours of laboratory.
Prerequisites: Biology 411 and consent of instructor. Recommended: Zoology 570 or Psychology 461.
Behavioral mechanisms relating animals to their physical and biotic environment.
- 625. Physical Aspects of Ecology (3)**
Two lectures and three hours of laboratory.
Prerequisite: Biology 411.
Analysis and measurement of physical factors of the environment and of the processes by which energy and matter are exchanged between organisms and the environment; the significance of the physical environment in ecological processes.
- 626. Aquatic Ecology (3)**
Two lectures and three hours of laboratory.
Prerequisites: Biology 411 and consent of instructor. Application for collecting permit must be made at least six weeks before class begins at the Center for Marine Studies (AS-111).
Ecological concepts as applied to benthic and pelagic populations and communities in fresh water and marine environments.
- 628. Advanced Topics in Ecology (2-4)**
Prerequisites: Biology 411 and consent of instructor.
Selected topics in ecology. May be repeated with new content and consent of the graduate adviser in ecology. Maximum credit six units on a master's degree.
- 630. Seminar in Terrestrial Ecology (2)**
Prerequisite: Biology 411.
Ecological concepts as applied to the terrestrial environment. May be repeated with new content. Maximum credit four units applicable on a master's degree.
- 631. Seminar in Aquatic Ecology (2)**
Prerequisite: Biology 411.
Ecological concepts as applied to the fresh water and marine environment. May be repeated with new content. Maximum credit four units applicable on a master's degree.
- 640. Seminar in Genetics (2)**
Prerequisite: Biology 503.
Maximum credit four units applicable on a master's degree.
- 649. Speciation (3)**
Prerequisites: Biology 411 and 503, or 549.
Concepts and principles of the origin of species.
- 651. Physiological Genetics (3)**
Prerequisites: Biology 503 or 544; Chemistry 231 and 231L. Recommended: Chemistry 361A-361B.
Biochemical aspects of genetics of microbial and human systems.

- 660. Seminar in Cellular Physiology (2)**
Prerequisite: Biology 502.
Maximum credit four units applicable on a master's degree.
- 661. Seminar in General Physiology (2)**
Prerequisite: Biology 502.
May be repeated with new content. Maximum credit four units applicable on a master's degree.
- 662. Seminar in Comparative Physiology (2)**
Prerequisite: Biology 562.
Comparative aspects of function at the molecular through organismal levels. Maximum credit four units applicable on a master's degree.
- 663. Seminar in Environmental Radiation (2)**
Prerequisites: Biology 570 and 571.
The sources, characteristics, distribution, measurement, and fate of radioactive contaminants in the biosphere and interactions with the biota. Maximum credit four units applicable on a master's degree.
- 670. Cytoplasmic Inheritance (3)**
Prerequisites: Biology 502 and 503.
Literature and techniques related to research in non-Mendelian genetics.
- 671. Methods in Physiology (2)**
Six hours of laboratory.
Prerequisite: Biology 502.
Current methods employed in physiological measurements. Maximum credit four units applicable on a master's degree.
- 672. Molecular Biophysics (3)**
Prerequisites: Biology 502 and Mathematics 122.
The description and analysis of biological processes and systems in terms of the properties of molecules and of basic principles.
- 697. Investigation and Report (3)**
Analysis and research techniques in biology.
- 790. Bibliography (1)**
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.
- 797. Research (1-3) Cr/NC**
Research in one of the fields of biology. Maximum credit six units applicable on a master's degree.
- 798. Special Study (1-3) Cr/NC**
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units.
- 799A. Thesis or Project (3) Cr/NC**
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree.
- 799B. Thesis or Project Extension (0) Cr/NC**
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.
- 897. Doctoral Research (3-6) Cr/NC**
Prerequisite: Admission to the doctoral program.
Independent investigation in the general field of the dissertation.
- 899. Doctoral Dissertation (3-6) Cr/NC**
Prerequisite: An officially constituted dissertation committee and advancement to candidacy.
Preparation of the dissertation for the doctoral degree.

GRADUATE COURSES IN BOTANY

- 600. Seminar (2-3)**
Prerequisite: Consent of instructor.
An intensive study in advanced botany. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.
- 601. Seminar in Phycology (2)**
Prerequisite: Botany 501.
Recent developments in phycology. May be repeated with new content. See class schedule for specific content. Maximum credit four units applicable on a master's degree.
- 602. Seminar in Mycology (2)**
Prerequisite: Botany 502.
Current problems in the taxonomy, morphology or physiology of the fungi. May be repeated with new content. See class schedule for specific content. Maximum credit four units applicable on a master's degree.
- 603. Seminar in Vascular Plants (2)**
Prerequisite: Botany 503.
Problems in the evolution of the vascular plants. May be repeated with new content. See class schedule for specific content. Maximum credit four units applicable on a master's degree.
- 614. Seminar in Systematic Botany (2)**
Prerequisite: Botany 514.
Current problems in the systematics of vascular plants. May be repeated with new content. See class schedule for specific content. Maximum credit four units applicable on a master's degree.
- 626. Seminar in Plant Pathology (2)**
Prerequisite: Botany 526.
Advanced topics in the biology of plant pathogens. May be repeated with new content. See class schedule for specific content. Maximum credit four units applicable on a master's degree.
- 630. Seminar in Plant Physiology (2)**
Prerequisite: Botany 530.
Current investigations in one of the areas in plant physiology. May be repeated with new content. See class schedule for specific content. Maximum credit four units applicable on a master's degree.
- 797. Research (1-3) Cr/NC**
Research in one of the fields of botany.
Maximum credit six units applicable on a master's degree.
- 798. Special Study (1-3) Cr/NC**
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units.
- 799A. Thesis or Project (3) Cr/NC**
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for a master's degree.
- 799B. Thesis or Project Extension (0) Cr/NC**
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.

GRADUATE COURSES IN ZOOLOGY

- 600. Seminar (2-3)**
An intensive study in advanced zoology. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

610. Seminar in Marine Zoology (2-3)

Prerequisites: Zoology 200 and consent of instructor.

Recent developments in marine zoology. May be repeated with new content. See class schedule for specific content. Maximum credit four units applicable on a master's degree.

615. Biogeography (3)

Prerequisite: Biology 411 or 549.

Concepts and principles of the distributional history of plant and animal groups, and the origins and dispersal of modern faunas and floras.

620. Seminar in Vertebrate Morphology (2-3)

Current problems in the descriptive, functional and evolutionary anatomy of vertebrates. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

625. Seminar in Ethology and Comparative Psychology (3)

Prerequisites: Biology 411, or Psychology 414 or 417, or Zoology 570, and consent of the graduate adviser.

Current problems in ethology and comparative animal behavior. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree. Not open to students with credit in Psychology 761. (Formerly numbered Biology 610.)

630. Seminar in the Biology of Cold-blooded Vertebrates (2-3)

Prerequisite: Zoology 200 or 506.

Biology of ectothermic animals. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

640. Seminar in the Biology of Warm-blooded Vertebrates (2-3)

Prerequisite: Zoology 200 or 506.

Biology of endothermic animals. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

650. Animal Energetics (3)

Prerequisite: An upper division course in physiology. Recommended: A course in calculus and one in biochemistry.

Energy transformation in animals to include the physiology of starvation, animal energetic efficiency, nutrition, and temperature regulation.

660. Advanced Marine Invertebrate Zoology (3)

One lecture and six hours of laboratory.

Prerequisite: Zoology 510.

Selected topics in advanced marine invertebrate zoology. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

670. Advanced Lower Vertebrate Zoology (2-4)

See class schedule for lecture-laboratory format.

Prerequisite: Either Zoology 515 or 516, depending on specific topic announced in class schedule.

Advanced treatment of ichthyology or herpetology. May be taken twice with new content for a maximum credit of eight units. Maximum credit eight units applicable on a master's degree.

675. Advanced High Vertebrate Zoology (2-4)

Prerequisite: Either Zoology 517 or 518, depending on specific topic announced in class schedule.

Advanced treatment of ornithology or mammalogy. May be taken twice with new content for a maximum of eight units. Maximum credit eight units applicable on a master's degree.

680. Advanced Entomology (3-4)

Two lectures and three hours of laboratory.

Prerequisites: Zoology 521, Biology 411, Botany 503.

Advanced treatment of some phase of entomology such as physiology, morphology, toxicology or systematics. Topic to be announced in the class schedule. May be repeated with new content. Maximum credit six units applicable on a master's degree.

690. Bibliography (1)

The use of basic reference books, journals, pertinent bibliographies preparatory to the writing of a master's thesis.

791. Research Techniques (3)

Prerequisite: Consent of graduate adviser.

Analysis of research techniques in zoology.

797. Research (1-3) Cr/NC

Research in one of the fields of zoology. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with department chair and instructor.

Individual study. Maximum credit six units.

799A. Thesis or Project (3) Cr/NC

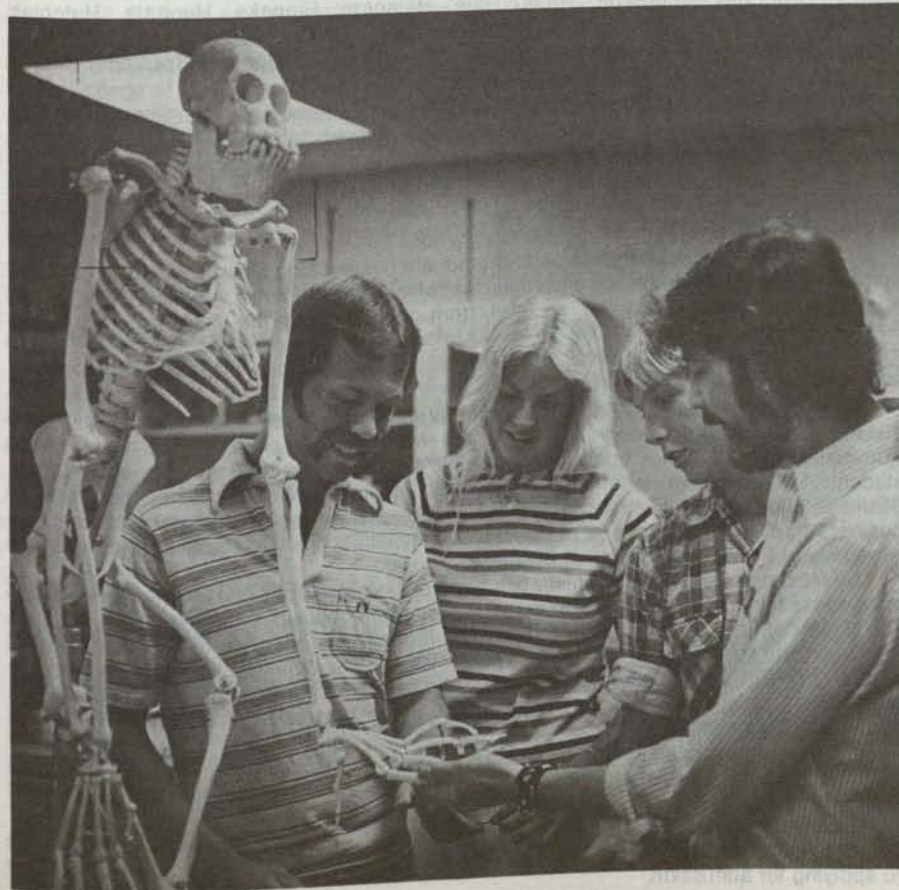
Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

799B. Thesis or Project Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.



Business Administration

Faculty

Dean, College of Business Administration: R. P. Hungate
 Associate Dean, College of Business Administration: M. L. Crawford
 Associate Dean for Graduate Study in Business Administration: W. F. Barber
 Director, School of Accountancy: A. R. Bailey

Chair, Department of Finance: P. A. Vandenberg
 Chair, Department of Information Systems: N. E. Sondak
 Chair, Department of Management: W. R. Sherrard
 Chair, Department of Marketing: R. W. Haas

Graduate Advisers:

Accounting: V. E. Odmark, R. A. Samuelson, G. E. Whittenburg

Finance: R. Hutchins, K. Sachdeva, W. W. Reints

Information Systems: W. R. Feeney, W. E. Spaulding

International Business: G. M. Gazda

Management: T. J. Atchison, J. R. Beatty

Management Science: W. R. Sherrard

Marketing: J. B. McFall, T. R. Wotruba

Personnel and Industrial Relations: D. W. Belcher

Production and Operations Management: A. L. Srbich

Real Estate: J. Short

Professors: Archer, Atchison, Bailey, Barber, Belasco, Belcher, Brodshatzer, Crawford, Darley, Galbraith, Ghorpade, Haas, Hale, Hampton, Hippaka, Hungate, Hutchins, Langenbach, Lightner, Lindgren, McFall, Meier, Meigs, Mitton, Neuberger, Nye, Odmark, Peters, Pierson, Reints, Reznikoff, Sherrard, Short, Snudden, Sondak, Spaulding, Srbich, Unterman, Vandenberg, Vanier, Wijnholds, Williamson, Wotruba

Associate Professors: Beatty, Block, Hatch, Hesse, Samuelson, Settle, Smith, C.

Assistant Professors: Adams, Belch, Crabb, Douglas, Feeney, Fisher, R., Gazda, Kenyon, Lackritz, Lane, Matsuura, Mercurio, Mitry, Porter, Sachdeva, Sciglimpaglia, Skekel, Smith, H., Soukup, Sterk, Swanson, Toole, Vik, Warschauer, Whittenberg, Whittington, Zutshi

Assistantships

Graduate teaching assistantships and graduate nonteaching assistantships in business administration are available to a limited number of qualified students. Application blanks and additional information may be secured from the Dean of the College of Business Administration.

General Information

The College of Business Administration offers graduate study leading to the Master of Business Administration degree and to the Master of Science degree in Business Administration. The major goals in the master's degree curriculum are to educate the students for general management positions, for management of the functional areas of business, and for executive responsibilities in organizations having close relationships with business activities. The College of Business Administration is a member of the American Assembly of Collegiate Schools of Business.

The Master of Business Administration degree is designed to provide a broad education in business for the student with either a business or a nonbusiness undergraduate degree. The Master of Science degree in Business Administration is designed to provide additional education and specialization in business subjects for the student who has an undergraduate degree in one of the business subject fields. The master's degree programs with a major in business administration have been accredited by the American Assembly of Collegiate Schools of Business.

Entrance requirements for the two master's degree curricula are the same. Either degree is available to any student regardless of previous education, provided the requirements of the degree are met.

All students considering graduate work in business are advised to seek further details from the Associate Dean for Graduate Studies in the College of Business Administration prior to applying for admission.

Close contacts with large and small firms, both local and national, enhance the business student's education. The generous cooperation of local business and government organizations provides opportunities for research and observation for graduate students. The continued professionalization of the business executives' responsibilities has created many opportunities for the student with an advanced degree in business administration.

Bureau of Business and Economic Research

The Bureau of Business and Economic Research is an organized research activity serving the needs of the College of Business Administration and the Department of Economics. Operationally, it is a part of the College of Business Administration, with a director and a policy committee. The principal objectives of the Bureau are to (1) conduct research in the areas of economics and business, with special reference to local and regional problems; (2) facilitate research in these areas by the faculty and students; (3) seek cooperative arrangements with outside individuals and organizations for conducting specific research projects; (4) compile local and regional data; (5) publish the results of Bureau research investigations and aid the faculty in publication of research. Graduate students are encouraged to make use of Bureau facilities.

Admission to the Graduate Program in the College of Business Administration

A student seeking admission to either of the master's degree curricula offered in the College of Business Administration should make application in the manner set forth in Part Three of this bulletin.

Admission will be based upon the applicant's ranking based on the formula: 200 times the overall GPA as an undergraduate plus the Graduate Management Admission Test (GMAT) score. No student will be admitted with less than 1050 points based upon this formula. A higher total may be required because of limitations on the facilities and resources in the College of Business Administration. In addition, the student must have maintained a 2.50 grade point average over the last 60 semester units of work attempted.

Transcripts and test scores must be on file at San Diego State University sufficiently in advance of the expected date of registration for a decision to be made. For fall admission the GMAT must be taken prior to April 1 and for spring admission, prior to August 1. Details concerning the GMAT may be obtained from the Test Office, San Diego State University, or by writing to the Educational Testing Service, 20 Nassau Street, Princeton NJ 08540.

Master of Business Administration Degree

Admission to the Degree Curriculum

Regulations governing admission to the University and to the College of Business Administration are outlined above and in Part Three of this bulletin. For admission to the curriculum for the Master of Business Administration degree there are no specific prerequisite courses.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Three of this bulletin.

Specific Requirements for the Master of Business Administration Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete an approved program of studies containing between 30 and 60 units of 600- and 700-numbered courses. The exact number of units for each student will depend on the extent of his previous work in business administration. Students with no previous course work in business administration or related fields will normally be expected to complete 60 units. Students with an undergraduate degree in business administration from a professionally accredited school will normally be expected to complete 30 units. Up to nine units of course work may be accepted for transfer. Transfer courses must be strictly graduate courses taken in a professionally accredited graduate program.

At least 21 of the total units required must be completed in residence at San Diego State University, and at least nine units of program courses must be completed after advancement to candidacy.

The requirements for the degree are as follows:

1. Complete each of the following twelve courses for which an equivalent has not been satisfactorily completed:

- B.A. 600 Financial Accounting (3)
- B.A. 601 Organization Theory (3)
- B.A. 602 Quantitative Methods I (3)
- B.A. 604 Law for Business Executives (3)
- B.A. 605 Marketing (3)
- B.A. 609 Computer Programming and Systems Analysis (3)
- B.A. 610 Managerial Accounting (3)
- B.A. 611 Behavior in Organizations (3)
- B.A. 612 Quantitative Methods II (3)
- B.A. 615 Financial Principles and Policies (3)
- B.A. 616 Managerial Economics (3)
- Econ. 603 Economic Analysis (3)

Satisfactory completion means that the student's grade in each equivalent course must be "C" (2.0) or better and that the course must have been completed within ten years prior to the first course completed on his master's degree program.

2. Complete the following two courses required of all students:

- B.A. 620 Research and Reporting (3)
- B.A. 726 Seminar in Policy Formulation (3)

3. Complete 18 units in the following two categories of concentration and electives:

- a. Concentration: No more than 15 units in one of the concentrations listed below, three units of which must include Business Administration 799A, Thesis (Plan A), or Business Administration 790, Directed Readings in Business Administration. Students choosing the Directed Readings option must then pass a comprehensive examination in their last semester of course work in lieu of the thesis (Plan B).

Concentrations available:

- Accounting
- Finance
- Information Systems
- International Business
- Management
- Management Science
- Marketing
- Personnel and Industrial Relations
- Production and Operations Management
- Real Estate

- b. Electives: At least three units in course work outside the concentration.

The distribution of the 18 units between concentration and electives, and the specific courses in each category, are to be determined by the student and graduate adviser in consultation.

4. Electives, if needed, to total at least 30 units.
5. Not more than a total of six units in courses 797, Research, and 798, Special Study, combined, will be accepted for credit toward the degree.
6. For regulations concerning grade point averages, final approval for the granting of the degree, award of the degree, and diplomas, see the section entitled "Basic Requirements for the Master's Degree," in Part Three of this bulletin.

Master of Science Degree in Business Administration

Admission to the Degree Curriculum

In addition to meeting the requirements for classified graduate standing in the University and admission to the College of Business Administration, as described above, and in Part

Three of this bulletin, the student must have satisfactorily completed the following courses or their equivalents before enrolling in 600- and 700-numbered courses listed on the official master's degree program:

- B.A. 212, Accounting Fundamentals (4)
- B.A. 140, Business Law (3)
- B.A. 180, Principles of Information Systems (3)
- Econ. 101-102, Principles of Economics (6)
- Econ. 201, Statistical Methods, or
Math 119, Elementary Statistics (3)
- Math 120, Mathematics for Business Analysis (3)
- B.A. 301, Statistical Analysis for Business, or
B.A. 302, Quantitative Methods (3)
- B.A. 323, Fundamentals of Finance (3)
- B.A. 350, Management and Organization (3)
- B.A. 370, Marketing Principles (3)

The following additional courses or their equivalents must have been satisfactorily completed for an Accounting Concentration before enrolling in 600- and 700-numbered courses listed on the official master's degree program:

- B.A. 310, Intermediate Accounting (4)
- B.A. 311, Financial Accounting Theory (4)
- B.A. 312, Managerial Cost Accounting (4)

Satisfactory completion means that the student's grade in each course must be "C" (2.0) or better and that the course must have been completed within ten years prior to the first course completed on his master's degree program. In addition, the student's adviser may request satisfactory completion of additional prerequisite courses in the student's proposed field of concentration.

Notice of admission to a curriculum with classified graduate standing will be sent to the student by the Graduate Division Office only upon the recommendation of the College of Business Administration.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Three of this bulletin.

Specific Requirements for the Master of Science Degree

In addition to meeting the requirements for classified graduate standing as described above and the general requirements for master's degrees as described in Part Three of this bulletin, the student must complete a graduate program of 30 approved units including at least 21 units in 600- and 700-numbered courses. Business Administration 799A, Thesis, is required. In the Accounting concentration a plan B option is available by substituting a comprehensive examination and three units of additional course work for the thesis requirement. Business Administration 616, Managerial Economics, is required unless the student has completed sufficient advanced economics courses as a part of his/her undergraduate preparation. Business Administration 726, Seminar in Policy Formulation, is required unless the student has completed Business Administration 405, Business Strategy and Integration, as part of his/her undergraduate degree. At least 24 units must be in business administration and economics. Not more than a total of six units in courses 797, Research, and 798, Special Study, may be accepted for credit toward the degree.

The following concentrations are available:

- | | |
|---------------------------|--|
| 1. Accounting | 6. Management Science |
| A. Financial | 7. Marketing |
| B. Taxation | 8. Personnel and
Industrial Relations |
| C. Managerial | 9. Production and Operations
Management |
| 2. Finance | 10. Real Estate |
| 3. Information Systems | |
| 4. International Business | |
| 5. Management | |

For regulations concerning grade point averages, final approval for the granting of the degree, award of the degree, and diplomas, see the section entitled "Basic Requirements for the Master's Degree," in Part Three of this bulletin.

Courses Acceptable on Master's Degree Programs in Business Administration

GRADUATE COURSES

Classified graduate standing is a prerequisite for all 600- and 700-numbered courses.

- 600. Financial Accounting (3)**
Basic concepts and principles of financial accounting; accounting as a data processing system; measurement of business income; financial statements.
- 601. Organization Theory (3)**
The business organization viewed as a system. Development of organization theory, functions and structure of organizations, control and adaptation, interaction of systems levels and organizational values.
- 602. Quantitative Methods I (3)**
Measure of central tendency and variation, sampling and various statistical tests such as analysis of variance, F, t, and X^2 tests. Simple and multiple correlation.
- 604. Law for Business Executives (3)**
Development, significance, and interrelationships of law and business. Analysis of essential aspects of law pertaining to business including materials from the law of contracts, sales, agency, business organizations, property, negotiable instruments, secured transactions. Effects of government regulation of labor and business.
- 605. Marketing (3)**
The marketing activities of a firm in relation to management and society. Application of economic theory to marketing institutions and functions. Not open to students with credit for Business Administration 370.
- 609. Computer Programming and Systems Analysis (3)**
Prerequisite: Business Administration 602.
Fundamentals of computers, problem-oriented computer language, flow-charting logic and techniques, analysis of the synthesis of computer-based systems.
- 610. Managerial Accounting (3)**
Prerequisite: Business Administration 600.
Accounting in relation to the decision-making process; various cost systems; relevancy of various cost concepts; direct costing, flexible budgets, distribution costing; break-even analysis; capital budgeting; and other techniques of management planning and control.
- 611. Behavior in Organizations (3)**
Prerequisite: Business Administration 601.
Nature of the human resource in organizations. Analysis of organizational systems and managerial actions to direct and control human behavior.
- 612. Quantitative Methods II (3)**
Prerequisite: Business Administration 602.
The design of statistical experiments and various operations research techniques such as simulation, linear programming, queuing theory, and Markov chain analysis.
- 615. Financial Principles and Policies (3)**
Prerequisite: Business Administration 600.
Finance and financial institutions as they relate to the firm and the flow of funds. Emphasis on the supply of and demand for capital; principles and tools of business finance; money and capital markets.
- 616. Managerial Economics (3)**
Prerequisite: Economics 603.
Role of economic theory in management analysis and decision. Study of demand, cost, and supply theories from a business viewpoint.

- 620. Research and Reporting (3)**
Prerequisite: Business Administration 612.
Principles of research design and data accumulation. The analysis and effective presentation of data related to business and industry.
- 630. Accounting Theory and Analysis of Financial Statements (3)**
Prerequisite: Business Administration 600.
The theories, principles and concepts underlying financial statements; measurement and presentation of enterprise resources, liabilities and income in accordance with generally accepted accounting principles.
- 631. Accounting Concepts and Problems of Financial Reporting (3)**
Prerequisite: Business Administration 630.
Special problem areas in the reporting of corporate assets and equities; emphasis upon pronouncements of regulatory bodies such as the Financial Accounting Standards Board and the Securities and Exchange Commission.
- 632. Advanced Accounting (3)**
Prerequisite: Business Administration 630.
Principles and concepts as related to the measurement, determination, and presentation of resources, equities, and income of parent and affiliated companies; concepts of fund accounting; specialized reporting for partnership formation, income distribution, and liquidation.
- 633. Federal Income Tax (3)**
Prerequisite: Business Administration 630.
Individual federal income tax, including deductions, credit, social security taxes, and property transactions.
- 634. Auditing (3)**
Prerequisite: Business Administration 632.
Critical analysis of the application of auditing principles in verification of financial statements; review of AICPA and SEC bulletins and regulations; consideration of professional ethics, audit standards, procedures, sampling techniques, and report writing; trends and developments in auditing profession.
- 635. Seminar in Taxation Topics (3)**
Prerequisite: Business Administration 633.
Theoretical treatment of selected topics in taxation. May be repeated with new content for a maximum of six units. See class schedule for specific content.
- 636. Seminar in Corporate Tax (3)**
Prerequisite: Business Administration 633.
Corporate tax problems involving distributions, liquidations, reorganizations, redemptions, personal holding companies, accumulated earnings tax, and thin capitalization.
- 637. Seminar in Accounting Information Systems (3)**
Prerequisites: Business Administration 609, 610 and 612.
Design of accounting systems. Current trends as discussed in the literature. Computerized procedures for internal and external reporting.
- 638. Seminar in Managerial Accounting (3)**
Prerequisite: Business Administration 610.
Managerial cost accounting concepts and procedures, including budgetary planning, cost control, advisory functions, measurement of divisional profitability, product pricing, and investment decisions.
- 639. Seminar in Accounting Theory (3)**
Prerequisite: Business Administration 632.
Historical development of accounting principles and theory; problems in valuation, income determination, and statement presentation.
- 640. Seminar in Tax Planning (3)**
Prerequisite: Business Administration 633.
Tax situations and appropriate alternative plans involving property transaction, securities, interest, investments, and compensation.

- 650. Seminar in Business Finance (3)**
Prerequisite: Business Administration 615.
Application of principles of finance to current problems in financial management, with emphasis on planning and development of tools for use in decision making. Consideration of case materials, study of the literature, and development of individual student reports.
- 651. Seminar in Investments (3)**
Prerequisite: Business Administration 615.
Examination of firms from an investment point of view; historical and current developments affecting investment values; sources of information; techniques of analysis; measurement of risks, returns, and investment values.
- 652. Seminar in Security Analysis and Portfolio Management (3)**
Prerequisites: Business Administration 609 and 651.
Security valuation and price forecasting. Portfolio management theory. Risk management and reduction analysis. Establishment of performance objectives.
- 653. Seminar in Quantitative Analysis for Financial Decisions (3)**
Prerequisites: Business Administration 609, 612 and 615.
Quantitative techniques and the computer as employed to optimize financial decisions.
- 654. Seminar in International Business Finance (3)**
Prerequisite: Business Administration 615.
International finance applied to the business firm.
- 655. Seminar in Financial Markets (3)**
Prerequisite: Business Administration 615.
Analysis of money and capital markets. Emphasis on factors of influence and sources and uses of data. Survey of literature in the field.
- 670. Seminar in Personnel Planning and Staffing (3)**
Prerequisite: Business Administration 611, or one of the following: Economics 680, Psychology 622, Public Administration 630, Sociology 720.
Theories and models of manpower planning; inventorying and forecasting of manpower needs and requirements; labor force analysis; recruitment; the staffing process; measurement tools and techniques.
- 671. Seminar in Union-Management Relations (3)**
Prerequisite: Business Administration 611, or one of the following: Economics 680, Psychology 622, Public Administration 630, Sociology 720.
Interaction of unions and business organizations with emphasis on collective bargaining. Effects on management and society. Trends in collective bargaining and in the organization of employees.
- 672. Seminar in Compensation (3)**
Prerequisite: Business Administration 611, or one of the following: Economics 680, Psychology 622, Public Administration 630, Sociology 720.
The organizational process of compensating employees. Compensation theory from economics, psychology, and sociology. Compensation systems and their effects on organizations and individuals.
- 673. Seminar in Organizational Development (3)**
Prerequisite: Business Administration 611, or one of the following: Economics 680, Psychology 622, Public Administration 630, Sociology 720.
The process of developing human resources and organizations. Theories of organizational development; tools and techniques, analysis of manpower and organizational development programs.
- 679. Seminar in Personnel and Industrial Relations (3)**
Prerequisite: Business Administration 611.
Analysis of issues and application of behavioral science theory in acquiring, developing, rewarding, and utilizing human resources.
- 680. Computer Hardware and Software Systems (3)**
Prerequisite: Business Administration 609.
Computer architecture, programming languages, programming systems, and operating systems.

- 681. Seminar in Information Theory (3)**
Prerequisite: Business Administration 609.
Data structures, data communications, computer-centered information networks, and addressing and indexing schemes.
- 682. Seminar in Measurement and Control of Information Systems (3)**
Prerequisites: Business Administration 680 and 681.
Information systems models, information utility, performance measurement, applications and systems evaluations, and computer-based adaptive control concepts and organization.
- 683. Seminar in Advanced Information Topics (3)**
Prerequisite: Business Administration 681.
Self-reproducing automata, artificial intelligence, self-organizing information systems.
- 688. Seminar in Management of Information Systems (3)**
Prerequisite: Business Administration 681.
Advanced information systems. Emphasis on current managerial trends and developments and on individual student research.
- 689. Seminar in Data Systems Design (3)**
Prerequisites: Business Administration 612 and 681.
Research in the analysis and design of data processing systems.
- 700. Insurance Principles and Practices (3)**
Nature and extent of personal, business, and social risk. Risk handling techniques; insurance principles and practices; basic contracts analysis; insurance underwriting and rating; insurance problems and trends; personal and business risk management.
- 705. Seminar in Estate Planning (3)**
Prerequisite: Business Administration 615.
The scope and nature of estate planning. Identification and analysis of the environmental factors and those aspects of federal and state law affecting estate planning and taxation. Estate taxation and social policy.
- 710. Seminar in World Business Environment (3)**
Prerequisite: Economics 603.
The nature, dimensions and motives of International Business. Impact of environmental factors. The nature of the multinational corporation, the importance of national and multilateral controls and policies for International Business management.
- 720. Seminar in Behavioral Sciences for Management (3)**
Prerequisite: Business Administration 611.
Applications of findings from behavioral sciences to management problems and decisions. Study of organization cultures and subcultures. Impact of human behavior on the enterprise.
- 721. Seminar in Group Processes and Leadership (3)**
Prerequisite: Business Administration 611.
Perceptions and processes in work groups. Experience in interpersonal networks, influence and rewards, stereotypes; managing differences and conflicts.
- 722. Seminar in Organizations and the Social Environment (3)**
Prerequisite: Business Administration 611.
Societal forces underlying the American industrial system: modern corporations and their historical antecedents, the organization man, the role of technology and the political economy in industrial society.
- 723. Seminar in Comparative Management (3)**
Prerequisite: Business Administration 611.
Concepts, theories, techniques, and practices of management in various countries.
- 724. Seminar in the Entrepreneur (3)**
Prerequisite: Business Administration 611.
Examination of the entrepreneurial approach; concepts, theory and techniques of managerial innovation and implementation; analysis of entrepreneurial skills.
- 726. Seminar in Policy Formulation (3)**
Prerequisites: Advancement to candidacy and consent of instructor.
Building and maintaining enterprises in our society; determining objectives; developing policies and plans for achievement; measuring and controlling organizational activities; reappraising objectives and policies on the basis of new developments.

- 728. Seminar in Business Planning (3)**
Prerequisites: Business Administration 601, 605, 615, and nine units in Business Administration courses numbered 630 or above.
Strategic decision making, long-range forecasting, and corporate planning with major emphasis on product-market relationships.
- 729. Seminar in Organization and Management (3)**
Prerequisite: Business Administration 611.
Analysis of problems in business and other organizations. Organization and decision theory and contemporary developments in management science are emphasized.
- 740. Seminar in Operations Research: Deterministic Systems (3)**
Prerequisites: Business Administration 609 and 612.
Mathematical optimization techniques for deterministic systems. Advanced topics in linear programming; nonlinear, dynamic, and integer programming; selected examples of application.
- 741. Seminar in Operations Research: Stochastic Systems (3)**
Prerequisites: Business Administration 609 and 612.
Use of probability and statistical decision theory for decision making under conditions of uncertainty. Markov processes, queuing theory, and the theory of games.
- 742. Seminar in Computer Applications in Operations Research (3)**
Prerequisite: Business Administration 740.
Computer simulation techniques for analysis of complex decision problems. Implementation of optimization algorithms through use of the digital computer.
- 743. Seminar in Management Science: Theory (3)**
Prerequisite: Business Administration 740.
Examination of recent developments in management science/operations research theory and methodology.
- 744. Seminar in Management Science: Application (3)**
Prerequisite: Business Administration 740.
Quantitative techniques for managerial planning and decision making. Applications of operations research and other concepts to industrial situations.
- 745. Seminar in Quantitative Forecasting and Planning (3)**
Prerequisite: Business Administration 740 or 741.
Mathematical approach to intermediate and long-range forecasting of economic and technological variables which affect the firm. Development of solution algorithms and heuristic procedures for solution of dynamic planning problems.
- 748. Seminar in Applied Multivariate Statistics for Business (3)**
Prerequisite: Business Administration 612.
Applications of various multivariate techniques such as factor analysis, multiple regression, judgment analysis, hierarchical grouping, multiple discriminant analysis, multivariate analysis variance, canonical correlation.
- 749. Seminar in Applied Behavioral Measurement (3)**
Prerequisite: Business Administration 602 and 611.
Measurement procedures useful in analyzing such areas as leadership, job satisfaction, attitudes, motivation, etc. Development and use of scaling strategies including Likert, Thurstone, Guttman, paired-comparison, forced-choice, semantic-differential, and review of existing instruments used in business-related settings.
- 750. Production and Operations Management (3)**
Prerequisite: Business Administration 612.
Theory, concepts and decision analysis related to effective utilization of major factors of production in manufacturing and service industries. Utilizes the system approach to achieve unification of the production elements in terms of both analysis and synthesis. Not open to students who have credit for a basic course in production management.
- 751. Seminar in Methods Engineering and Job Design (3)**
Prerequisite: Business Administration 750.
Use of industrial engineering for management decisions—job simplification and motion economy; micromotion analysis, time standards and determination, performance rating, allowances, statistical work measurement, learning curves, formula construction, machine interference and the establishment of production times from standard data.

- 752. Seminar in Quality Control (3)**
Prerequisite: Business Administration 750.
Statistical techniques for controlling quality, reliability and maintainability; types of control and limit charts.
- 753. Seminar in Operations Planning and Control Systems (3)**
Prerequisite: Business Administration 750.
Analysis and design of single- and multiple-product integrated production and inventory control systems. Combined detailed and aggregate planning of operations with deterministic or stochastic demand over finite and infinite horizon.
- 754. Seminar in Production and Operations Management (3)**
Prerequisite: Business Administration 750.
Case studies of selected industries, emphasizing integration of the manufacturing and operations functions with the major goals of the organization.
- 760. Seminar in Consumer Behavior (3)**
Prerequisite: Business Administration 605.
The study of consumer behavior in relation to marketing strategy and the changing environment of business.
- 761. Seminar in New Products Marketing (3)**
Prerequisite: Business Administration 605.
The study of new products management in relation to planning and implementation of marketing strategy.
- 768. Seminar in Industrial and Government Procurement Management (3)**
Prerequisites: Business Administration 601 and 605.
Procurement methods used in industry and government; internal departmental operations, interrelationships with other departments; supplier selection, pricing/cost analysis; contract negotiations, special characteristics of government procurement.
- 769. Seminar in International Marketing (3)**
Prerequisite: Business Administration 605.
The impact of cultural, social, political, economic, and other environmental variables on international marketing systems and the decision-making process of multinational marketing operations.
- 770. Seminar in Marketing and the Economy (3)**
Prerequisite: Business Administration 605.
Advertising, selling, sales promotion, and merchandising as they relate to society, business and the economy.
- 762. Seminar in Advertising Management (3)**
Prerequisite: Business Administration 605.
Advertising and sales promotion in relation to the planning and implementation of marketing strategy.
- 763. Seminar in Sales Management (3)**
Prerequisite: Business Administration 605.
Sales management and personal selling decisions and strategies in business organizations.
- 764. Seminar in Marketing Price Policy (3)**
Prerequisite: Business Administration 605.
Study of pricing strategy and price determination in business organizations.
- 765. Seminar in Marketing Channels and Physical Distribution (3)**
Prerequisite: Business Administration 605.
Analysis of marketing channels and physical distribution systems in domestic and international trade.
- 766. Seminar in Market Analysis and Research (3)**
Prerequisites: Business Administration 605 and 612.
Application of statistical and mathematical methods to market problems, consumer research, and product analysis.
- 767. Seminar in Industrial Marketing Management (3)**
Prerequisite: Business Administration 605.
The management of marketing decisions and strategies peculiar to the industrial market.

780. Seminar in Real Estate and Urban Development (3)

Prerequisite: Business Administration 616 or Economics 603.
Real estate market functions and operations. Real estate finance and appraisal theories and approaches. Models of urban land use and urban development. Issues in real estate decision-making.

783. Seminar in Real Estate Finance and Investment (3)

Prerequisite: Business Administration 780.
Theories and factors governing the financial functions of lenders, business and governmental agencies in real estate lending operations. Analysis of real estate investment by financial institutions, corporations, individuals and government.

784. Seminar in Real Property Valuation (3)

Prerequisite: Business Administration 780.
Economic principles of valuation. Data collection, analyses and correlation. The Cost, Market, and Income Approaches. New Appraisal Technology. Special Purpose Appraising.

785. Seminar in Urban Land Policy (3)

Prerequisite: Business Administration 780 or City Planning 610 or Economics 758 or Geography 570.

Relationship between private and public role players in urban land allocation and utilization. Problems arising from private market land use decisions. Current and future policy alternatives such as land use controls, urban growth policies and housing programs.

786. Seminar in Housing Development (3)

Prerequisite: Business Administration 780 or City Planning 610 or Economics 758 or Geography 655.

The nature of the building industry. Demand characteristics. The local housing market. Low and moderate income housing developments. New housing technology. Government incentives and constraints. Environmental considerations. The role of the private investor and housing developer.

789. Seminar in Current Urban Land Issues (3)

Prerequisite: Business Administration 780.
Current problems in real property. Regional land use planning. (Formerly numbered and titled Business Administration 781, Seminar in Real Estate.)

790. Directed Readings in Business Administration (3)

Prerequisite: Advancement to candidacy.
Preparation for the comprehensive examination for those students in the M.B.A. program under Plan B.

795. Seminar in Selected Topics (3)

Selected areas of concern in business administration. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

797. Research (3) Cr/NC

Prerequisite: Advancement to candidacy.
Research in one of the fields of business administration. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable on a master's degree.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

Chemistry**Faculty**

Chair, Department of Chemistry: W. D. Jones
Graduate Adviser: R. W. Isensee
Credential Adviser: N. F. Dessel (Natural Science)
Professors: Abbott, Bennett, Cobble, Coffey, Grubbs, Hellberg, Jensen, Jones, Malley, Mathewson, O'Neal, Richardson, Ring, Roeder, Sharts, Stewart, Wadsworth, Walba, Woodson
Associate Professors: Dahms, Lebherz
Assistant Professor: Chatfield

Assistantships

Graduate teaching assistantships and graduate nonteaching assistantships in chemistry are available to a limited number of qualified students. Application blanks and additional information may be secured from the Graduate Adviser in the Department of Chemistry.

General Information

The Department of Chemistry, in the College of Sciences, in cooperation with the Department of Chemistry, University of California, San Diego, offers a program of graduate study leading to the Doctor of Philosophy degree in Chemistry. This degree is awarded jointly by the Board of Regents of the University of California and the Board of Trustees of the California State University and Colleges in the names of the University of California, San Diego, and San Diego State University.

Graduate programs leading to the Master of Arts degree in Chemistry and the Master of Science degree in Chemistry are also offered.

The facilities, staff, and equipment of the Department of Chemistry meet the requirements of the American Chemical Society, and students obtaining the A.B. or B.S. degree with the approved curriculum are granted the A.C.S. certification. All graduate study is based on this sound undergraduate foundation.

The Department is well-equipped for the active research program which is being carried on. Major pieces of equipment include: JEOL Model JNM-PS-100NMR Spectrometer with Fourier Transform capability, Varian EM-390 NMR, Hitachi RMU-6E Mass Spectrometer, Cary Model 14 and 16 Spectrophotometers, Gilford Spectrophotometers, Microwave Spectrometer, Perkin-Elmer 621 I.R. Spectrophotometer, Varian E-3 ESR Spectrometer, Jarrel-Ash Laser Raman Spectrometer, Perkin-Elmer Fluorescence Spectrophotometer, Perkin-Elmer Atomic Absorption Spectrophotometer, Hewlett-Packard Reporting Gas Chromatograph, Princeton Applied Research Polarographic Analyzer, high temperature calorimeters, high-voltage electrophoresis apparatus, pulsed Nd:glass laser system and optical multichannel analyzer, ultra and refrigerated centrifuges, Durrum Stopped-flow Spectrophotometer System interfaced with a Varian 620 i computer and a variety of radiation counters including a liquid scintillation counter. A variety of computing resources are available including programmable calculators, both local and remote time sharing systems, and large-scale batch-mode facilities. A high-temperature laboratory has just been completed.

Areas of research under active investigation and available for student participation include analytical chemistry, biochemistry, inorganic chemistry, organic chemistry and physical chemistry.

Section I. Master's Degree Programs**Admission to Graduate Study**

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, classified standing may be subject to satisfactory performance on orientation examinations which are administered by the Department of Chemistry. The student with a major in chemistry from another accredited institution should have met all requirements for certification of the baccalaureate degree by the American Chemical Society (statement available on request).

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as stated in Part Three of this bulletin. In addition, the student must pass orientation examinations in chemistry. These examinations should be taken during the first semester in residence.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes a major consisting of at least 24 units in chemistry from courses listed below as acceptable on master's degree programs. At least 15 of these units must be in 600- and 700-numbered courses, excluding Chemistry 792, 797 and 798. Chemistry 711 and 791 are required. Subject to departmental approval, the student may elect Plan A with the thesis (in which case the program must include Chemistry 792 and 799A), or Plan B with the comprehensive examination in lieu of the thesis. A student electing Plan A must pass a final oral examination on his thesis.

Specific Requirements for the Master of Science Degree

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Three of this bulletin. He must also complete a graduate program which includes a major consisting of at least 24 units in chemistry from courses listed below as acceptable on master's degree programs. At least 15 of these units must be in 600- and 700-numbered courses, excluding Chemistry 792, 797 and 798. Chemistry 711, 791, 792 and 799A are required. A student must pass a final oral examination on his thesis.

Section II. Joint Doctoral Program

The cooperating faculties of the Departments of Chemistry at the University of California, San Diego and at San Diego State University possess complementary specialties that enable the doctoral student to gain familiarity with most areas in chemistry and to find research activity and direction in a great variety of specific problems.

In order that he may participate effectively in this program, the entering student will be required to have a mastery of the subjects usually presented in the undergraduate curriculum: physical, organic, analytical, and inorganic chemistry. All applicants will be expected to present the equivalent of one year of physics and of mathematics at least through integral calculus. Students should be prepared to take placement examinations which will be administered by a joint committee and will cover the fields of inorganic, organic and physical chemistry, and mathematics.

On admission to the program, the student is guided by Requirements for the Doctoral Degree Program given in Part Three of this bulletin. The student will normally spend his first year in the program completing his year of residency at the University of California, San Diego. It is desirable for the student to complete his qualifying examination by the end of his fifth semester and to be advanced to candidacy.

Staff

The following faculty members of the Departments of Chemistry of the cooperating institutions participate in the joint doctoral program, being available for direction of research and as departmental members of Joint Doctoral Committees.

University of California, San Diego:

Graduate Adviser: J. R. Arnold; Alternate: R. Linck

Staff: Arnold, Doolittle, Kraut, Miller, Perrin, Schrauzer, Traylor, Vold, Zimm

San Diego State University:

Graduate Adviser: R. W. Isensee; Alternate: W. D. Jones

Staff: Abbott, Bennett, Cobble, Coffey, Dahms, Grubbs, Hellberg, Jensen, Jones, Leberz, Malley, O'Neal, Richardson, Ring, Roeder, Sharts, Stewart

Courses Acceptable on Advanced Degree Programs in Chemistry

UPPER DIVISION COURSES

500A-500B. Principles of Chemical Engineering (3-3)

(Same course as Mechanical Engineering 584A-584B.)

Prerequisite: Credit or concurrent registration in Mechanical Engineering 350 or Chemistry 310A or 410A.

Industrial stoichiometry; fluid flow and heat transfer as applied to unit operations such as evaporation, distillation, extraction, filtration, gas-phase mass transfer, drying, and others. Problems, reports, and field trips.

501. Chemical Oceanography (3)

Three lectures and occasional field trips.

Prerequisite: Credit or concurrent registration in Chemistry 310B or 410B.

The application of the fundamentals of chemistry to the study of oceans.

502. Chemical Literature (1)

Prerequisite: Upper division standing in chemistry.

An introduction to the availability, scope and use of the chemical literature.

510. Advanced Physical Chemistry (3)

Prerequisite: Chemistry 410B.

Mathematical tools essential to solving problems in chemical thermodynamics, statistical mechanics, chemical kinetics, quantum chemistry and molecular structure and spectroscopy, with applications.

520A. Inorganic Chemistry (3) I, II

Prerequisite: Credit or concurrent registration in Chemistry 310B or 410B.

The physical basis of the periodic system, complex inorganic compounds, and the nature of the chemical bond.

520B. Inorganic Chemistry (3) II

Prerequisite: Chemistry 520A.

An advanced systematic study of representative and transition elements and their compounds.

530. Theoretical Organic Chemistry (3) I, II

Prerequisites: Chemistry 310A or 410A, and 431 and 431L.

Electronic and physical properties of organic molecules; structure-reactivity correlations: Electronic structure of molecules (qualitative molecular orbital theory); stereochemistry; and linear free energy relationships.

537. Organic Qualitative Analysis (4)

Two lectures and six hours of laboratory.

Prerequisites: Chemistry 431, 431L, and credit or concurrent registration in Chemistry 310A or 410A. Chemistry 457A-457B recommended.

Chemical, physical, and spectral methods discussed and employed to determine structure of organic compounds. Purification and separation techniques stressed.

550. Advanced Instrumental Methods (2) I, II

Prerequisites: Chemistry 431 and 431L and credit or concurrent registration in Chemistry 410B.

Advanced theory of chemical instrumentation.

560A-560B. General Biochemistry (3-3)

Prerequisites: Chemistry 310B or 410B, and 431 and 431L.

The structure, function, metabolism, and thermodynamic relationships of chemical entities in living systems. Not open to students with credit in Chemistry 361A-361B.

577. Radiochemical Analysis (4) II

Two lectures and six hours of laboratory.

Prerequisite: Chemistry 310A or 410A.

Principles and techniques of radioactivity applied to the various fields and problems of chemistry. Instrumentation, tracer application, activation analysis, nuclear reactions and radiolysis.

GRADUATE COURSES

- 710. Advanced Topics in Physical Chemistry (1-3)**
Prerequisite: Consent of instructor.
Selected topics in physical chemistry. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.
- 711. Chemical Thermodynamics (3)**
Prerequisite: Chemistry 410B.
Chemical thermodynamics and an introduction to statistical thermodynamics.
- 712. Chemical Kinetics (3)**
Prerequisite: Chemistry 410B.
Theory of rate processes; applications of kinetics to the study of reaction mechanisms.
- 713. Quantum Chemistry (3)**
Prerequisite: Chemistry 410A.
Quantum mechanics of atomic and molecular systems; applications to chemical bonding theory.
- 714. Molecular Structure (3)**
Prerequisite: Chemistry 410B.
Theory and techniques used in the determination of molecular structure.
- 720. Advanced Topics in Inorganic Chemistry (1-3)**
Prerequisite: Chemistry 520A.
Selected topics in inorganic chemistry. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.
- 721. Mechanisms of Inorganic Reactions (3)**
Prerequisite: Chemistry 520A.
Mechanisms in inorganic reactions with an emphasis on coordination chemistry.
- 722. Chemistry of the Nonmetals (3)**
Prerequisite: Chemistry 520A.
An advanced systematic study of the nonmetallic elements and their compounds.
- 730. Advanced Topics in Organic Chemistry (1-3)**
Prerequisites: Chemistry 431 and 431L.
Selected topics in organic chemistry. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.
- 731. Mechanisms of Organic Reaction (3)**
Prerequisites: Chemistry 410B, 431 and 431L.
Reactivity and mechanism in organic reactions.
- 732. Advanced Organic Chemistry (3)**
Prerequisites: Chemistry 431 and 431L.
Applications and limitations of organic reactions from the viewpoint of synthesis.
- 750. Advanced Topics in Analytical Chemistry (1-3)**
Prerequisite: Chemistry 410B.
Selected topics from the field of analytical chemistry. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.
- 760. Advanced Topics in Biochemistry (1-3)**
Prerequisite: Chemistry 560B.
Selected topics in biochemistry. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.
- 762. Enzymology (2)**
Prerequisite: Credit or concurrent registration in Chemistry 310B or 410B.
Theory and techniques used in the study of the mechanism of action of enzymes.
- 763. Cellular Regulation (2)**
Prerequisites: Chemistry 361A-361B or 560A-560B.
The biochemistry of cellular regulatory mechanisms in eukaryotic cells. The regulation of gene transcription, in RNA translation and post-translational processes, including the mechanism and regulation of intracellular protein turnover.

- 764. Membrane Biochemistry (3)**
Prerequisites: Chemistry 361A-361B or 560A-560B.
Membrane structure and function. Biophysical and biochemical properties of membranes from prokaryotic and eukaryotic cells and animal cell viruses; biosynthesis and assembly of membrane components; molecular basis of solute transport, energy coupling, cell surface transformation, and cellular recognition, adhesion and fusion.
- 767. Advanced Biochemical Techniques (2)**
Prerequisite: Chemistry 560A.
Six hours of laboratory. Theory and practice of current research techniques in biochemical research.
- 790. Seminar (1-3)**
An intensive study in advanced chemistry. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.
- 791. Research Seminar (1)**
Prerequisite: Consent of department chair.
Discussions on current research by students, faculty, and visiting scientists. Each student will make a presentation based on the current literature.
- 792. Bibliography (1)**
Exercise in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.
- 797. Research (1-3) Cr/NC**
Prerequisite: Consent of instructor.
Research in one of the fields of chemistry. Maximum credit six units applicable on a master's degree.
- 798. Special Study (1-3) Cr/NC**
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units.
- 799A. Thesis (3) Cr/NC**
Prerequisite: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree.
- 799B. Thesis Extension (0) Cr/NC**
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.
- 897. Doctoral Research (1-3) Cr/NC**
Prerequisite: Admission to the doctoral program.
Independent investigation in the general field of the dissertation.
- 899. Doctoral Dissertation (3-6) Cr/NC**
Prerequisites: An officially constituted dissertation committee and advancement to candidacy.
Preparation of the dissertation for the doctoral degree.

Communicative Disorders

(Speech Pathology and Audiology Courses)

Faculty

Chair, Department of Communicative Disorders: H. G. Kopp
 Graduate Advisers: A. C. Nichols (Coordinator), E. J. Allen, H. G. Kopp, M. Newhoff, R. Novak, R. M. Riedman, and E. L. Thile
 Credential Adviser, Speech and Hearing Specialist: E. L. Thile
 Credential Advisers, Deaf: H. G. Kopp, K. Phillips
 Professors: Kopp, Nichols, Riedman, Thile
 Associate Professor: Allen
 Assistant Professors: Gould, Newhoff, Novak, Phillips, Williams

General Information

The Department of Communicative Disorders, in the College of Human Services, offers graduate study leading to the Master of Arts degree in Speech Pathology and Audiology, and to the credentials described below. The department offers advanced study in speech and hearing science, speech pathology, audiology, and education of the deaf. The programs utilize the facilities of the Speech and Hearing Clinic in the Clinical Training Center in the Education Building and in the Communication Clinic. Observation, diagnostic and therapeutic experiences with out-patient children and adults are available. Field experience is offered in the public schools and community agencies. Practicum and observation experiences are possible at Children's Hospital; United Cerebral Palsy Center; The Home of Guiding Hands (mental retardation); Anderson and Lafayette Schools (deaf and severely hard of hearing); Head Start (disadvantaged); Rolando School (congenital aphasia); University of California Medical School Hospital; U.S. Naval Hospital, Balboa Park; U.S. Veterans Administration Hospital; Chicano Community Center; San Ysidro Community Health Center; and Edgemoor Geriatrics Hospital.

The University has been granted permission to negotiate a Ph.D. program with the University of California at San Diego School of Medicine in Communicative Disorders.

Admission to Graduate Standing

All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Three of this bulletin.

Candidates for admission to classified graduate standing, including credential candidates are reviewed by the faculty as a whole, and by a faculty committee from one of the three areas of the department: speech pathology, audiology, and education of the deaf. To initiate this review, a candidate for admission indicates which of these programs he or she intends to enter. The criteria for admission that guide the review committee are as follows:

1. In considering the candidate's *statement of purpose*, content, style and clarity of presentation are primary points.
2. Three *letters of recommendation* from appropriate persons who can and do attest to the candidate's high potential for graduate study are required by the reviewing faculty.
3. A *grade point average* of 3.00 overall or 3.50 during the last 60 units of college or university study will be necessary for consideration for admission.
4. A *Graduate Record Examination Aptitude Test (GREAT)* score of 950 (total) is a criterion for admission. Candidates with high grade point averages, 3.50 or above, may be admitted conditionally if the 950 criterion is not met. In such cases, the condition of admission is that the candidate take and pass the GREAT with a total score of 950 or above during the first semester of residence in the department. Continuation in the program may be contingent upon fulfilling this condition. In cases where these criteria are not met, exceptional strength in one area may balance a deficit in another area. Such candidates may be admitted conditionally, subject to faculty review at the end of the first semester of residence. A postbaccalaureate level credential candidate must be reviewed for classified or conditionally classified postbaccalaureate standing prior to enrollment in clinical

practicum. The following courses are controlled for this purpose: Speech Pathology and Audiology 326, 345, 346, 356.

All transfer students planning a program to include clinical practica must enroll in the appropriate undergraduate practicum as specified for their field of interest (Speech Pathology and Audiology 326, 345, 346, 356, 357, 528) prior to enrollment in graduate practica.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Three of this bulletin. In addition, students seeking the Master of Arts degree in Speech Pathology and Audiology are required to have completed Speech Pathology and Audiology 600.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units which includes a major consisting of 24 units in speech pathology and audiology which must include Speech Pathology and Audiology 600 and 797 or 799A. Fifteen units of the 24 units must be in 600- and 700-Audiology 600 and 797 or 799A. Fifteen units of the 24 units must be in 600- and 700-Audiology 600, 601, 602, 603, 604, 605, 606, 640, 644, 649, 654, 657, 658 or 797, 798, or 799A. A student must complete Speech Pathology and Audiology 799A, Thesis, for Plan A. If Plan B is elected, the student must complete a research project as approved by the department; complete two units of Speech Pathology and Audiology 797, Research; and pass a comprehensive examination (which may be repeated only once).

Credentials

Specialist Credential for the Communication Handicapped

The Specialist Credential for the Communication Handicapped prepares students for an emphasis in one or more of the following areas of handicap:

- Deaf and Severely Hard of Hearing
- Deaf-Blind
- Severe Oral Language (including aphasia)
- Speech and Hearing

The Specialist Credential for the Communication Handicapped specifies a sequence of speech pathology and audiology courses plus a sequence of education courses.

Admission Requirements

1. Formal application to the Department of Communicative Disorders.
2. Interview with a faculty member in the Department of Communicative Disorders.
3. Admission to the program for the Single Subject Credential (Secondary) or Multiple Subjects Credential (Elementary).

- or -

1. A basic teaching credential. Students should consult with appropriate advisers in the College of Education for specific requirements.
2. Students applying to the program at the postbaccalaureate level must satisfy the admission requirements of the department for classified graduate standing.

Program

Persons interested in the Special Education Specialist Credential shall:

1. Concurrently or prior to completion of the specialist credential, complete the single subject credential (preliminary or clear) or the multiple subjects credential (preliminary or clear). Students may choose to:
 - (a) Major in Liberal Studies (offered by the College of Education) in conjunction with specified speech pathology and audiology courses.
 - (b) Pursue a departmental major; complete specified prerequisites for the College of Education; pass the National Teacher Examination prior to entering the College of Education professional education sequence.

2. Complete a minimum of one year of study, including:
 - (a) The Special Education generic course work: Special Education 500, 501, 502.
 - (b) Advanced work in the area of specialization in the Department of Communicative Disorders including:
 - (1) Communication Handicapped Specialization generic course work Speech Pathology and Audiology 104, 105, 106, 320, 321, 322, 340, 341, 531 (or Linguistics 520), 532, 551, 552, 553, 600.
 - (2) Additional course work required for the specific area of emphasis within the Credential (Severe Oral Language, Deaf, Deaf-Blind, Speech and Hearing) selected by the student in conjunction with adviser.

Clinical Rehabilitative Services Credential

Clinical-Rehabilitative Services (C-RS) Credentials are available in the following areas: Language, Speech and Hearing (LSH) Audiology Severe Language Handicapped/Aphasic (SLH)

The Ryan Credential Program is competency based; that is, specified competencies have been identified as requirements for areas of specialization by the State Commission. Candidates may satisfy institution requirements, therefore, by either satisfactory completion of required courses or their equivalency, or by demonstrating equivalent competencies by experience or examination. Candidates may enter the C-RS Credential Program at undergraduate or graduate levels. A postbaccalaureate year (minimum of 30 semester units) is required of all candidates.

The following generic courses within the Department of Communicative Disorders are required: Speech Pathology and Audiology 104, 105, 106, 320, 321, 322, 323, 324, 325 or 357, 326, 340, 341, 345, 346, 527, 530, 531 or Linguistics 520, and Speech Pathology and Audiology 551. Courses from other departments include: Psychology 101 or Sociology 101, Psychology 210, 260 or Zoology 108, Psychology 330 or Family Studies and Consumer Sciences 270, Psychology 340 or Sociology 440 or Family Studies and Consumer Sciences 436, 271 or 576, Physics 107, Special Education 500 and 550, and Linguistics 520 or Speech Pathology and Audiology 531.

The Advanced Specialization Program in Language, Speech and Hearing (LSH) requires the following additional courses: Speech Pathology and Audiology 433, 528, 529, 532, 552, 553, 605, 606 or 596 (voice), 626, and 646 (or 346). Courses from other departments include Linguistics 553.

The Severe Language Handicapped (SLH) credential requires the following courses within the department in addition to those required for the LSH credential: Speech Pathology and Audiology 325 (SLH class placement), 529, 596 (Multisensory Integration) and 433 (SLH sections for the courses in this track). Courses in other departments include Elementary Education 411 or 421, 413, Education 631, Special Education 501 and 575.

In addition to the Generic Program, the Advanced Specialization Program in Audiology requires the following courses within the Department of Communicative Disorders: Speech Pathology and Audiology 358, 433 (Audiology sections for courses in this track), 529, 532, 543, 547, 550, 552, 553, 644, 649 (Pediatrics), 656 and 657.

Certificates and Licensure

Preparation Leading to the Certificate of Clinical Competence from the American Speech and Hearing Association

Students may complete the academic and clinical practice requirements leading to the Certificate of Clinical Competence in Speech Pathology (CCC-Sp) or to the Certificate of Clinical Competence in Audiology (CCC-A) given by the American Speech and Hearing Association. The certificate requires 60 units of course work, 30 units of which must be completed at the graduate level; 300 clock hours of supervised clinical experience, 150 hours of which must be completed at the graduate level; a clinical fellowship year; and a national examination. The academic and practica requirements must meet certain specifications. Consult an adviser in the area in which certification is desired for specific information.

Preparation Leading to the State Credential and the Professional Certificate from the Council on Education of the Deaf

Students may complete the academic and practica requirements leading to the State Credential and the Professional Certificate given by the Council on Education of the Deaf. The Professional Certificate requires a specific pattern of courses and teaching experiences and evidence of successful classroom teaching following completion of the academic requirements. Consult an adviser in the Program for Education of the Deaf for more information.

Preparation Leading to State Licensure in Speech Pathology or Audiology

Students may complete the academic and clinical practicum requirements leading to California State Licensure in Speech Pathology or in Audiology, a legal requirement for all individuals professionally employed in non-public school settings. The Speech Pathology and Audiology Examining Committee which operates within the California State Board of Medical Quality Assurance requires evidence of completion of 24 semester hours of course work in the area (Speech Pathology or Audiology) in which the license is to be granted, 275 work in the area (Speech Pathology or Audiology) in which the license is to be granted, 275 clock hours of clinical experience, nine months of full-time experience (Required Professional Experience), and a national examination. Most Licensure and ASHA Certification requirements may be fulfilled concurrently. Consult an adviser in the area in which licensure is desired for specific information.

Courses Acceptable on Master's Degree Programs in Speech Pathology and Audiology

UPPER DIVISION COURSES IN SPEECH PATHOLOGY AND AUDIOLOGY

- 527. Diagnostic Methods in Speech Pathology (3) I, II**
Prerequisites: Speech Pathology and Audiology 320, 323, and 340, and credit or concurrent registration in Speech Pathology and Audiology 326.
Principles and procedures in the assessment and prognosis of communication disorders to include delayed speech and mental retardation. Case histories, testing, interviewing, and clinical reporting. Child, parent, and teacher counseling.
- 528. Diagnostic Practicum in Speech Pathology (3) I, II**
One lecture and six hours of laboratory.
Prerequisite: Speech Pathology and Audiology 527 and passage of a competency examination.
Supervised clinical practice in diagnostic methods. Experience in multidisciplinary assessment.
- 529. Orientation to Public School Practicum (3) I, II**
Prerequisites: Speech Pathology and Audiology 324 and 527. Minimum of 50 hours of supervised clinical practicum. Prior to admission, applicants must receive departmental approval.
Goals, materials and procedures for organizing and administering speech, language and hearing programs in the school. Fifteen hours of observation and fifteen hours of screening required. Should be taken the semester before Speech Pathology and Audiology 433 or Special Education 480E (severe oral language or speech and hearing emphases). (Formerly numbered Speech Pathology and Audiology 329.)
- 530. Family Communication Dynamics (3)**
Prerequisites: Speech Pathology and Audiology 322 and 326.
The communication environment in the home. Parent-child interaction in relation to the origin and alleviation of functional and organic speech disorders.
- 531. Language Structure (3)**
Prerequisite: Speech Pathology and Audiology 106.
Systematic study of the design features of language as they relate to communication behavior. The primary focus is the role of language structure in disordered communication.
- 532. Assessment of Language Disorders (3) I, II**
Prerequisite: Speech Pathology and Audiology 531.
Techniques of language assessment, including administration and evaluation of particular diagnostic tests. Organic implications in auditory perceptual problems. Discussions and demonstrations. Project required.

539. Neuropathologies of Speech, Hearing and Language (3) II
Prerequisites: Speech Pathology and Audiology 321 and 340. Recommended: Speech Pathology and Audiology 323.

Research and theory concerning the nature, etiologies and principles of treatment of disorders of speech, hearing and language resulting from pathologies of the nervous system.

543. Hearing Amplification (1 or 3) I
Prerequisites: Module I: Speech Pathology and Audiology 340. Module II: Speech Pathology and Audiology 342.

Module I includes hearing aid components, functions, trouble shooting and client orientation to amplification (1 unit). Module II includes hearing aid evaluations, fittings, and electroacoustical hearing aid analysis (2 units). Students may elect Module I (1 unit) or Modules I and II (3 units).

547. Hearing Conservation (3) II
Prerequisite: Speech Pathology and Audiology 341.

Noise measurement, analysis and reduction and its effects on hearing and communication. Damage risk criteria and methods of hearing protection.

550. Problems of Deafness (3) I
Educational programs, services and resources for hearing impaired; historical background, philosophy, sociological and psychological problems.

551. Speech Reading and Auditory Training (3) I, II
Prerequisites: Speech Pathology and Audiology 320 and 340.

Theory and methods of speech reading; auditory rehabilitation methods including survey of amplification systems. Fifteen hours of observation in program for deaf, severely hard of hearing.

552. Articulation Disorders and Methods (3) II
Prerequisites: Speech Pathology and Audiology 321 and 551.

Significant theories and research in prevention and remediation of articulatory disorders. Includes emphases on speech habilitation of hearing impaired, cognitive and motor processing.

553. Language Disorders and Methods (3) I
Prerequisites: Speech Pathology and Audiology 531 and 551.

Significant theories and research in language development and remediation. Includes emphasis on application to hearing impaired individuals.

596. Selected Topics in Speech Pathology and Audiology (1-4) I, II
Prerequisite: Twelve units in speech pathology and audiology.

Specialized study of selected topics from the area of speech pathology and audiology. See class schedule for specific content. Maximum credit six units. Maximum credit three units applicable on a master's degree.

GRADUATE COURSES IN SPEECH PATHOLOGY AND AUDIOLOGY

600. Research and Bibliography (3)
Two lectures and three hours of laboratory.

Prerequisites: Undergraduate major or equivalent in Speech Pathology, Audiology, or Education of the Deaf; and Psychology 270.

Bibliographic techniques. Methods and exposition of research in the fields of speech pathology and audiology. Recommended for the first semester of graduate work, and prerequisite to advancement to candidacy.

601. Seminar in Voice Science (3)
Prerequisites: Speech Pathology and Audiology 320 and 321.

Relationship of basic principles of sound to speech and language. Analysis of speech sound production. Application of mechanical and electronic equipment to the measurement and control of speech and language.

602. Seminar in Aphasia (3)
Prerequisites: Speech Pathology and Audiology 323 and 539.

Review and analysis of research in diagnosis and therapy for persons with disorders of symbolization (adult and childhood aphasia). Concurrent enrollment in one unit of Speech Pathology and Audiology 626 recommended.

603. Seminar in Cerebral Palsy (3)
Prerequisites: Speech Pathology and Audiology 324 and 539.

Review and analysis of research in diagnosis and theories of treatment for persons with speech and language disorders associated with cerebral palsy. Concurrent enrollment in one unit of Speech Pathology and Audiology 626 recommended.

604. Seminar in Oro-Facial Anomalies (3)
Prerequisites: Speech Pathology and Audiology 321, 324, and 340; and 75 hours of supervised practicum.

Review and analysis of research in diagnosis and therapy for persons with cleft palate and other oro-facial anomalies. Concurrent enrollment in Speech Pathology and Audiology 626 recommended.

605. Seminar in Stuttering (3)
Prerequisite: Speech Pathology and Audiology 322.

Differential diagnosis of stuttering. Individual and group therapy for children and adults with dysfluency problems. Concurrent enrollment in one unit of Speech Pathology and Audiology 626 recommended.

606. Seminar in Voice Pathology (3)
Prerequisites: Speech Pathology and Audiology 321 and 324.

Study of voice problems of structural and functional etiologies. Differential diagnosis of vocal anomalies. Theories and therapy for vocal problems. Concurrent enrollment in Speech Pathology and Audiology 626 required.

626. Advanced Clinical Practice in Speech Pathology (1) Cr/NC
Three hours of laboratory.

Prerequisites: A minimum of three units of Speech Pathology and Audiology 326 and/or 346; Speech Pathology and Audiology 340; departmental approval; credit or concurrent registration in appropriate seminar or courses as specified below:

A. Aphasia: Speech Pathology and Audiology 531 and 602.
B. Cerebral Palsy and Neuromotor Anomalies: Speech Pathology and Audiology 539 or 603.

C. Cleft Palate and Oro-Facial Anomalies: Speech Pathology and Audiology 604.
D. Stuttering: Speech Pathology and Audiology 322, 605.

E. Articulation: Speech Pathology and Audiology 552 or 654.
F. Language Disorders: Speech Pathology and Audiology 531, 553.

G. Voice Pathologies: Speech Pathology and Audiology 606.
Supervised work with representative advanced speech and language disabilities. Twenty-six hours practicum required per unit. Maximum credit four units. Up to three units may be taken concurrently. Maximum credit four units of Speech Pathology and Audiology 626, 645, 646 and/or 656 applicable toward the master's degree. Transfer students must enroll in one unit of Speech Pathology and Audiology 326 prior to 626.

628. Advanced Diagnostic Methods in Speech Pathology (3) Cr/NC
One lecture and six hours of laboratory.

Prerequisites: Speech Pathology and Audiology 326 and 528. Departmental approval. Diagnosis of individuals with complicated speech problems such as brain injury.

640. Seminar in Psychoacoustics (3) I
Prerequisites: Speech Pathology and Audiology 342 and credit or concurrent registration in Speech Pathology and Audiology 600.

Psychophysical concepts underlying clinical audiology. Relationship of audiologic test results to the conditions under which they were obtained. (Formerly numbered Speech Pathology and Audiology 644.)

644. Medical Audiology (3) II
Prerequisites: Speech Pathology and Audiology 345 and credit or concurrent registration in Speech Pathology and Audiology 600.

Problems of diagnosis, referral and report writing. Testing in medical setting and medically significant hearing pathologies.

Recommended Speech Pathology and Audiology 640. (Formerly numbered Speech Pathology and Audiology 640.)

645. Advanced Clinical Practice in Audiologic Assessment (1) Cr/NC

Prerequisite: Speech Pathology and Audiology 345.
Three hours of laboratory.

Advanced casework in hearing evaluation. Maximum credit four units. Up to two units may be taken concurrently. Maximum credit four units of Speech Pathology and Audiology 626, 645, 646 and/or 656 applicable on a master's degree.

646. Advanced Clinical Practice with Hard of Hearing (1) Cr/NC

Prerequisite: Speech Pathology and Audiology 346.
Three hours of laboratory.

Supervised practice with problem hearing cases. Maximum credit four units. Up to two units may be taken concurrently. Maximum credit four units of Speech Pathology and Audiology 626, 645, 646 and/or 656 applicable on a master's degree.

649. Seminar in Major Research in Diagnostic Audiology (3)

Prerequisites: Speech Pathology and Audiology 342; and credit or concurrent registration in Speech Pathology and Audiology 600.

Consideration of research in clinical audiology. May be repeated with new content. Maximum credit six units.

654. Seminar in Physiological Phonetics (3)

Prerequisite: Speech Pathology and Audiology 552.

Physiology underlying the production of continuous speech, including transitional movements, based on a syllabic concept.

656. Advanced Clinical Practice with the Deaf (1) Cr/NC

Three hours of laboratory.

Prerequisites: Speech Pathology and Audiology 552 and 553.

Supervised clinic practicum at an advanced level with representative deaf cases. Maximum credit four units. Maximum credit four units of Speech Pathology and Audiology 646 and 656 applicable on a master's degree with emphasis in the Hearing Impaired.

657. Differential Diagnosis of the Hearing Impaired (3)

Prerequisites: Speech Pathology and Audiology 551, and Speech Pathology and Audiology 626, 646, or 656.

Diagnosis of multiple-handicapped, hearing impaired children; including clinical teaching, critical overview of assessment methods, materials and equipment, prognosis, current philosophies and trends. Suggested concurrent enrollment in Speech Pathology and Audiology 656.

658. Seminar in Problems of Deafness (3)

Prerequisites: Speech Pathology and Audiology 346 or 356.

Problems of deafness, evaluation of research, interdisciplinary approach to aural habilitation. See class schedule for specific content.

659. Seminar in Problems of Deaf-Blind (3)

Prerequisite: Speech Pathology and Audiology 356.

Problems of the Deaf-Blind, study of techniques and methodology, evaluation of research, interdisciplinary approach to habilitation. See class schedule for specific content.

797. Research (2) Cr/NC

Prerequisite: Advancement to candidacy and consent of the graduate adviser.

Research in speech pathology, deaf education or audiology. Maximum credit two units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Individual study. Maximum credit six units.

Prerequisite: Consent of staff, to be arranged with department chair and instructor.

799A. Thesis or Project (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

799B. Thesis or Project Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.

Drama

Faculty

Chair, Department of Drama: Don W. Powell
Coordinator Graduate Program: M. Lessley
Graduate Advisers: Amble, Annas, Bellinghiere, Harvey, Howard, Lessley, McKerrow, Owen, Powell, Stephenson
Credential Adviser: M. McKerrow
Professors: Amble, Harvey, Howard, Owen, Powell, Stephenson
Associate Professors: Annas, Lessley, McKerrow
Assistant Professor: Bellinghiere

Assistantships

Graduate teaching assistantships in drama are available to a limited number of qualified students. Application blanks and further information may be obtained from the department chair.

General Information

The Department of Drama, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Drama and the Master of Fine Arts Degree. The department offers advanced study in the various areas of drama as they relate to acting, directing, playwriting, scene design, lighting, children's theatre, and costume and makeup. The center for graduate students in drama on the San Diego State University campus is the Dramatic Arts Building, one of the finest educational theatre plants in the United States. The Dramatic Arts Building contains a main stage with an auditorium seating 500 and an experimental theatre seating 200, three classrooms, a scene design drafting room, a fully equipped costume laboratory, a spacious scene shop, and several rehearsal rooms.

MASTER OF ARTS DEGREE IN DRAMA

Admission to Graduate Study

In addition to the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin, the student will be required to complete the departmental diagnostic examination during his first semester of graduate enrollment in the department. The examination is administered each semester on the second Saturday following the beginning of classes. Each candidate must also provide the department with three letters of recommendation.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, as described in Part Three of this bulletin. In addition, students seeking the Master of Arts degree in Drama are required to have completed Drama 600, and to have removed any deficiencies assigned as the result of the diagnostic examination.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of a minimum of 30 units which includes at least 24 units from courses listed below as acceptable on master's degree programs in drama, of which at least 18 units must be in 600- and 700-numbered courses. Drama 600, Research and Bibliography, Drama 647A, Seminar in History of Theatre and Drama, and Drama 799A, Thesis or Project, are required courses. For the master's thesis in a selected area, but does not necessarily provides the opportunity for a research thesis in a selected area, but does not necessarily guarantee the student a design or direction thesis or project.

MASTER OF FINE ARTS DEGREE IN DRAMA

Admission to Graduate Study

In addition to meeting the requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin, the student must achieve a score of no less than 1000 on the Graduate Record Examination Aptitude Test and must complete the departmental diagnostic examination which is administered each semester on the second Saturday following the beginning of classes. Candidates must possess a baccalaureate degree in drama with a grade point average in drama of no less than 2.5 overall in the last 60 units of study attempted with a 3.0 undergraduate average in the major with a 3.5 average in those theatre classes considered prerequisites for the M.F.A. in technical theatre or design. Additionally, candidates must have completed requirements commensurate with their proposed emphasis in the M.F.A. program, completed a minimum of six units of theatre history, and demonstrated outstanding abilities in a particular area of dramatic arts by the submission of a portfolio and resume. The design portfolio, when appropriate, should contain sketches, graphics, floor plans, elevations, plots, color swatches, and photographs of productions revealing the applicant's creative ability in his/her chosen area of technical theatre or design. The resume should contain documentation of participation in no less than five full-length theatrical productions in an accredited college or university theatre, a professional theatre group, or a community theatre approved by the Drama Department. Further, the candidate is responsible for the submission of no less than four letters of recommendation regarding the candidate's academic, professional and personal qualifications from responsible academic or professional theatre figures.

If the student has not met certain criteria or demonstrates deficiencies in his/her undergraduate preparation, he/she may be granted conditional admission with the understanding that he/she will complete prescribed coursework in addition to the 60-unit program and prior to advancement of the student to classified standing. In the event that a student already accepted into the program should request a change of specific emphases at a later date, he/she will be required to reapply for acceptance into the program, and to retake the departmental diagnostic examination.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Three of this bulletin. Candidates for the M.F.A. must have completed 30 units with a minimum grade point average of 3.0 included in the official program. They must also have successfully completed Drama 600 and any deficiencies noted by the faculty upon the completion of the departmental diagnostic examination. The appointment of a major adviser from the student's major area of specialization must be made, and a thesis topic which has received the approval of the departmental graduate committee review. There must be a positive report from the graduate committee, which will review the student's performance in terms of professional standards, such as the ability to work with other members of the theatrical team, an acceptable artistic output, the meeting of deadlines, the ability to function within organizational outlines, a demonstration of the skills commensurate with the specific emphasis area, and a demonstration of the physical and mental stamina to perform under the stress of a production schedule.

Specific Requirements for the Master of Fine Arts Degree

Candidates for the M.F.A., in addition to meeting the requirements for classified graduate standing, must complete a 60-unit graduate program which includes a core of courses totaling 21 units as follows: Drama 600, 621, 643, 645, 646A, 646B, and 647A or 647B. In addition, six units of departmental graduate level electives are to be selected from Drama 644, 647A or 647B if not taken above, 648, and 798. The student must complete 15 units of practicum, project, and thesis units under the course numbers, Drama 642, 746, 795, and 799A. Twelve elective units are to be selected from the following series of courses, with no more than six units in any one area. Those acceptable courses are Art 694, 760, 769, 771, 775, or English 614, 617, 632, 640, or Telecommunications and Film 602, 615, or Drama 545A

or 545B, 551, 552, 554. Six units of electives are to be selected from courses acceptable for graduate credit at the discretion of the student and his major adviser with the approval of the graduate coordinator. Upon completion of Drama 600, 642, 643, 645, 646A and 646B, the student is eligible to make application for a Project/Thesis if a 3.0 average has been maintained in those courses.

Candidates will present a written thesis (799A) with emphasis on analysis/apologia of the Drama 795 project. Candidates must pass a final oral examination by the faculty, which will include his official thesis committee, upon the completion of all other requirements for the degree.

At least 45 units of the student's program must be completed in residence at San Diego State University, and the student must be in residence not less than three semesters. No more than six units in 798 will be accepted for credit toward the degree.

Courses Acceptable on Master's Degree Programs in Drama

UPPER DIVISION COURSES

511. Styles in Creative Dramatics (3) I, II

Prerequisite: Drama 310.

Advanced techniques and procedures in the teaching of creative dramatics. Lectures and reading on the application of creative dramatics with emphasis on the different styles of creative dramatics available to the practitioner. Practical experience through work with children.

515. Directing for Children's Theatre (3) II

Prerequisite: Drama 255.

Staging and technical problems relative to the production of plays for children; casting procedures, blocking and characterization principles, rehearsal and scenic techniques. Practical experience through university-sponsored productions. (Formerly numbered Drama 315.)

533. Style in Acting and Directing (3)

Prerequisite: Drama 231.

Acting and directing problems related to the production of plays from the great periods in theatre history. Special attention to characterization, style, dramatic values, creative directing, and production approaches.

534. History of Acting Theory (3)

Prerequisite: Drama 231.

The major acting theories and theoreticians from Diderot, through Delsarte and Stanislavski, to Grotowski, and analysis of major actors who practiced these theories.

540. Styles in Scenic Design (3) II

Prerequisite: Drama 440.

History of scenic design and the application of contemporary styles to various types of dramatic production for stage, television and cinema. (Formerly numbered Drama 440B.)

545A-545B. Stage Lighting (3-3) I, II

Two lectures and three hours of laboratory.

Prerequisite: Drama 545A is prerequisite to 545B.

Light, color, lighting instruments, and control equipment, including the design and planning of lighting for plays.

546. Computer Systems and Special Effects Techniques in Stage & Television Lighting (3)

Two lectures and three hours of laboratory.

Prerequisite: Credit or concurrent registration in Drama 545B.

Functional study of computer systems in stage and television lighting with emphasis on realizing effective methods of using such systems in production.

551. Costume, Movement, and Manners (3) I

Prerequisite: Drama 250.

Interrelationship of period costumes on the movement and manners of the time and their application on the stage.

552. Costume History and Design for the Theatre (3)

Two lectures and three hours of laboratory.

Prerequisites: Drama 250 and 452.

A continuation of Drama 452, to include chronological study of clothing and theatrical dress from the Restoration period to 1930, with practical applications in terms of contemporary costume design for the theatre.

554. Costume Construction Techniques (3) I

Two lecture-demonstrations and three hours of laboratory.

Prerequisite: Drama 250.

Period pattern drafting, draping, cutting, construction. Wig, millinery, armour, mask, accessory construction. Costume paint and dye techniques.

598. Selected Topics in Drama (1-3) I, II

Prerequisite: Twelve units in drama.

A specialized study of selected topics from the areas of drama. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

GRADUATE COURSES**600. Research and Bibliography (3)**

Basic reference works, scholarly and critical journals; introduction to bibliographical techniques; exercises and problems in methods and exposition of research as it relates to the various areas of speech. Recommended for first semester of graduate work, and prerequisite to advancement to candidacy.

621. Seminar in Theories of the Theatre (3)

Prerequisites: Drama 420, 600.

Critical determinants in the theatre which have led to the major stylistic movements: Aristotle, Wagner, Brecht, Strindberg, Appia, Craig, Jones, Brunetiere, Archer, Simonson and Grotowsky.

635. Seminar in Children's Dramatics (3)

Prerequisites: Drama 310 and 515.

Modern developments and trends in children's theatre and creative dramatics in educational, civic and professional programs in the United States and England.

642. Theatre Practicum Skills (3) Cr/NC

Prerequisite: Admission to the M.F.A. program.

Twelve hours per week in laboratory and workshop experience in three design areas (lighting, scene design, costume).

Investigation and application of those skills necessary to the function of a theatrical design artist in theatrical scene design, lighting design or costume design.

Experience and instruction in drafting, painting, color mixing, costume and pattern cutting, lighting and projection techniques, slide preparation, construction and use of equipment and materials. (Formerly numbered Drama 746A.)

643. Seminar in Staging Practices for Theatre and Television (3)

An investigation of the recent developments of modern staging facilities. The application of technological advances and electromechanical devices to the scenic arts for theatre and television.

644. Seminar in Stage Direction (3)

Prerequisite: Drama 457.

Research projects in the aesthetic principles and practices of stage direction with an emphasis on theory, technique and historical development.

645. Seminar in Lighting for Stage and Television (3)

Prerequisite: Drama 545A or 545B.

Projects concerned with the aesthetic and technical problems of stage lighting.

646. Seminar in Design for Stage and Television (3)

The principles of design in the theatre with an emphasis on the historical development of theatrical costume or scenic environment. The investigation of recent tendencies in styles and their evolution. Each section may be taken once for credit.

A. Costume Design

Prerequisite: Drama 452 or 552.

B. Scenery Design

Prerequisite: Drama 448 or 540.

647. Seminar in History of Theatre and Drama (3)

Prerequisites: Drama 420, 460A and 460B.

A. British and Continental Theatre

B. American Theatre

648. Seminar in Producing the European Play (3)

Prerequisites: Drama 420, 460A, 460B, and 600.

Problems in producing works of such playwrights as Ibsen, Strindberg, Chekhov, Shaw. Maximum credit six units applicable on a master's degree.

746. Theatre Practicum Internship (3)

Prerequisites: Drama 642 and advancement to Candidacy in the M.F.A. program.

Twenty-four hours per week in laboratory and workshop field experience in one of three design areas (lighting, scene design, costume) at an approved professional theatre. (Formerly numbered Drama 746B.)

795. Practicum in Theatre Arts (1-6)

Prerequisites: Drama 600 and 647.

Faculty supervised projects in scene design, costume design, lighting design performance or direction leading to public performance of a full-length play.

798. Special Study (1-3) Cr/NC

Individual study. Maximum credit six units applicable on a master's degree.

Prerequisite: Consent of staff; to be arranged with department chair and instructor.

799A. Thesis or Project (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy. Drama 795 (Practicum in Theatre Arts) is a prerequisite if the student elects the preparation of a project.

Preparation of a project or thesis for the master's degree.

799B. Thesis or Project Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.



Economics

Faculty

Chair, Department of Economics: D. O. Popp
 Coordinator Graduate Program: Douglas B. Stewart
 Graduate Advisers: Kartman, Parti, Stewart, Venieris
 Credential Adviser: Douglas B. Stewart
 Professors: Babilot, Barckley, Bridenstine, Clement, Flagg, Gifford, Hardesty, Jencks, Kartman, Leasure, Madhavan, Nam, Neuner, Poroy, Sebold, Venieris
 Associate Professors: Hambleton, Popp, Stewart
 Assistant Professors: Green, Parti, Rotella, Vogt

Assistantships

Graduate assistantships in economics are available to a limited number of qualified students. Application blanks and further information may be obtained from the Chairman of the Department of Economics.

Scholarships

Annually the Center for Public Economics with the advice of the Department's Scholarship Committee awards the \$500 Walter Weiss scholarship, the \$400 Henry Cramer scholarship, the \$200 Sidney Evans scholarship, and a general \$300 scholarship to students in economics.

General Information

The Department of Economics, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Economics. A student may specialize in Public Economics of the Urban Sector, Development Economics, or general economics. For graduate study in connection with the Master of Arts degree in Social Science, refer to "Social Science" in Part Four of this bulletin. Research facilities include the Social Science Research Laboratory of the College, and, within the Department, the Center for Public Economics, the Institute of Labor Economics and the Center for Research in Economic Development.

Admission to Graduate Study

General requirements for admission to the University with classified graduate standing are described in Part Three of this bulletin. In addition, the Graduate Committee of the Department must judge the applicant capable of graduate work in Economics. The Committee's judgment will be based on (1) the applicant's transcripts of prior academic work; (2) three letters of recommendation from individuals familiar with the applicant's academic ability; and (3) the applicant's scores on the GRE Aptitude Test. Item (2) should be addressed directly to the Department of Economics. Official transcripts must be received by the Admissions Office directly from the institutions attended. All documents should be on file by March or early April for fall admission and by late November for spring admission.

Applicants whose preparation in economics and mathematics is judged inadequate by the Graduate Committee may be admitted with Conditional Graduate Standing (classified). The Committee may require students so admitted to remove the deficiency by satisfactory performance on placement exams administered by the Department or in additional course work within a specified amount of time.

Advancement to Candidacy

In addition to the general requirements for advancement to candidacy described in Part Three of this bulletin, the student must have satisfactorily completed Economics 541, 620 and 621.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete an approved graduate program of at least 30 units. Each program must include Economics 541 (if not previously completed with a grade of C (2.0) or better); 620 and 621. No program may contain more than six units from the following courses: Economics 741, 797, 798, and 799A. Written comprehensive examinations in micro and macro theory and in two additional fields are required, but a grade of B (3.0) or better can be substituted for these exams on a graduate course-by-course basis.

Students selecting Plan A must include Economics 799A in their programs and complete a thesis.

Students under Plan B may choose courses from one of the following areas:

Public Economics of the Urban Sector: Economics 701, 702, 741 and 758 are required courses, or

Development Economics: Economics 660, 665, 728, and 741 are required courses, or may choose courses in

General Economics: Economics 541, 620, 621, 797 and 12 additional units from the list of acceptable courses below are required. Nine of these additional units must be in 600- or 700-numbered courses.

Courses Acceptable on Master's Degree Programs in Economics

UPPER DIVISION COURSES

502. Public Economics (3)

Prerequisite: Economics 321 (325) or 401.

General equilibrium. Externalities of consumption and production, their impact on allocative efficiency. Theory of social wants and public goods supply. Theoretical treatment of individual and community preference ordering and decision making. Proposals for improving the allocation of resources.

505. Welfare Economics (3)

Prerequisites: Economics 102 or 304, and 321 (325).

Theories of individual and social well-being; economic and ethical bases of optimum welfare arrangements; individual values and social decision making; tests of improvement; interdependence and externalities; public and private sectors; properties of social welfare functions.

520. Advanced Economic Theory (3)

Prerequisites: Economics 320 (324) and 447.

Recent contributions to the advanced theory of the firm, consumer demand, employment and growth.

541. Econometrics (3)

Prerequisites: Economics 201 and 447 or Mathematics 142.

Measurement in economics. The construction and testing of simple economic hypotheses. Use of economic models involving multiple-regression analysis.

555. Economic Analysis of Environmental Quality (3) II

Prerequisite: Economics 321 or 453.

Examination of materials balance, interface between economic and ecological systems, and comprehensive waste residuals management. Economic analysis of population growth and environmental degradation, preservation vs. development issues, global environmental problems and international law.

559. Location Theory (3)

Prerequisite: Economics 458.

The optimal location of economic activities. The effects of spatial distribution of resources and markets on the locational equilibrium of the firms, households, and public facilities.

561. International Trade Theory (3)

Prerequisites: Economics 320 and 321, or 324 and 325.

The pure theory of international trade and commercial policy.

- 562. International Economic Expansion and Dependence (3)**
Prerequisite: Economics 313 or 365 or 464.
Explores various theories of imperialism and dependence, the behavior of multinational corporations, and role of state from Marxian and other perspectives. Theories examined in terms of experience of specific countries (e.g., Latin America).
- 592. International Monetary Theory and Policy (3)**
Prerequisite: Economics 320 (324) or 490.
Balance of payments, international capital movements and foreign exchange in relation to current theories and policies.
- 596. Experimental Topics (3)**
Prerequisite: Consent of instructor.
Intensive study in specific areas of economics. Topics to be announced in the class schedule. Maximum credit six units.

GRADUATE COURSES

- 603. Economic Analysis (3)**
Prerequisite: Classified graduate standing.
The theory of the firm in a market economy. Not open to students with credit in Economics 320 and 321; not applicable toward a master's degree in economics.
- 606. The Public Economy (3)**
Prerequisite: Economics 401 or Public Administration 450.
Determinants of the supply and demand for public goods; the social decision-making processes in determining public goods; supply; financing public goods; taxes and expenditures; planned program budgeting and cost-benefit analysis. Not applicable toward a master's degree in economics.
- 611. Seminar in the Development of Economic Thought (3)**
Prerequisite: Twelve units in economics.
A critical study of the development of economic thought.
- 620. Seminar in Advanced Economic Theory (3)**
Prerequisites: Economics 320 and 321, or 324 and 325; and 447.
Theory of money, employment, and income determination. Alternative theories of consumption, investment, price level and rate of interest. Causes of instability in short and long run.
- 621. Seminar in Advanced Economic Theory (3)**
Prerequisites: Economics 320 and 321, or 324 and 325; and 447.
Theory of consumer and producer behavior. Determination of prices and resource allocation patterns in a market economy; partial and general equilibrium.
- 635. Seminar in Economic History (3)**
Prerequisite: Economics 335 or 338A or 338B.
Individual study and group discussion on selected topics in economic history.
- 660. Seminar in International Economics (3)**
Prerequisites: Economics 541 and 620.
Resource allocation, income distribution, commercial policies, capital movements, balance of payments, and international monetary institutions.
- 665. Seminar in the Economics of Underdeveloped Countries (3)**
Prerequisites: Economics 541 and 620.
Theories regarding underdevelopment and policies for development of economically underdeveloped countries.
- 680. Seminar in Labor Economics (3)**
Prerequisite: Economics 380 or 482.
Individual study and group discussion of selected topics in labor economics.
- 696. Experimental Topics (3)**
Prerequisite: Consent of instructor.
Intensive study in specific areas of economics. May be repeated with new content. Topics to be announced in the class schedule. Maximum credit six units.
- 701. Seminar in Tax Policy (3)**
Prerequisites: Economics 541 and 621.
Advanced study of public finance problems with emphasis on theory of taxation and its applications.

- 702. Seminar in Public Expenditure Analysis (3)**
Prerequisites: Economics 541 and 621.
Theory of social wants and public goods supply. Theoretical treatment of individual community preference orderings. Evaluation of public expenditures, including the use of cost-benefit analysis.
- 728. Seminar in Development Planning (3)**
Prerequisite: Economics 541.
Role of government in development. Choice of target and policy variables. Planning techniques and their application to the national development problems.
- 741. Seminar in Economic Research (6)**
Three hours of seminar and nine hours of independent study.
Prerequisites: Classified standing and 15 units from the approved program including Economics 541, 620 and 621.
Advanced treatment of research design and methodology. Application of empirical techniques to selected problems.
- 758. Seminar in Urban and Regional Economics (3)**
Prerequisite: Economics 541 and 621.
Urban and regional economics; individual research and reports.
- 777. Seminar in Utilities and Energy Resources (3)**
Prerequisite: Economics 452 or 477.
Selected topics in public utility economics and regulation, and the economics of energy resource development.
- 783. Comparative Labor Seminar (3)**
Prerequisites: Economics 380 or 483.
Research in comparative labor problems, including problems of labor and social legislation, medical economics, poverty problems, labor force structural problems, and international labor movements.
- 790. Seminar in Monetary Economics (3)**
Prerequisite: Economics 490.
Analysis of theoretical issues associated with the demand for money, the money supply and process of money creation. Emphasis upon interaction of monetary and real factors in domestic-international money and financial markets.
- 795. Internship in Economics (3) Cr/NC**
Prerequisites: Economics 541, 620, 621 and approval of graduate adviser.
Students will be assigned to various jobs in which economics theory can be applied to decision-making. Supervision will be shared by the graduate adviser and on-the-job supervisor.
- 796. Bibliography (1)**
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's thesis.
- 797. Research (3) Cr/NC**
Prerequisites: Classified graduate standing and consent of instructor.
Independent research project in an area of economics.
- 798. Special Study (1-3) Cr/NC**
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units.
- 799A. Thesis (3) Cr/NC**
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree.
- 799B. Thesis Extension (0) Cr/NC**
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

Education

Faculty

Dean of the College of Education: T. A. Arciniega
 Associate Dean for Academic Affairs: R. R. Nardelli
 Assistant Dean for Student Affairs: J. Lujan
 Coordinator of Counselor Education: J. D. Chamley
 Coordinator of Educational Administration: R. Latta
 Coordinator of Educational Technology and Librarianship: P. J. Harrison
 Coordinator of Elementary Education: J. M. Kaatz
 Coordinator of Multicultural Education: H. Trueba
 Coordinator of Secondary Education: J. G. McLevie
 Coordinator of Special Education: D. Doorlag
 Coordinator of Higher Education Programs: D. Meek
 Coordinator of Graduate Programs in Education: P. J. Hawley
 Graduate Advisers:

Counseling (Master of Science): J. D. Chamley
 Educational Research: P. J. Hawley
 Educational Technology and Librarianship: P. J. Harrison
 Elementary Administration and Supervision: R. Latta
 Elementary Curriculum and Instruction: D. Gast
 Multicultural Education: H. Trueba
 Administration and Supervision: R. Latta
 Secondary Curriculum and Instruction: R. Smith
 Special Education: D. Doorlag

Professors: Ackerly, Anderson, Anthony, Baker, Becker, Becklund, Bee, Berg, Blanc, Briggs, Bruce, Burnside, Carnevale, Chamley, Charles, Cornejo, Crum, Cummins, Curry, Doorlag, Duckworth, Erickson, Fearn, Fishburn, Forbing, Fulkerson, Gast, Gates, Gega, Goodson, Gray, Groff, Halfaker, Harrison, Hawley, Hill, W.O., Holt, Huls, Inskip, Kendall, Latta, Malcolm, McCabe, McClard, McCoy, McLevie, Meek, Miller, Mitchell, Moreno, Morris, W.P., Murphy, Nagel, Pehrson, Person, Platz, Ramage, Retson, Riggs, Rixman, Ross, Rowland, Samuels, Servey, Shaw, Singer, Jr., Smith, H.R., Smith, R.D., Jr., Stautland, Steckbauer, Strom, Treadway, Trueba, Wetherill, Wilding, Yesselman

Associate Professors: Aliotti, Altamura, Botkin, Brady, Clark, Elliott, Ford, Howard, Jones, Kaatz, Malian, McFarlane, Merino, Mooers, Morris, J., Reel, Rossett, Senour, Thompson, Warburton

Assistant Professors: Behm, Conlon, Cochran, Espinosa, Hill, P., Klann, Lewis, McAllister, Ochoa, Park, Patton, Rodriguez, Sharpe, Weir

General Information

The College of Education offers graduate study leading to the Master of Arts degree in Education with concentrations in the following: educational technology and librarianship, elementary curriculum and instruction, reading education, secondary curriculum and instruction, administration and supervision, special education, educational research, and multicultural education. Some of these concentrations are designed to permit concurrent completion of the requirements for the correspondingly named advanced credentials.

Graduate study is also offered leading to the Master of Science degree in Counseling and the Master of Science degree in Rehabilitation Counseling.

The Ph.D. in Education with a Multicultural Component is offered as a joint doctorate with the Claremont Graduate School. Inquiries concerning this program should be addressed to the Coordinator of Graduate Programs, College of Education.

Section I. Joint Doctoral Program

The cooperating faculties at San Diego State University and Claremont Graduate School represent diverse research and teaching interests. Under their stewardship students may prepare themselves for qualifying examinations and for dissertation research in many areas including educational administration, curriculum and instruction, special education,

counseling psychology, learning theory, human growth and development, applied linguistics and higher education. In addition to the traditional concerns of advanced study in education, the program seeks to explore the effects of culture on learning and teaching and to investigate ways to meet the needs of all students in a pluralistic society. For these reasons and because of its importance as a newly emerging field of inquiry, multicultural education is both a separate component of the program and a unifying theme within it.

In addition to multicultural education, three other components constitute the core areas of the program: research and evaluation, area of specialization and cognate area. Fulfillment of the cognate area requires coursework, or the equivalent, outside of the field of education.

Normally an applicant will be expected to hold a master's degree in education from an accredited institution. Experience in the field is desirable and could reduce the time required to prepare for qualifying examinations. A minimum of 48 semester units of residency, 24 at each institution, is required before a student is eligible to take qualifying examinations. In addition to these residency units, additional coursework may be needed before the student is competent to conduct dissertation research. After successful completion of qualifying examinations, the student is advanced to candidacy and enters the dissertation phase of the program.

Upon admission to the program, the student is guided by the requirements for the doctoral program given in Part Three of this bulletin and those listed under Education in the Claremont Graduate School Bulletin.

For further information write:

San Diego State University
 P. Hawley, Coordinator
 Graduate Programs & Research
 College of Education

Claremont Graduate School
 C. Briner, Chair
 Faculty in Education

Section II. Master's Degree Programs

Master of Arts Degree in Education

Admission to Graduate Study

The student must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, the student must have completed a minimum of 12 units in professional education courses, and he must either be admitted to the program of teacher education or hold a valid California credential, other than an emergency or provisional credential, before he or she will be recommended by the school for classified graduate standing.

Advancement to Candidacy

A student desiring a Master of Arts degree in Education with a concentration in educational technology and librarianship, elementary curriculum and instruction, reading education or secondary curriculum and instruction may be advanced to candidacy upon completion of the basic requirements as described in Part Three of this bulletin. A student desiring a concentration in administration and supervision, or multicultural education must, in addition to the above, meet specific requirements for admission to the appropriate advanced credential program. A student desiring a master's degree concentration in special education must also meet specific admission requirements. (For further information, refer to the College of Education, Office of Graduate Programs, Room Education 100B, or to the coordinators of the respective programs.)

Specific Requirements for the Master of Arts Degree in Education

In addition to meeting the requirements for admission to the University with classified graduate standing and the credential requirements as applicable, the student must satisfy the basic requirements for the master's degree described in Part Three of this bulletin. In addition, the student must complete a minimum of 18 units in one of the concentrations in education. Education 690 and either Education 799A or Education 795A-795B are required

courses common to all concentrations. All applicants for the Master of Arts degree in Education must pass a comprehensive examination and satisfactorily complete either a thesis (Plan A) or two writing seminars (Plan B). In addition, students majoring in certain concentrations are required to verify successful teaching experience and to satisfy requirements for advanced credentials. See below for further information regarding each of the concentrations.

The Comprehensive Examination

This examination, designed to evaluate the student's achievement in the specific area of his concentration, is required of all candidates for the master's degree in education. A student is eligible to take the comprehensive examination only after advancement to candidacy.

The examination is offered near the mid-point of each semester. Reservation must be made at least one week in advance of the examination. For information on exact dates, and for a reservation, check with the Office of Graduate Programs, College of Education, Room Education 100B, or with the coordinators of the respective programs.

Selection of Plan A or Plan B

In general, applicants will be programed for Plan B, the seminar plan. After the student has completed approximately half of his program for the degree, he may request permission to transfer to Plan A, the thesis plan, if he has by this time established a plan for his thesis and has secured a faculty adviser. Requests for transfer to Plan A must be prepared as an official change in program for the master's degree, countersigned by the faculty adviser, and submitted to the Office of Graduate Programs in the College of Education.

In general, Plan A is designed for students who have a particular research problem they wish to investigate in some detail. Plan B provides students the opportunity (1) to have two experiences of a writing and research nature, (2) to participate actively in the research projects of the other members of the seminar, and (3) to subject their own research to critical evaluation by the other seminar members. Both plans require the ability to formulate and define research problems, to assemble data pertinent to the problem, to draw conclusions, and to present the study in acceptable written form. It is expected that the two seminars will be at least as demanding as the thesis with respect to the difficulty and quantity of work required.

Course Requirements

Note: Students are requested to consult with the appropriate master's degree adviser prior to taking any course work leading to the master's degree. Students are urged to take Education 690 (3 units) as early as possible in their first graduate year.

Concentrations

Administration and Supervision

The Master of Arts degree in Education with a concentration in educational administration and supervision is designed to provide increased knowledge and skill for the prospective administrator or supervisor. The program is intended for those educators who wish to become superintendents, assistant superintendents, principals, vice principals, supervisors, department chairs or other administrative and supervisory personnel.

The Commission for Teacher Preparation and Licensing has approved the San Diego State University proposal for an Administrative Services Credential. The document submitted to and approved by the Commission followed guidelines established by the Commission. Students completing the program successfully will meet the requirements for the credential. The credential authorizes service in any administrative position in California public schools.

- The requirements for the Administrative Services Credential are as follows:
1. Possession of a valid California teaching or pupil personnel credential which is based on a bachelor's degree.
 2. Three years of teaching or counseling experience in the public schools or in private schools of equivalent status.
 3. Possession of a master's degree. (The degree does not need to be in educational administration.)

4. Development of specified competencies as evidenced by successful completion of coursework outlined below.

It should be emphasized that students who already hold a master's degree may earn the credential without completion of a second master's degree in educational administration.

Those students with special interests not requiring an administrative credential are invited to seek counsel from the Coordinator of the Department of Educational Administration concerning a program which can vary from the one listed below. Such students would be those who wish to become private school administrators, school business managers, team leaders, department chairs or who have other administrative interests associated with education.

Admission requirements for the master's degree and/or credential are as follows:

1. Possession of a master's degree or classified graduate standing for a master's degree based on the following:
 - a. A grade point average of 2.5 in the last 60 semester units attempted.
 - b. Graduate Record Examination Aptitude Test Score of at least 950.

Note: Exceptions to the above requirements may be granted following successful completion of the core courses listed below.

2. A teaching credential and teaching experience.
3. Admission to the Department of Educational Administration:
 - a. Complete and file an application for admission to the Department of Educational Administration.
 - b. File with the department two letters of recommendation in support of the application.
 - c. If requested by the department, complete a counseling interview with a department faculty member. (Such requests may be made to clarify issues raised in "letters of recommendation" and/or to gain further information deemed pertinent to an admissions decision.)

Students who have teaching credentials will normally complete the necessary steps for full admission while they are enrolled in the "Core" courses listed below.

Courses required in the program:

Core (12 units)

- Educ. Admin. 600, Principles of Educational Administration (3 units)
- Educ. Admin. 610, Education Leadership (3 units)
- Educ. Admin. 620, Legal and Financial Aspects of School District Policies (3 units)
- Educ. Admin. 630, Curriculum Development and Evaluation (3 units)
- Advanced Seminars and Field Work (9 units) (These courses are open only to students who have completed the core and who are fully admitted to the program.)

1. Elementary Specialization
 - Educ. Admin. 640A-640B-640C, Seminar in Elementary School Administration and Supervision (6 units)
 - Educ. Admin. 660A-660B-660C, Field Experience in Elementary School Administration and Supervision (3 units)
2. Secondary Specialization
 - Educ. Admin. 650A-650B-650C, Seminar in Secondary School Administration and Supervision (6 units)
 - Educ. Admin. 670A-670B-670C, Field Experience in Secondary School Administration and Supervision (3 units)

Completion of the above courses will meet the competency requirements for a credential for students who already have a master's degree.

- Additional Requirements for the Master's Degree (9 units)
- Education 690, Procedures of Investigation and Report (3 units)
- Education 799A, Thesis (3 units) and Electives (3 units)

or
Education 795A-795B, Seminar (6 units)
Pass a Departmental Comprehensive Examination.

For further information, the student is referred to the Department of Educational Administration, Room Education 179.

Educational Research

The Master of Arts degree in Education with a concentration in educational research is designed to prepare students having a basic background in education to conduct measurement, research, and evaluation activities at a professional level. Emphasis is upon preparation for research activities at the school district level.

1. Prerequisite: A basic background in education (a minimum of 12 units of professional education) including at least one course in tests and measurement.
2. Education 690, Procedures of Investigation and Report (3 units).
3. Core program (9 units): Education 661, Seminar in Educational Measurement; Secondary Education 564, Quantitative Methods in Educational Research; Education 691, Seminar in Educational Research Design.
4. Electives (15 units) selected with adviser's approval.
5. Education 799A, Thesis (3 units).

Educational Technology and Librarianship

The Master of Arts degree in Education with a concentration in educational technology and/or librarianship (see Library Services Credential) is designed for persons seeking a career in one or a combination of the following: The systematic design, implementation and use of instructional strategies; the systematic design, production, use and evaluation of instructional products; and/or the administration of school library media centers. Students are prepared to work in design, production and/or resource management in settings like schools, hospitals, learning resource centers, industry, publishing, etc. For further information, see the Coordinator of Educational Technology and Librarianship. Course requirements follow:

1. Prerequisite: Varies with the career goal of the student—see adviser.
2. Education 690, Procedures of Investigation and Report (3 units).
3. Core program (15 units): The core is composed of courses in education and related fields, selected with the approval of the adviser on the basis of the student's interests and goals. A minimum of nine units must be taken in courses at the 600 and 700 level.
4. Electives (6-9 units) selected with the approval of the adviser.
5. Research (3-6 units): Education 795A-795B, Seminar (6 units); or Education 799A, Thesis (3 units).

Elementary Curriculum and Instruction

The Master of Arts degree in Education with a concentration in elementary curriculum and instruction is designed to increase professional competence in the form of more breadth, depth, and technical skill in curriculum and instruction, either generally or in selected areas of specialization. A Specialist Credential in Early Childhood Education may be earned concurrently with this degree. See graduate adviser, Elementary Education, for further information. Course requirements are as follows:

1. Prerequisite: A basic background in education (minimum of 12 units) to include curriculum and methods, growth and development, educational psychology, and history and philosophy of education.
2. Education 690, Procedures of Investigation and Report (3 units).
3. Core program (15 units): The core is composed of courses in education and related fields, selected with the approval of the adviser on the basis of the student's interests, professional needs and goals. The core program will include:
 - a. Elementary Education 610, Curriculum Construction and Evaluation in Elementary Education or Elementary Education 710, Curriculum Development and Evaluation for Early Childhood Education (3 units).
 - b. Education 660, Advanced Educational Psychology or Education 682, Social Foundations, or Education 683, Comparative Education, or Education 685, Philosophy of Education, or Education 686, Educational Sociology, or Elementary Education 711, Diagnostic and Prescriptive Teaching of Young Children (3 units).
 - c. Elementary Education 611, Seminar in Reading in Elementary Education, or Elementary Education 612, Seminar in Language Arts in Elementary Education, or Elementary Education 613, Seminar in Mathematics in Elementary Education, or Elementary Education 614, Seminar in Social Studies in Elementary Education, or

Elementary Education 615, Seminar in Science in Elementary Education or Elementary Education 624, Seminar in Elementary Social Studies Curriculum Development or related courses with approval of the adviser (3 units).

- d. 500/600/700-numbered courses in Elementary Education with the approval of the adviser (3-6 units).
 - e. 500/600/700-numbered courses in education or related fields selected with the approval of the adviser (up to 6 units).
4. Electives (6-9 units) selected with the approval of the adviser.
 5. Special Study and Research (3-6 units): Education 795A-795B, Seminar (6 units); or Education 799A, Thesis (3 units).

Multicultural Education

The Master of Arts degree in Education with a concentration in multicultural education is designed to provide specialized and advanced skills in dealing with bilingual/cross-cultural school and community situations. Students select one of two culture areas in which to specialize: Asian-American or Mexican-American.

1. Prerequisites:
 - a. A basic background in education (B.A. or teaching credential or certificate).
 - b. Experience in the selected culture. (In the Mexican-American specialization, this means proficiency in Spanish.)
2. Education 690, Procedures of Investigation and Report (3 units).
3. Multicultural education core program (12 units):
 - Education 550, Philosophy of Cultural Pluralism in Education
 - Education 553, Multicultural Oral Language Assessment Training
 - Education 650, Bilingual/Cross-Cultural Curriculum Development
 - Education 651, Bilingual/Cross-Cultural Teaching Strategies
4. Education courses (6 units) selected with adviser's approval.
5. Electives (3-6 units) from 500/600/700-numbered courses from academic disciplines or ethnic studies with approval of adviser on the basis of the student's interests, goals and needs.
6. Research (3-6 units): Education 795A-795B, Seminar (6 units); or Education 799A, Thesis (3 units).

Reading Education

The Master of Arts degree in Education with a concentration in Reading Education is designed to provide increased knowledge and skill for those who are or wish to become reading specialists in public or private schools and clinics. The program prepares candidates to teach, tutor, develop curriculum, offer in-service instruction and administer reading centers for students ranging from kindergarten through community college, university, and adult levels. This degree is often earned concurrently with a California Reading Specialist Credential, which has a number of common requirements.

1. Prerequisite: Completion of a minimum of 12 units of professional course work in education, including a basic course in methods and materials for teaching reading.
2. Education 690, Procedures of Investigation and Report (3)
3. Core Program (15 units):
 - Education 511, Reading Diagnosis (3)
 - Education 621, Advanced Diagnosis in Reading (3)
 - Education 631, Reading Clinic (3)
 - Education 652, Topics in Reading Education (minimum of 3)
 - Elementary Education 611, Seminar in Reading in Elementary Education (3)
 - or
 - Secondary Education 681, Seminar in Secondary School Reading (3)
4. Electives (6-9 units)
Course work within or outside the College of Education selected with the approval of the adviser.
5. Education 795A-795B, Seminar (3-3) or Education 799A, Thesis (3)

Secondary Curriculum and Instruction

The Master of Arts degree in Education with a concentration in Secondary Curriculum and Instruction, is designed as the base for applicants to increase professional competence in any of the fields typically taught in secondary schools, and for obtaining those competencies and technical skills in curriculum and instruction either generally, or in selected areas of specialization.

1. Prerequisites: A basic background in education (12 units).
2. Education 690, Procedures of Investigation and Report (3 units).
3. Core program: (6 units) to include Secondary Education 610, Curriculum Development (3 units) and 3 units from Secondary Education 613, Advanced Problems in Instruction
or
Secondary Education 616, Recent Trends in Curriculum;
or
Secondary Education 617, Seminar in Research in Curricular Problems.
4. Electives (15 units) selected with the approval of the graduate adviser on the basis of the student's interests, goals and needs. A minimum of 3 units must be in 600- or 700-numbered courses. A maximum of 6 units may be selected from cognate fields outside the College of Education.
5. Education 795A-795B, Seminar, or Education 799A Thesis (3 units).

A Master of Arts degree in Education with a concentration in curriculum and instruction in the area of occupational or adult education is also offered. Each student is urged to consult with the program adviser as to the specific course content of the program. With the adviser's approval in this 30-unit program, up to 12 units of electives may be selected in the appropriate fields related to the major occupational field.

Special Education

The Master of Arts degree in Education with a concentration in special education is designed to assist the applicant in improving performance in his roles as a classroom teacher. Individually designed programs have as goals increased knowledge and skill in the areas of the gifted, educationally handicapped, and mentally retarded. With adviser's approval, in this 30-unit program, up to 12 units (Plan B) or up to 15 units (Plan A) of electives may be chosen from courses in the elementary, secondary and special education departments, and related academic departments.

1. Prerequisite: A basic background in education (minimum of 12 units) to include such courses as curriculum and methods, educational psychology, growth and development, and history and philosophy of education.
2. Education 690, Procedures of Investigation and Report (3 units).
3. Core program (9 units) to include: Education 660, Advanced Educational Psychology; Special Education 670, Seminar in Education of Exceptional Children; and a 600- or 700-level education course in area of specialty.
4. Electives selected with adviser's approval.
5. Additional required courses (3-6 units): Education 795A-795B, Seminar (6 units); or Education 799A, Thesis (3 units).

Master of Science Degree in Counseling

Application for Admission

In seeking admission to the program leading to the Master of Science degree in Counseling, or work in rehabilitation counseling, the student should write directly to Dr. John D. Chamley, Chair, Department of Counselor Education, requesting appropriate application materials. Detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms.

FULL-TIME STUDENTS ARE ADMITTED ONLY IN THE FALL SEMESTER OF EACH YEAR. PART-TIME STUDENTS ARE ADMITTED FALL AND SPRING. COMPLETE APPLICATIONS FOR THE FALL SEMESTER MUST BE RECEIVED BY THE COUNSELOR EDUCATION OFFICE

NO LATER THAN FEBRUARY 15 AND FOR THE SPRING SEMESTER NO LATER THAN NOVEMBER 15.

The student must file an application for admission to San Diego State University with both the Office of Admissions and the Department of Counselor Education.

Admission to Graduate Study

A student seeking admission to the curriculum leading to the Master of Science in Counseling degree, or work in rehabilitation counseling, must meet the requirements for admission to the University with classified graduate standing, as stated in Part Three of this bulletin.

Criteria for admission require that the student submit evidence in written form and through interviews demonstrating personal, professional, and academic adequacy for the Master of Science in Counseling degree. Only students who show reasonable promise of success in counseling as a career will be admitted to this curriculum. In order to continue in the program the student must demonstrate on-going academic and personal growth.

Advancement to Candidacy

The student must satisfy the general requirements for advancement to candidacy as described in Part Three of this bulletin. In addition, the student must maintain continued good standing in the counselor education program. For further information, refer to the Department of Counselor Education, North Education Building, Room 179.

The Comprehensive Examination

A comprehensive examination is required. The student must demonstrate satisfactory performance on a comprehensive examination, in lieu of a thesis, prepared by the Department of Counselor Education.

Information regarding the Comprehensive Examination can be obtained in the Counselor Education Office, North Education Building, Room 179.

Specific Requirements for the Master of Science Degree

In addition to meeting the requirements for classified graduate standing, as described in Part Three of this bulletin, and for advancement to candidacy, the requirements must be met for the specific program in which the student is enrolled, as described below.

Full-Time Block Program

The full-time block program leads to a 36-unit master of science degree. It includes those courses listed below as required for the part-time evening program and allows for individualized in-depth work in selected areas of study. There is an emphasis upon field work experience in various settings through the internship part of the program. This degree is designed primarily for those planning to enter public school counseling and other related areas of counseling.

Part-Time Evening Program

1. Education 690; Counselor Education 710A-710B or equivalent.
2. At least nine units of work from each of the following groups of courses:
First Level: Education 690, Counselor Education 610A, 610B, 620
Second Level: Counselor Education 640, 650, 660, 670 (645 and 667)
Third Level: Counselor Education 710A, 710B, 720, 730, 740, 750, and Psychology 654 and 655.
3. Successful completion of a program consisting of at least 36 units of approved course work.

Master of Science Degree in Rehabilitation Counseling

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin.

Students seeking admission to the graduate program which leads to a Master of Science degree in Rehabilitation Counseling should address their inquiries to the director of the program. Detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms. As there are specific requirements for the program, it is not sufficient merely to file the general university admission forms.

STUDENTS ARE ADMITTED ONLY IN THE FALL SEMESTER EACH YEAR AND COMPLETE APPLICATIONS MUST BE RECEIVED BY THE ADMISSIONS OFFICE AND THE REHABILITATION COUNSELOR PROGRAM NO LATER THAN FEBRUARY 15.

The student must file an application for admission to San Diego State University with both the Office of Admissions and the Department of Counselor Education.

Criteria for admission require that students submit evidence in written form and through interviews demonstrating personal, professional, and academic adequacy for the Master of Science degree in Rehabilitation Counseling. Only students who show reasonable promise of success in rehabilitation counseling as a career will be admitted to this curriculum. In order to continue in the program, the student must demonstrate ongoing academic and professional growth.

A student who has already completed a program leading to a Master of Arts degree in Education with a concentration in counseling, or a Master of Science degree in Counseling, will not be eligible for admission to the program leading to the Master of Science degree in Rehabilitation Counseling.

The Rehabilitation Counselor Program has the primary objective of preparing students to enter the field of vocational rehabilitation, and has an emphasis in providing counseling services to physically, emotionally, and mentally disabled persons. A limited number of graduate stipends from the Rehabilitation Services Administration are available to (1) students who are committed to entering vocational rehabilitation after graduation, and (2) students with a financial need.

Advancement to Candidacy

To be eligible for advancement to candidacy the student must, in addition to holding classified graduate standing, have completed at least 24 units of the coursework listed on the official program, maintain good standing in the Rehabilitation Counselor Program, and otherwise comply with the regulations of the Graduate Division as described in Part Three of this bulletin.

Specific Requirements for the Master of Science Degree in Rehabilitation Counseling

In addition to meeting the requirements for classified graduate standing, and the basic requirements for the master's degree, as described in Part Three of this bulletin, the student must complete a minimum of 60 graduate units of 500-, 600- and 700-numbered courses, to include:

- Education 690 - Procedures of Investigation and Report (3)
- Counselor Education 610A-610B - Determinants of Human Behavior (3-3)
- Counselor Education 645 - Appraisal and Vocational Choice (6)
- Counselor Education 660 - Theory and Process of Counseling (4)
- Counselor Education 670 - Theory and Process of Group Counseling (4)
- Counselor Education 680A - Introduction to the Rehabilitation Process (3)
- Counselor Education 680B - Medical Aspects of Disability (4)
- Counselor Education 680C - Psychological Aspects of Disability (3)
- Counselor Education 680D - Placement of the Disabled (3)
- Counselor Education 710A, 710B - Professional Seminar (3-3)

Nine units total from the following:

- Counselor Education 720 - Internship (3 or 6) Cr/NC
- Counselor Education 730 - Field Work in Counseling (3, 3-3, or 3-3-3) Cr/NC

Nine units total from the following:

- Counselor Education 740 - Practicum: Individual Counseling (3, 3-3, 3-3-3) Cr/NC
- Counselor Education 750 - Advanced Seminar and Practicum: Individual Counseling (3 or 6) Cr/NC

The Comprehensive Examination

A comprehensive examination is required. The student must demonstrate satisfactory performance on a comprehensive examination, in lieu of thesis, prepared by the Rehabilitation Counselor Program. Reservations for the examination must be made in advance in the Rehabilitation Counseling Program Office, North Education Building, Room 188.

Program Structure

The Rehabilitation Counselor Program is offered in a two-year, full-time block format, and leads to a 60-unit degree of Master of Science in Rehabilitation Counseling. A limited number of students are accepted on a part-time basis.

Teaching Credentials

San Diego State University offers credential programs requiring at least one year of postbaccalaureate course work at the upper division or graduate level for the following credentials:

- | | |
|--------------------------------------|----------------------------------|
| *Multiple Subjects | Health Services |
| *Single Subject | Library Services |
| Early Childhood Education Specialist | Pupil Personnel Services |
| Bilingual/Cross-cultural Specialist | School Psychology |
| Special Education Specialist | Community College Instructor |
| Reading Specialist | Clinical Rehabilitative Services |
| Administrative Services | (see Communicative Disorders) |

A student who completes the prescribed programs for any of the above credentials will be recommended by the university to the Commission for Teacher Preparation and Licensing for the credential.

For information regarding admission to teacher education and requirements for these credentials, refer to the university *General Catalog* or contact the College of Education.

Bilingual/Cross-Cultural Specialist Credential

Candidates in the credential program must possess a valid California Teaching Credential and must successfully complete 24 units of credit as follows:

1. Education 690: Procedures of Investigation and Report 3
2. Multicultural Education Core Curriculum 12
 - Ed 550 Philosophy of Cultural Pluralism in Education 3
 - Ed 553 Multicultural Oral Language Assessment Training 3
 - Ed 650 Bilingual/Cross-Cultural Curriculum Development 3
 - Ed 651 Bilingual/Cross-Cultural Teaching Strategies 3
3. Education courses: All students are required to enroll in special sections of Education 687, Workshop in Community Influences on Learning and Curriculum Planning 6
4. Electives: from 500/600/700-numbered courses from academic disciplines or ethnic studies with approval of adviser on the basis of the student's interests, goals and needs 3

Early Childhood Education Specialist Credential

This credential authorizes the holder to serve as an Early Childhood Education Specialist in one or more of the following capacities:

1. Teacher—lead teacher, demonstration teacher.
2. Coordinator of Early Childhood Education programs.

*Refer to the General Catalog for a description of this program.

3. Instructor and/or coordinator of paraprofessionals.
4. Supervisor and/or director of Early Childhood Education programs.
5. Program developer.
6. Program evaluator.
7. Researcher.

Attainment of this credential requires the following:

1. A bachelor's degree (or higher).
2. Completion of requirements for the Multiple Subjects or other valid and appropriate California Teaching Credential.
3. Completion of an approved 30-unit graduate program for the Specialist Credential. Required courses are Elementary Education 502, 571, 710, 711, 712, 713.
4. Verification of two years of successful teaching experience at the preschool or primary grade levels.

Health Services Credential

San Diego State University offers curricula leading to the Health Services Credential. This authorizes the holder to serve as a School Nurse. For information concerning the credential, the student is referred to the Department of Secondary Education Office, 100F. The Health Services Credential has been approved by the Commission for Teacher Preparation and Licensing.

Requirements for Admission

1. Baccalaureate degree.
2. Active registration as an R.N.

Program

The following program elements are required of all health services credential candidates (30 units):

	<i>Units</i>
SPED 500 Exceptional Individuals	3
SECED 667 Guidance Problems in Education	3
SPA 105 Introduction to Audiology	2
SPA 340 Audiometry: Principles	3
SPA 341 Techniques of Audiometry	1-3
HS&S 406 Health Education Methodology	3
HS&S 520 Administration of the School Health Program	3
NURS 480 School Nursing	3
ED 720B Internship (School Nursing)	1-6
(Prerequisites for 720B include HS&S 510, 520, SECED 667, SPED 500; SPA 105.)	
ED 687 Workshop in Community Influences on Learning and Curriculum Planning	1-3
Electives Maximum credit nine units; subject to prior approval and dependent upon previous experience.	

Library Services Credential

San Diego State University offers curricula leading to the Library Services Credential. This credential authorizes the holder to serve as a school library/media specialist in grades kindergarten through 12. For information concerning the credential, the student is referred to the Department of Educational Technology and Librarianship.

Requirements for Admission

1. Formal application to the Department of Educational Technology and Librarianship.
 2. Admission to a basic teaching credential program.
- or-
- Possession of a basic teaching credential.

3. Interview(s) with a faculty member in the Department of Educational Technology and Librarianship.

Program

The following program elements are required of all library credential candidates: (31 units.)

	<i>Units</i>
ETL 445 School Library Media Programs	3
ETL 483 Directed Teaching-Library Practice	4
	<i>Cr/NC</i>
ETL 540 Educational Technology	3
ETL 541 Media Production Techniques	3
ETL 546 Basic Reference Materials	3
ETL 547 Selection of Instructional Materials	3
ETL 548 Cataloging and Classification	3
ETL 675 Seminar in the Administration of Instructional Media Centers	3
ETL 678 Literature for Children	3
ETL 679 Literature for Adolescents	3

Total Units 31

Pupil Personnel Services Credential

San Diego State University offers programs leading to the Pupil Personnel Services Credential. This credential authorizes the holder to function as a counselor or other pupil personnel specialist in grades K through 12. For information concerning this credential, the student is referred to the Department of Counselor Education.

Requirements

1. Admission to the University *and* to the Department of Counselor Education. Formal application also must be made to the Department of Counselor Education early in the semester prior to anticipated enrollment.
2. There are 44 competencies which must be satisfied for this credential. These competencies are met in the following courses: Education 690, Counselor Education 610A, 610B, 620, 640, 645, 650, 660, 667, 670 710A, 710B, 730, and 740. Students who have had comparable course work outside the Department of Counselor Education and who desire to apply for the P.P.S. Credential through this department are required to provide evidence, in each case to the satisfaction of the relevant faculty member, that the designated competencies have been met.
3. Included as part of the above competencies is a field work requirement which involves cross-cultural field experiences with pupils of divergent age levels. The specific nature of the field work will vary according to the background of each student.
4. A master's degree is not a requirement for this credential, however, courses in the program described above may be acceptable also for the Master of Science degree in Counseling for which satisfactory completion of the Comprehensive Examination in Counselor Education and a minimum of 30 acceptable graduate units in residence area required.

Reading Specialist Credential

San Diego State University offers a program leading to a Reading Specialist Credential. This credential authorizes the holder to function as a reading specialist in grades Kindergarten through 12. For information concerning this credential, the student is referred to the Clinical Training Center.

Requirements for Admission

1. A valid California basic teaching credential applicable within the range of grades kindergarten to 12.

2. Admission and planning interviews with a program adviser.
3. An approved basic course in methods and materials for teaching reading.

Program

	Units
Education 511 Reading Diagnosis	3
Education 621 Advanced Diagnosis in Reading	1
to be taken concurrently with 652B, Interpersonal/ Interdisciplinary Communication Skills	3
Education 631 Reading Clinic	3
Education 690 Procedures of Investigation and Report	3
Elementary Education 611 Seminar in Reading in Elementary Education/ Secondary Education 681 Seminar in Secondary School Reading	3
Education 652 Topics in Reading Education	3
Three required categories 652A Linguistic/Cultural Differences and Reading; 652B, Interpersonal/ Interdisciplinary Communication Skills; 652C, Children/ Young Adult Literature; Oral and Creative Responses to Reading.	3
Electives	12

Additional Requirements

1. A minimum of one year of full-time teaching experience (or the equivalent) within the range of grades kindergarten to 12.
2. Satisfactory completion of a comprehensive examination covering the program course work.

A master's degree is not a requirement for this credential; however, courses in the program described above may be acceptable also for the Master of Arts in Education degree with a concentration in Reading Education. The 12 units of electives for this credential must be selected with the approval of a reading program adviser. Students who have not had extensive experience teaching reading should take Education 701, Field Experience as a Reading Specialist. Education 795A and 795B may be taken as elective units for the credential, as may up to three additional units of Education 652, Topics in Reading Education.

School Psychology Credential

San Diego State University offers a program leading to the School Psychology Credential. The credential authorizes the holder to function as a school psychologist in grades K through 12. For information concerning this credential, the student is referred to the Coordinator of the School Psychology Program in the Department of Counselor Education.

Requirements

1. Admission to the University *and* to the Department of Counselor Education.
2. The School Psychology Credential program is built around developing certain competencies rather than the accumulation of a given number of course hours. However, these competencies can be developed by completing the approved program for the Pupil Personnel Services Credential, or equivalent, and taking the courses in the School Psychology Program which includes Counselor Education 621, 641A-641B, 720, 752, and 760, Education 511, and Special Education 420, 500, 501, 510, or equivalent. Students who have had comparable course work outside the Department of Counselor Education and who desire to apply for the School Psychology Credential through the department are required to provide evidence, in each case with the satisfaction of the relevant faculty member, that the designated competencies have been met.
3. Included as part of the above competencies in a field work requirement which involves cross-cultural field experiences with pupils of divergent age levels. The specific nature of the field experiences will vary according to the background of each student.

Special Education Specialist Credential

San Diego State University offers curricula for the Special Education Specialist Credential in the five areas: Communication Handicapped, Learning Handicapped, Severely Handicapped, Physically Handicapped, and Gifted. For information concerning the Communication Handicapped, the student is referred to the Department of Communicative Disorders. For information concerning the other specialties, the student is referred to the Department of Special Education.

The five areas authorize the holder to teach the types of exceptional children listed:

1. Communication Handicapped.
2. Learning Handicapped.
3. Severely Handicapped.
4. Physically Handicapped.
5. Gifted.

Requirements for Admission

1. Formal application to the Department of Special Education.
 2. Admission to the program for the Single Subjects Credential (secondary) or Multiple Subjects Credential (elementary).
- or-
- A basic teaching credential.
3. Interview(s) with a faculty member in the Department of Special Education or Communicative Disorders.

Program

Persons interested in the Special Education Specialist Credential shall:

1. Concurrently or prior to completion of the Specialist Credential, complete the Single Subjects Credential (preliminary or clear) or the Multiple Subjects Credential (preliminary or clear).
2. Complete one year of study in Special Education, including:
 - a. The generic course work: Special Education 500, 501, 502.
 - *b. Advanced work in area of specialization:
 - (1) Special Education 510, 511, 512, 513 series.
 - (2) Special Education 420 series, 421, 422 and 423, or 480 series.
 - (3) Electives—6 to 12 units—on advice of adviser.

Community College Instructor Credential

Specific Requirements

1. An associate degree in which the student can establish four years of occupational experience in a subject matter area plus 12 units in designated courses on the community college.
2. A baccalaureate degree in which the student can establish two years of occupational experience and a major or minor in a subject matter area related to this occupational experience plus six units in designated courses on the community college.
3. A master's degree in a subject matter area designated in Title 5, Section 5, §52210 (subjects commonly taught at a community college).

Baccalaureate Degree Candidates

Education 380, 381, 382 and 565 are offered to students who have had experience in an occupational program taught in a community college. Students may also enroll if they presently hold a California partial credential in an occupational area. Early consultation with the Higher Education Programs Coordinator is recommended.

* Applies only to specialization in Learning Handicapped, Severely Handicapped, Physically Handicapped, and Gifted. Those interested in the Communication Handicapped specialization are referred to the Department of Communicative Disorders.

Master's Degree Candidates

No formal courses in education are required under the current interpretation of the Education Code. The program is elective and selective. It is strongly suggested, however, that graduate students enroll in the professional courses in teacher education in order to enhance employment possibilities as most community colleges require some professional preparation and/or experience. Students desiring further information are urged to consult the Higher Education Programs Coordinator, Room 129, Education Building. Admission to Education 700 is based upon successful completion of Education 666 (not required for psychology majors) and Education 680 and selection by the Community College Admission Committee.

Most departments on the San Diego State University campus have developed programs permitting graduate students to obtain the master's degree and enroll in the education courses concurrently in as little as one year of full-time study. The courses in education are typically offered in the summer session and after three o'clock in regular semesters.

The following courses are suggested to enhance employment in the community college:

- Education 630 Seminar in Instructional Methods and Materials: Community College (2)
- Education 666 Educational Psychology: Community College (2)
- Education 680 The Community College (3)
- Education 700 Directed Teaching: Community College (4) Cr/NC

NOTE: Directed teaching can be accomplished only in a community college day assignment and not in summer session.

Courses Acceptable on Master's Degree Programs in Education

UPPER DIVISION COURSES IN EDUCATION

GENERAL

- 511. Reading Diagnosis (3)**
Two lectures and three hours of laboratory.
Prerequisites: Valid teaching credential and consent of instructor.
Diagnosis of reading difficulties and exploration of remedial techniques.
- 565. Occupational Student (3) S**
Prerequisite: Education 380 or 381.
The learning process and individual differences, behavioral characteristics of youth, race and ethnic relations in the schools.
- 568. Human Relations and Counseling in Adult Education (1-3)**
Prerequisite: Possession of a valid teaching credential.
Principles, procedures and issues appropriate to human relations and counseling in adult education.
- 593. Workshop in Adult Education (1-3) II**
Prerequisite: Possession of a valid teaching credential.
Designed to meet the needs of individuals or groups of adult educators who wish to study special problems in adult education. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

MULTICULTURAL EDUCATION

- 550. Philosophy of Cultural Pluralism in Education (3)**
Study of culture from a multidisciplinary and holistic perspective provides a thorough understanding of the interrelationship between education and cultural patterns and the roots of cultural pluralism; emphasis on establishing a theoretical framework for appreciating cultural and linguistic diversity in children.
- 553. Multicultural Oral Language Assessment Training (3)**
Prerequisite: Education 550.
Orientation to study of selected culture's linguistic characteristics; comparison with Standard American English for distinguishing problems of linguistic interference on oral language performance of pupils as a basis for prescribing individualized instruction; emphasis on home/community context of child language.

GRADUATE COURSES IN EDUCATION

Students without classified graduate standing are not admitted to 600- and 700-numbered courses in Education.

Twelve units of professional education are prerequisite for enrollment in all graduate courses, except Education 630, 666 and 680, which require special clearance from the Coordinator of Higher Education Programs; and courses in Counselor Education.

GENERAL

- 621. Advanced Diagnosis in Reading (3)**
Prerequisite: Education 511.
Principles and techniques of individual and group diagnosis of reading difficulties. Experience in administration and interpretation of individual and group instruments in diagnosis. (Formerly numbered Elementary Education 621.)
- 630. Seminar in Instructional Methods and Materials: Community College (2)**
Prerequisites: Education 666 and concurrent registration in Education 700.
The teaching process at the community college level, including lesson planning, utilization of audiovisual and other instructional materials, and procedures of evaluation.
- 631. Reading Clinic (3)**
Two lectures and three hours of laboratory.
Prerequisites: Education 511 and 621.
The utilization of remediation techniques in a laboratory situation.
- 632. Change in Education (3)**
Prerequisite: Valid teaching credential.
Examination of the process of change in education, analysis of recent major changes and study of techniques for effecting change.
- 652. Topics in Reading Education (1-6)**
Prerequisite: California Teaching Credential.
A variety of instructional sequences (mini-courses), each focusing on a single topic or competency dealing with reading instruction. Topics differ each semester to adjust to current literature in the field, in-service needs and resource availability. Of three required units, at least one must be taken from each of the three required categories (A, B and C). Students may elect to take more than three from these same categories or an elective category (D). Consult class schedule each semester for offerings.
- A. Linguistic/Cultural Difference and Reading
 - B. Interpersonal/Interdisciplinary Communication Skills
 - C. Children/Young Adult Literature; Oral and Creative Responses to Reading
 - D. Elective Category
- 660. Advanced Educational Psychology (3)**
Prerequisite: Elementary Education 362 or Secondary Education 412 or valid teaching credential.
Advanced study of the research in educational psychology and its application to learning and human growth.
- 661. Seminar in Educational Measurement (3)**
Problems in educational testing. Emphasis on construction, administration and validation of teacher-made tests.
- 666. Educational Psychology: Community College (2)**
Prerequisite: Credit or concurrent registration in Education 680.
The nature of the community college student; the learning process, including contributions of audiovisual materials. The functions of student personnel services in the community college.
- 670. Simulation and Games (3)**
Prerequisite: Open to teachers and those enrolled in education credential programs. The use and construction of simulations and games for education. (Formerly numbered Secondary Education 618.)
- 672. Values Education (3)**
Prerequisite: Valid teaching credential or enrollment in a credential program.
Analysis of various strategies that promote clarification of values and moral dilemmas. Development of classroom strategies to measure values and implement value clarification.

674. Schools and Changing Sex Roles (3) I

Prerequisite: Open to teachers and those enrolled in education credential programs. Impact of schools upon the role of males and females and the role the educational systems play in maintaining traditional roles. (Formerly numbered Secondary Education 685.)

680. The Community College (3)

Overview of philosophy, history, aims, scope, function, outcomes, principles and problems of the community college. Relation of the community college to secondary and higher education. Fieldwork required.

682. Social Foundations (2 or 3)

Prerequisite: Admission to teacher education. Sociological, historical, and philosophical foundations of American education and their influences on present-day educational practices.

683. Comparative Education (3)

The contemporary educational ideas and practices of various countries of the world and their impact on our culture and education.

685. Philosophy of Education (3)

Prerequisite: Education 383. Advanced study of philosophical backgrounds of educational thought; a study of comparative philosophies, and an analysis of selected current trends and problems.

686. Educational Sociology (3)

Prerequisite: Education 383. A study of the social, economic, political and moral setting in which present-day American education functions.

687. Workshop in Community Influences on Learning and Curriculum Planning (1-3)

Prerequisite: Teaching experience. Advanced study of community influences on learning and child growth and development, and of group techniques; implications for curriculum planning. Provides opportunity for work on individual problems of the participants. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

688. Workshop in Community College Education (1-6)

Prerequisite: Teaching or administrative experience in a community college. To provide community college faculty members with opportunities to explore ways to improve curriculum and instruction in the community college. See class schedule for specific content.

689. Workshop in Intercultural Education (3)

A cooperative workshop sponsored by the University and local school districts to study trends in intercultural education in American schools, including the examination and construction of units, curricular and instructional materials and techniques. See class schedule for specific content.

690. Procedures of Investigation and Report (3)

Research methods in education. Location, selection and analysis of professional literature. Methods of investigation, data analysis and reporting. Required of all applicants for advanced degrees in education.

691. Seminar in Educational Research Design (3)

Prerequisite: Education 690. Principles and methods of planning and conducting systematic investigations of educational problems—including historical, descriptive and experimental methods of research. Practice in the definition of problems, formulation of hypotheses, construction of samples, control of variables, and interpretation of results.

700. Directed Teaching: Community College (4) Cr/NC

Prerequisites: Education 666 (not required for psychology majors) and 680, approval of the Community College Admissions Committee, and concurrent registration in Education 630.

Systematic observation, participation, and teaching under supervision in a community college. A weekly seminar or conference is required. Application to take this course must be made in the preceding semester by preregistration with the Higher Education Programs Coordinator. Not acceptable on master's degree programs.

701. Field Experience as a Reading Specialist (4)

Prerequisites: Education 511, 621, 631, 652 and consent of the instructor. Supervised experience as a Reading Specialist. Approval of instructor and of local school district required in the semester prior to registration.

720. Internship (1-6) Cr/NC

Supervised internship experience. Application to take the course must be made early during the preceding semester. May be repeated with new content. Maximum credit six units applicable on a master's degree.

A. Community College Education

Prerequisites: Education 666, 680 and teaching or administrative experience in a community college.

B. School Nursing

Prerequisites: Secondary Education 667, Special Education 500, Health Science and Safety 510, 520, Speech Pathology and Audiology 105.

C. Adult Education

Prerequisite: Education 660.

795A-795B. Seminar (3-3)

Prerequisites: Education 690 and advancement to candidacy for the Master of Arts degree in education.

An intensive study in selected areas of education culminating in a written project. Limited to students following Plan B for the Master of Arts degree in education.

798. Special Study (1-6) Cr/NC

Individual study. Maximum credit six units. Prerequisite: Consent of staff; to be arranged with department chair and instructor.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP. Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

DOCTORAL COURSES IN EDUCATION**801. Seminar on Social and Cultural Foundations of Multicultural Education (3-4)**

Prerequisite: Admission to the doctoral program or consent of the Graduate Coordinator. Students are required to have a background in the social sciences or humanities relevant to such educational issues as social behavior and minority cultures.

Social and cultural parameters that have contributed to the shaping of American society and affected developments in education in the last two decades. Emphasis on the impact on multicultural education and human social behavior in pluralistic societies.

804. Bilingual Education: Models and Current Research Trends (3-4)

Prerequisites: Education 801, a background in socio-linguistics or social anthropology and admission to the doctoral program or consent of Graduate Coordinator.

Analysis of existing models of bilingual education based on previously identified needs of linguistic minority students. Demonstrated needs from current research in classrooms by ethnographers. Significance of linguistic/cultural competencies for academic performance and validity of existing impact studies.

806. The Minority Learner: Public Policy and Classroom Practice (3-4)

Prerequisites: Education 801 and admission to the doctoral program or consent of the Graduate Coordinator. Background in psychological foundations of education and educational policy is required.

National, state and school policy directed at providing the minority learner with equal educational opportunity. Discussion of legislation for desegregation, bilingual education, school implementation cases and classroom practices as these relate to equal educational opportunity.

810. Seminar in Curriculum Development (3-4)

Prerequisites: Elementary Education 610, Secondary Education 610, Educational Administration 630 or Education 650 and consent of Graduate Coordinator.

Examination of curricular issues with emphasis on the processes of decision making, curricular development, implementation and evaluation. Attention given to innovative programs and to role and process of legislation in curricular change.

820. Advanced Educational Statistics (3-4)

Prerequisites: Education 564, 661, 690, 691 or equivalent graduate level courses and consent of Graduate Coordinator.

Theory and practice of statistical inference for research in education. Probability and sampling theory, data collection and organization, computer applications in educational research, statistical significance testing and prediction, use of statistical computer program libraries.

895. Seminar (1-8)

Prerequisite: Admission to the doctoral program or consent of the Graduate Coordinator. Investigation of a particular topic or issue, emphasis on empirical research in education; topic to be announced in the class schedule. Maximum credit eight units applicable on an advanced degree.

MULTICULTURAL EDUCATION**650. Bilingual/Cross-Cultural Curriculum Development (3)**

Prerequisite: Advancement to candidacy or teaching credential.

Study of competency-based education techniques; development of skills in devising performance criteria and criterion-referenced tests in bilingual-bidialectal/cross-cultural situations; development of individualized instruction and program planning strategies.

651. Bilingual/Cross-Cultural Teaching Strategies (3)

Prerequisite: Advancement to candidacy or teaching credential.

Examination of existing bilingual/cross-cultural teaching materials and skills in adapting these materials for instruction; emphasis on methodology for the bilingual/cross-cultural classroom.

UPPER DIVISION COURSES IN COUNSELOR EDUCATION**506. Guidance Conference (1-3) I, II**

Prerequisite: Consent of conference director.

A series of lecture and discussion sessions centering on current problems in counseling and guidance. Designed to serve the needs of any person desiring to keep informed of developments in this area. May be repeated with new content. Maximum credit six units applicable on a master's degree. See class schedule for specific content.

GRADUATE COURSES IN COUNSELOR EDUCATION**601. Student Personnel Services in Higher Education (3)**

Philosophy, goals and objectives of Student Personnel Services in Higher Education. Focus on supportive services and their administration.

610A-610B. Determinants of Human Behavior (3-3)

Implications of theory and research in behavioral sciences for the understanding of human behavior. Counselor Education 610A deals with personality theories and psychological determinants of behavior; 610B with social and cultural determinants.

615. Seminar in Multicultural Dimensions in Counseling (3)

Issues, insights and techniques for improving effectiveness in working with culturally different populations.

616. Counselors as Change Agents: Theory and Practice (4)

Three lectures and three hours of laboratory.

Organizational models, system analysis, power, and change theories and strategies as applied to educational institutions. Laboratory emphasis on change techniques for counselors and student personnel workers.

620. Guidance Services in Public Education (3)

Historical, philosophical and legal bases of pupil personnel services; staff roles and relationships in a variety of organizational patterns.

621. Introduction to School Psychology (3)

Introduction to school psychology: roles (assessing, counseling, consulting) skills (innovative techniques, consultation); and issues (modifying the system, multicultural impact).

630. Workshop in Counseling (3)

Prerequisite: Consent of instructor.

Application of principles and procedures to specific situations for improvement of counseling services. Individual problems emphasized. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

640. Theory and Process of Appraisal (4)

Three lectures and three hours of laboratory.

Measurement theory and procedures, including interpretation of test results. Not open to students with credit in Counselor Education 645. Offered during summer sessions only in combination with Counselor Education 650 as 645.

641A-641B. Individualized Appraisal of Learning Characteristics (4-4)

Three lectures and three hours of laboratory.

Prerequisite: Counselor Education 640.

Administration and interpretation of instruments and techniques for assessing learning characteristics of children from multicultural settings. 641A: Scholastic status, learning aptitudes, social-emotional maturity, interpersonal relations and behavioral adjustment. 641B: Individualized intellectual assessment of school-aged children.

645. Appraisal and Vocational Choice (6)

Five lectures and three hours of laboratory.

Measurement theory, interpretation of test results, vocational choice theory, occupational and educational information in career planning. Not open to students with credit in Counselor Education 640 or 650. Application to take the course must be made early during the preceding semester.

650. Theory and Process of Vocational Choice (4)

Three lectures and three hours of laboratory and/or field work.

Vocational choice theory, occupational and educational materials used in career planning. Not open to students with credit in Counselor Education 645. Offered during summer sessions only in combination with Counselor Education 640 as 645.

651. Counseling Women in Transition (3)

Development of counseling skills in career development, educational, psychological and social forces affecting contemporary women and men. Impact of these forces upon relationships between the sexes and personal definitions of femininity/masculinity.

660. Theory and Process of Counseling (4)

Three lectures and three hours of laboratory.

Prerequisite: Counselor Education 610A.

Counseling process theories, approaches to and techniques for counseling, and research concerning counseling effectiveness. Supervised practice in counseling, analyzing counseling, and writing counseling reports. Not open to students with credit in Counselor Education 667. Offered during summer sessions only in combination with Counselor Education 670 as 667.

667. Counseling: Individual and Group (6)

Five lectures and three hours of laboratory.

Counseling theory and techniques, individual and group. Not open to students with credit in Counselor Education 660 or 670. Application to take the course must be made early during the preceding semester.

670. Theory and Process of Group Counseling (4)

Three lectures and three hours of laboratory.

Prerequisites: Counselor Education 610A and 610B.

Group process and individual growth, theories of group interaction, sensitivity training and group leadership techniques. Not open to students with credit in Counselor Education 660 as 667. Offered during summer sessions only in combination with Counselor Education 660 as 667.

680A. Introduction to the Rehabilitation Process (3)

Two lectures and three hours of laboratory.

Prerequisite: Admission to Rehabilitation Counselor Program.

Background and legislation related to vocational rehabilitation; overview of client services and role and function of the rehabilitation counselor as a professional person. Orientation to community rehabilitation agencies.

680B. Medical Aspects of Disability (4)

Two lectures and six hours of laboratory.

Prerequisite: Admission to Rehabilitation Counselor Program.

Orientation to medicine and illness in relation to work capacity and work outlook. Focus on major diseases and impairments resulting in vocational disability. Lecture and clinical seminars.

680C. Psychological Aspects of Disability (3)

Two lectures and three hours of laboratory.

Prerequisite: Admission to Rehabilitation Counselor Program.

Analysis of the psychological component to illness and disease. Focus on functional disorders and vocational implications. Lecture and clinical seminars.

680D. Placement of the Disabled (3)

Two lectures and three hours of laboratory.

Prerequisite: Admission to Rehabilitation Counselor Program.

Determination of employment needs of disabled clients, case study method. Follow-through to placement. Continuous survey of employment needs and opportunities in the wider community.

710A-710B. Professional Seminar - (3-3)

Prerequisites: Counselor Education 645; six units from Counselor Education 640, 650, 660 and 670.

Study of selected areas in counseling and rehabilitation culminating in a written project with emphasis on research, counseling, and/or rehabilitation as a profession. Topic to be announced in class schedule.

720. Internship (2-6) Cr/NC

Supervised internship experience in counseling or school psychology activities. Application to take the course must be made early during the preceding semester. May be repeated with new content. Maximum credit six units applicable on a master's degree.

730. Field Work in Counseling (2-6) Cr/NC

Prerequisite: Counselor Education 660.

Application of concepts and procedures of counseling or school psychology services in appropriate school or agency setting. Daily observation and practice. Weekly seminar sessions with university staff. Application to take the course must be made early during the preceding semester. May be repeated with new content. Maximum credit six units applicable on a master's degree in counseling; maximum credit nine units applicable on master's degree in Rehabilitation Counseling.

740. Practicum: Individual Counseling (3) Cr/NC

Prerequisite: Counselor Education 660.

Supervised experience in individual counseling and career planning. Maximum credit six units applicable on a master's degree in counseling; maximum credit nine units applicable on master's degree in Rehabilitation Counseling.

741. Practicum: Group Counseling (3) Cr/NC

Prerequisite: Counselor Education 670.

Supervised experience in group counseling and career planning. Maximum credit six units applicable on a master's degree.

750. Advanced Seminar and Practicum: Individual Counseling (3-6) Cr/NC

Supervised experience in individual counseling and study of problems, issues, and research.

751. Seminar and Practicum: Group Counseling (3-6) Cr/NC

Prerequisite: Counselor Education 741.

Supervised experience in group counseling, study of problems, issues and research.

752. Seminar & Practicum: School Psychology (3-6) Cr/NC

Prerequisite: Counselor Education 621.

One lecture and six hours of practicum for three units.

Advanced theories of learning and development of normal and exceptional pupils from multicultural backgrounds. Application of standard and innovative school psychology practices.

760. Advanced Seminar in School Psychology (3)

Prerequisite: Counselor Education 621.

Study of selected areas in school psychology which culminates in a written project with emphases on research, problems and/or issues. Topic to be announced in class schedule.

GRADUATE COURSES IN EDUCATIONAL ADMINISTRATION**600. Principles of Educational Administration (3)**

Prerequisite: Teaching credential.

Federal, state and local educational administrative relationships. Introduction to educational administrative and organizational theory with appropriate experiences to show transfer to practice.

*** 610. Education Leadership (3)**

Prerequisite: Teaching credential.

Concepts and techniques of leadership, analysis of the factors and practice in the procedures of group and individual leadership in four areas: (a) the community; (b) the teaching staff; (c) the student personnel; (d) the professional field of educational administration and supervision.

*** 620. Legal and Financial Aspects of School District Policies (3)**

Prerequisite: Teaching credential.

Relationship of the school district to attendance units. The legal basis for policy formation in the selection and retention of certified personnel, in the admission and assignment of pupils, in the instructional programs and in related budgetary considerations.

*** 630. Curriculum Development and Evaluation (3)**

Prerequisite: Teaching credential.

Curriculum development in both elementary and secondary schools, with emphasis on interrelationships between these levels, responsibilities of curricular and supervisory personnel, and use of research.

640A-640B-640C. Seminar in Elementary School Administration and Supervision (2-2-2)

Prerequisites: Educational Administration 600, 610, 620, 630, and admission to Program of Educational Administration; concurrent registration in 660A-660B-660C.

Analysis of theories and practices in the administration and supervision of the elementary school.

650A-650B-650C. Seminar in Secondary School Administration and Supervision (2-2-2)

Prerequisites: Educational Administration 600, 610, 620, 630, and admission to Program of Educational Administration; concurrent registration in 670A-670B-670C.

Analysis of theories and practices in the administration and supervision of the secondary school.

660A-660B-660C. Field Experience in Elementary School Administration and Supervision (1-1-1) Cr/NC

Prerequisite: Concurrent registration in Educational Administration 640A-640B-640C.

Field experience in the elementary schools. Approval of local school district required in the semester prior to registration.

670A-670B-670C. Field Experience in Secondary School Administration and Supervision (1-1-1) Cr/NC

Prerequisite: Concurrent registration in Educational Administration 650A-650B-650C.

Field experience in the secondary schools. Approval of local school district required in the semester prior to registration.

680. Seminar in Educational Administration (1-6)

Prerequisites: Teaching credential and consent of instructor.

Study of educational administration in a specialized field, such as community college, school district, a subject field, or designated services. Field experience when appropriate. See class schedule for specific content. May be repeated with new content. Maximum credit six units.

*** 682. Workshop in Educational Administration (1-3)**

Prerequisites: Teaching credential and permission of department.

Concentration, in a workshop environment, on a particular problem and/or competency unique to educational administrators. May be repeated with new content. See class schedule for specific content. Maximum credit three units applicable on a master's degree.

700. Seminar in Legal and Financial Aspects of School District Management (3)

Prerequisites: Teaching credential, and Educational Administration 600, 610, 620, 630.

Principles and practices of law and finance as an aspect of school business administration, school plant planning and development, and the operation and maintenance of school facilities and services.

710. Seminar in School-Community Relationships (3)

Prerequisites: Teaching credential, and Educational Administration 600, 610, 620, 630.

Sociological aspects of school administration with particular emphasis on broad social policy, contemporary issues, community-school relationships, other social and service agencies of the community.

720. Seminar in Educational Personnel Management (3)

Prerequisites: Teaching credential, and Educational Administration 600, 610, 620, 630.

Personnel relationships to include administrative relationships with the Board of Education and the school staff. Central office personnel procedures including recruitment, employment, placement, evaluation, promotional and training procedures.

730. Seminar in District Curriculum Development, Evaluation and Improvement (3)

Prerequisites: Teaching credential, and Educational Administration 600, 610, 620, 630.

School district curricular development from kindergarten through community college, relationships of the superintendent and central administrative staff to regular staff and supervisory staff.

740. Advanced Seminar in Educational Administration (3)

Prerequisites: Teaching credential and Educational Administration 700, 710, 720, 730.

Study of a selected area in educational administration, such as educational law, finance, supervision, personnel procedures, etc. May be repeated with new content. See class schedule for specific content. Maximum credit nine units.

750A-750B. Seminar in Educational Facilities Planning (3-3) Cr/NC

Prerequisite: Possession of an administrative credential, credit or concurrent registration in Educational Administration 750A.

Development of new and/or remodeling of old educational facilities from the planning stage to complete utilization.

*** 760. Internship in Educational Administration (2-6) Cr/NC**

Prerequisites: Teaching credential and consent of instructor.

Internship for prospective educational administrators. Released time, permission of supporting organization and administration with chair of Department of Educational Administration previous semester required.

UPPER DIVISION COURSES IN EDUCATIONAL TECHNOLOGY AND LIBRARIANSHIP

532. Design and Production of Instructional Materials (3)

Six hours of activity.

Planning, preparing and using instructional materials with a wide variety of learners. Transparencies, lettering aids, color slides, audio cassettes, simulations, and portable video.

Not open to students enrolled in Educational Technology and Librarianship Credential or M.A. program or with credit in Educational Technology and Librarianship 541.

540. Educational Technology (3) I, II, S

Six hours of activity.

Applications of educational technology to instruction and learning. Individualization through the use of media. Includes film, TV, simulation, programmed instruction, computers and multi-media.

541. Media Production Techniques (3)

Six hours of activity.

Planning and production of still media formats for instruction. Lettering techniques, illustrations, overhead transparencies, high contrast materials, storyboarding, scripting and slide/tape presentations. Not open to students with credit in Educational Technology and Librarianship 532.

542. Advanced Production Techniques (3)

Six hours of activity.

Prerequisite: Educational Technology and Librarianship 541.

Application of communication principles, skills and techniques pertaining to the design and production of light and heat sensitive instructional materials to problems of educational communication and instructional development.

544. Instructional Materials Design (3) I, II

Systematic approach to instructional design. Review of research and theory in materials design and programmed instruction. Development and validation of programmed materials in various formats.

546. Basic Reference Materials (3) I, II

General reference books, bibliographies and source materials with emphasis on their use in the school library media center.

547. Selection of Instructional Materials (3) I, II

Prerequisite: Educational Technology and Librarianship 445.

Selection criteria and development of written policy statements. Annotations, reviewing media, standard catalogs and bibliographies.

548. Cataloging and Classification (3) I, II

Two lectures and three hours of laboratory.

Prerequisite: Educational Technology and Librarianship 445.

A practical approach to organizing instructional materials in school library media centers. Descriptive cataloging, classification, and choice of subject headings. Basic knowledge of typing helpful.

549. Ethnic Materials for Children and Young People (3)

Six hours of activity.

Survey and evaluation of instructional material for children and young people of varied ethnic and cultural groups. Opportunity for selective and critical in-depth reading, listening, viewing, analysis and evaluation.

553. Workshop in Educational Television (3)

Nine hours of laboratory.

The procedures and theories of television production as it pertains to closed circuit and instructional use of television. The selection and utilization of program content and the method of presenting material through the television medium will be discussed and demonstrated. Not open to students with credit in Telecommunications and Film 320.

596. Workshop in Educational Technology and Librarianship (1-3)

Selected problems in educational technology and librarianship. Maximum credit six units. See class schedule for specific content.

GRADUATE COURSES IN EDUCATIONAL TECHNOLOGY AND LIBRARIANSHIP

641. Instructional Graphic Communication (3)

Six hours of activity.

Prerequisite: Educational Technology and Librarianship 541.

Application of communication principles and learning theory to the design and production of instructional graphic materials. Emphasis on design, production and evaluation of opaque and transparent visual imagery.

642. Multimedia Message Design (3)

Six hours of activity.

Prerequisite: Educational Technology and Librarianship 541.

Application of communication principles and learning theories to the design, development and integration of audio and visual media into instructional packages.

671. Computers in Education (3)

Six hours of activity.

Prerequisite: Educational Technology and Librarianship 540.

Role of computers in various instructional settings, management of instruction, delivery of instruction, evaluation, and simulations. Current issues and applications evaluated.

674. Seminar in Management of Educational Technology (3) I

Prerequisite: Educational Technology and Librarianship 540.

Research reviewed and the findings related to current practices. Relationships of educational technology to educational philosophies and current issues. Recent trends evaluated.

675. Seminar in the Administration of Instructional Media Centers (3) I, II

Prerequisites: Educational Technology and Librarianship 445 and 540.

The relationship of school, district, and regional media centers to the educational program. Concepts of leadership and management, review of current practices and policies.

676. Seminar in Instructional Design (3)

Prerequisite: Educational Technology and Librarianship 540, 541 and 544.

Examination of roles and concerns of persons in instructional design. Problem-solving on current design issues. Instructional product development, use and evaluation.

677. Reference Materials in Subject Areas (3)

Prerequisite: Educational Technology and Librarianship 546.

Reference materials in humanities, social sciences, and sciences with emphasis on their use in the school library media center.

678. Literature for Children (3)

Prerequisite: Educational Technology and Librarianship 547.

Literature and other library materials suited to the elementary school student. Standard, classic and current books for children; aids and criteria for selection.

679. Literature for Adolescents (3)

Prerequisite: Educational Technology and Librarianship 547.

Literature and other library materials suited to the high school student. Standard, classic and current books for the adolescent; aids and criteria for selection.

775. Directed Internship in Educational Technology (2-6) Cr/NC

Supervised internship in an educational setting. (Application to take course must be made during preceding semester.)

UPPER DIVISION COURSES IN ELEMENTARY EDUCATION**502. Field Experience in Early Childhood Education (1-6) I, II, S**

Prerequisite: Elementary student teaching or approved full-time teaching experience.

Supervised field experience in pre-school or primary grades. Assignments made on an individual basis to fit the candidate's background, experience and career goals. Maximum credit six units.

512. Children's Literature in Elementary Education (3) I, II

A survey of children's literature; the selection and use of material in the elementary classroom.

514. Social Studies Unit Construction in Elementary Education (3) Irregular

Prerequisite: Elementary Education 414 or 418.

Selecting and organizing content, analyzing materials, and developing instructional units in elementary social studies for classroom use.

523. Classroom Diagnosis and Remediation of Underachievers in Mathematics (3) I, II

Six hours of activity.

Prerequisite: Teaching credential or teaching experience.

The assessment and remediation of underachievers in mathematics. Techniques in determining difficulties in mathematics and prescribing remedial work; for use by elementary and secondary classroom teachers and mathematics education specialists.

562. Measurement and Evaluation in Elementary Education (3) Irregular

The use of intelligence and achievement tests in the diagnosis and improvement of learning; construction of objective examinations; problems of evaluation in education; the elements of statistical techniques.

571. Seminar in Child Development (3) I, II, S

Prerequisite: One course in child development.

Patterns in human development, especially in children ages eight and younger. Interpreting child development to differentiated staff, paraprofessionals, parents and community members. Planning for continuous progress. Reporting progress to parents.

596. Workshop in Elementary Education (1-6) I, II, S

To meet the needs of individuals or groups of teachers who desire to study selected problems in elementary education. The observation of classroom teaching or other suitable demonstrations will be provided for members in attendance. Interested persons should contact the Coordinator of Elementary Education. May be repeated with new content for more than six units. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

GRADUATE COURSES IN ELEMENTARY EDUCATION**610. Curriculum Construction and Evaluation in Elementary Education (3)**

Prerequisite: Credit or concurrent registration in Education 690.

Advanced study of the research in curriculum development, construction and evaluation.

611. Seminar in Reading in Elementary Education (3)

Prerequisite: Credit or concurrent registration in Education 690.

Advanced study of trends in reading instruction. Topics include developmental sequences in reading skills and abilities, reading in the content fields, individual differences and interests. Students will develop individual projects or problems.

612. Seminar in Language Arts in Elementary Education (3)

Prerequisite: Credit or concurrent registration in Education 690.

Advanced study of problems in teaching language arts in the elementary school, including spelling, literature and written and oral communication. Emphasis will be on the study of the scientific research in the field.

613. Seminar in Mathematics in Elementary Education (3)

Prerequisite: Credit or concurrent registration in Education 690.

A study of research and practice in the methods of teaching and in the curriculum of elementary and junior high school mathematics.

614. Seminar in Social Studies in Elementary Education (3)

Prerequisite: Credit or concurrent registration in Education 690.

Problems in teaching social studies in the elementary school with emphasis on the study of the scientific research in the field.

615. Seminar in Science in Elementary Education (3)

Prerequisite: Credit or concurrent registration in Education 690.

Advanced study of the problems of teaching science in the elementary school with emphasis on the literature of science education.

618. Advanced Diagnosis and Treatment of Learning Difficulties (3)

Prerequisites: A teaching credential and Elementary Education 562 or Secondary Education 563.

Principles and techniques of diagnosis and treatment of difficulties in learning the school subjects. Supervised experience in working with individual pupils and their parents.

624. Seminar in Elementary Social Studies Curriculum Development (3)

Prerequisite: Elementary Education 414 or 418, and credit or concurrent registration in Education 690.

Current theories of instruction pertaining directly to elementary social studies teaching and curriculum development; critique of current social studies courses of study and guides; experience in elementary social studies curriculum planning at the classroom, school and district levels.

710. Curriculum Development and Evaluation for Early Childhood Education (3)

Prerequisite: Nine units of elementary methods.

Philosophy of Early Childhood curriculum development. Analysis, evaluation and development of curriculum materials for children, ages eight and younger.

711. Diagnostic and Prescriptive Teaching of Young Children (3)

Prerequisite: One course in educational psychology.

Diagnosing learning needs of young children. Planning varied activities which match learning needs. Evaluation of objectives and pupil attainment. Teaching strategies for children eight and younger.

712. Community Involvement in Early Childhood Education (3)

Parent and community involvement in goal-setting, policy formation and instruction. Cultural influence on communicative skill development, personal identity and value acquisition. Identifying and utilizing community resources for early childhood education programs.

713. Organization and Supervision of Early Childhood Education Programs (3)

Planning, organizing and implementing various E.C.E. programs (e.g., nursery schools, day care center, kindergarten-primary programs). Coordination and supervision of programs for cognitive, motor and social development, health, nutrition, psychological services and staff development.

UPPER DIVISION COURSES IN SECONDARY EDUCATION**515. Bilingual Teaching Strategies for Secondary Teachers (3)**

Prerequisite: Teaching experience or enrollment in the Secondary Credential Program.

Overview of legal and historical developments leading to bilingual teaching in the U.S. with attention to interactive and individualized techniques appropriate for bilingual students. Language assessment methods for grouping and evaluating bilingual students are discussed and practiced. Fieldwork required.

563. Measurement and Evaluation in Secondary Education (3) Irregular

Problems of evaluation in secondary education; construction of examinations; elements of statistics; selection and interpretation of standardized measures.

564. Quantitative Methods in Educational Research (3) I, II

Basic tests of statistical significance with special reference to the interpretation of educational data.

596. Workshop in Secondary Education (1-3 or 6) I, II

Designed to meet the needs of individuals or groups of teachers who wish to develop or continue the study of some problem with the consultation of the university staff and the San Diego County Curriculum staff. May be repeated with new content for more than six units. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

GRADUATE COURSES IN SECONDARY EDUCATION**610. Curriculum Development (3)**

Prerequisite: Student teaching or teaching experience.

Present status and development of the secondary school curriculum with emphasis on curriculum construction and curriculum evaluation. Opportunities provided for study of problems submitted by students.

613. Advanced Problems in Instruction (3)

Prerequisites: Teaching experience and consent of instructor.

An analysis of the scientific research and philosophical principles in secondary school instruction.

614. Seminar in Advanced Curriculum and Instruction in Mathematics (3)

Factors directing the changing mathematics curriculum; recent trends and current research in the teaching of secondary mathematics.

615. Innovations in Instruction (3)

Prerequisite: Teaching experience or enrollment in the Secondary Credential Program.

An exploration of innovative instructional practice in the public and private schools, with emphasis on innovative teaching strategies. An evaluation of the motivational effect and structural validity of promising instructional practices.

616. Recent Trends in Curriculum (3)

Prerequisite: Teaching experience.

Current practices and trends in secondary schools. Extensive individual work on related problems of interest to members of the class.

617. Seminar in Research in Curricular Problems (1-3)

Prerequisites: Consent of the Coordinator of Secondary Education and instructor.

Individual study by graduate students who have demonstrated exceptional ability.

667. Guidance Problems in Education (3)

The theory and practice of guidance, emphasizing advanced mental hygiene concepts needed by teachers, counselors and nurses.

673. Seminar in Curriculum and Instruction in the Social Sciences (3)

Prerequisite: Valid teaching credential and appropriate teaching experience.

Theories of content selection, social pressures which affect curriculum design of the secondary school; current research in curriculum development, trends in teaching techniques and materials. Field trips to be arranged.

681. Seminar in Secondary School Reading (3)

Prerequisite: Education 690.

Sources of research on reading; reading and criticism of selected studies; identification of research trends and needs.

790. Seminar in Secondary Education (3)

Prerequisite: Advancement to Candidacy.

Intensive consideration of selected topics of current importance in Secondary Education. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

UPPER DIVISION COURSES IN SPECIAL EDUCATION**500. Exceptional Individuals (3) I, II, S**

Two lectures and two hours of activity.

Behavioral commonalities among exceptional pupils, knowledge of principles, procedures, techniques and tests in identifying the learning and behavioral patterns of exceptional pupils, characteristics of exceptional pupils in terms of program and developmental needs. (Formerly numbered Special Education 567.)

501. Instructional Programs for Exceptional Individuals (2) I, II, S

Prerequisite: Credit or concurrent registration in Special Education 500.

Assessment of instructional needs, planning an effective individualized school program and developing procedures for evaluating pupil progress. Identify current programs and trends for planning effective individualized and group programs for exceptional individuals.

502. Interaction and Interpersonal Processes (2) I, II, S

Prerequisite: Credit or concurrent registration in Special Education 500.

Theories and processes of communication technology as they pertain to the functioning individually and collectively, of parent, professionals, and community agencies in promoting personal, social, and vocational growth of individuals with exceptional needs.

510. Assessment and Evaluation of Exceptional Individuals (3) I, II

Prerequisites: Special Education 501 and 502.

Tests and procedures for assessing, evaluating and monitoring progress of exceptional individuals to meet their physical, intellectual, social, and emotional needs. Problems in the psychoeducational diagnosis and appraisal. Utilization of assessment procedures for the educational and rehabilitation program. (Formerly numbered Special Education 561.)

May be taken in each of the four areas of specialization.

- | | |
|-------------------------|---------------------------|
| A. Learning Handicapped | C. Physically Handicapped |
| B. Severely Handicapped | D. Gifted |

511. Curriculum and Instruction for Exceptional Individuals (3) I, II

Prerequisites: Special Education 501 and 502.

Utilization of data for determining general and specific objectives to meet the needs unique to exceptional individuals. Developing and selecting materials and procedures for the achievement of these objectives. Establishing procedures for monitoring and evaluating pupil progress. (Formerly numbered Special Education 563, 568 and 573.)

May be taken in each of the four areas of specialization.

- | | |
|-------------------------|---------------------------|
| A. Learning Handicapped | C. Physically Handicapped |
| B. Severely Handicapped | D. Gifted |

512. Personal Adjustment of the Exceptional Individual (3) I, II

Prerequisites: Special Education 501 and 502.

Overlay of intellectual, emotional and physical problems which influence the success or failure patterns of individuals with exceptional needs. Strategies used to facilitate the adjustment of the exceptional individual to his environment including home, school and work. (Formerly numbered Special Education 572.)

May be taken in each of the four areas of specialization:

- | | |
|-------------------------|---------------------------|
| A. Learning Handicapped | C. Physically Handicapped |
| B. Severely Handicapped | D. Gifted |

513. Dynamics of Behavior Change and the Exceptional Individual (3) I, II

Prerequisites: Special Education 501 and 502.

Management and treatment of individuals with exceptional needs. Current theories and programs in behavioral change studies analyzed with reference to their applications for the educational environment.

May be taken in each of the four areas of specialization:

- | | |
|-------------------------|---------------------------|
| A. Learning Handicapped | C. Physically Handicapped |
| B. Severely Handicapped | D. Gifted |

550. Workshop in Special Education (1-4) I, II

Curriculum and methods of teaching in an area of exceptionality; observation of demonstration class; development of materials of instruction. May be repeated once in a second area of exceptionality. Maximum credit six units applicable on any degree.

GRADUATE COURSES IN SPECIAL EDUCATION**622. The Gifted Child (3)**

Prerequisites: Elementary Education 362 and 372, or Secondary Education 412.

The abilities and characteristics of the intellectually gifted or talented; related problems of curriculum, teaching, administration and guidance.

670. Seminar in Education of Exceptional Children (3)

Prerequisite: Special Education 500.

Principles, trends and research in the education of exceptional children.

671. Seminar in Emotionally Disturbed Children and Youth (3)

Prerequisite: Special Education 670.

Advanced study of the theories, principles and practices in working with the emotionally handicapped.

672. Seminar in Education of the Gifted (3)

Prerequisite: Special Education 670.

Review of studies and investigation in learning and adjustment of the gifted, including assessment, classification, curriculum provisions, and social and emotional adjustment.

673. Seminar in Education of the Mentally Retarded (3)

Prerequisite: Special Education 670.

Review of studies and investigation in learning and adjustment of retarded children including etiology, classification, diagnosis and assessment.

771. Directed Internship: Mentally Retarded (4) Cr/NC

Application to take the course must be made during the preceding semester.

Extensive daily participation or teaching in public schools and preparation for the teaching of exceptional children in the area of the mentally retarded.

Engineering**Faculty****College of Engineering**

Dean: Glen L. Martin

Department of Aerospace Engineering and Engineering Mechanics

Chair: J. F. Conly

Graduate Adviser: R. D. McGhie

Professors: Conly, Dharmarajan, McGhie, Narang

Department of Civil Engineering

Chair: Howard H. Chang

Graduate Adviser: I. Noorany

Professors: Chang, Chou, Johnson, Krishnamoorthy, Martin, Noorany, Quiet, Stone,

Stratton

Assistant Professor: Banks

Department of Electrical and Computer Engineering

Chair: M. S. Lin

Graduate Adviser: R. J. Stuart

Professors: Learned, Lin, Lodge, Skaar

Associate Professors: Brown, Harris, Iosupovicz, Mann, Marino, Panos

Assistant Professors: Drake, Stuart

Department of Mechanical Engineering

Chair: G. T. Craig

Graduate Adviser: C. Morgan

Professors: Bedore, Craig, Fitz, Hussain, Morgan, Murphy, Ohnysty, Rao

Associate Professors: Mansfield, Pfaelzer

Assistantships

Graduate teaching assistantships and graduate nonteaching assistantships in engineering are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the appropriate department.

General Information

The College of Engineering offers graduate study leading to Master of Science degrees in Aerospace, Civil, Electrical, and Mechanical Engineering. These curricula are designed to augment the student's undergraduate training by advanced study in one of the various fields of engineering. Recognizing the increasing importance in modern technology of the engineer-scientist team, San Diego State University has developed an academic pattern which offers to one holding a first degree in engineering an opportunity to pursue advanced study in a specialized area of knowledge.

The undergraduate curricula in engineering, with degrees in aerospace, civil, electrical, and mechanical engineering, are accredited by the Engineers' Council for Professional Development.

Within the region served by San Diego State University are to be found many organizations which employ a considerable number of engineers holding the master of science degree.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the Graduate Division with classified graduate standing as described in Part Three of this bulletin. In addition, the student must have a bachelor's degree in a field of engineering appropriate to the field in which he desires to earn an advanced degree or in a field closely related thereto from an institution acceptable to the College of Engineering. If a student's undergraduate preparation is deemed insufficient, he will be required to take specified courses for the removal of the deficiency. Such courses, taken as an unclassified student, are in addition to the minimum of 30 units for the master's degree in engineering.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, which are described in Part Three of this bulletin.

Specific Requirements for the Master of Science Degree

In addition to meeting the requirements for classified graduate standing as stated above, the student must satisfy the basic requirements for the master's degree as described in Part Three of this bulletin. With the approval of the appropriate department the student working toward the master of science degree may elect either Plan A, requiring a thesis, or Plan B, requiring a comprehensive written examination. In either case, a final oral examination will be required.

The student shall arrange his course pattern, in conference with his graduate adviser, according to the following requirements for the specific degree:

Aerospace Engineering

Specific requirements for the degree: The student's program prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:

1. Eighteen units of 600- and 700-numbered courses in aerospace engineering and/or engineering mechanics including EM643, EM601 and EM621, and at least nine units in one area of specialization and excluding Aerospace Engineering 797, 798, 799A.
2. At least six additional units of 500-, 600- and 700-numbered courses in the College of Engineering or in the Departments of Mathematical Sciences, Physics, or Astronomy, including Aerospace Engineering 799A (Plan A), if elected.
3. Six elective units of 500-, 600- and 700-numbered courses approved by the graduate adviser.

Areas of Specialization in Aerospace Engineering

Fluid Dynamics

- AE 600. Seminar (1-3)
- AE 612. Compressible Fluid Flow (3)
- AE 716. Aerodynamics of Flight (3)

Engineering Mechanics

- EM 600. Seminar (1-3)
- EM 725. Theory of Plates (3)
- EM 726. Theory of Shells (3)
- EM 727. Theory of Elastic Stability (3)

Flight Dynamics

- AE 600. or EM 600. Seminar (1-3)
- AE 671. Flight Dynamics—Theory of Flight Paths (3)
- EM 703. Theory of Vibrations (3)

Civil Engineering

Specific Requirements for the Degree: The student's program, prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:

1. Eighteen units of 600- and 700-numbered courses in civil engineering, excluding Civil Engineering 797, 798, and 799A.
2. At least six additional units of 500-, 600- or 700-numbered courses in the College of Engineering or in the College of Sciences, including Civil Engineering 799A, (Plan A), if elected.
3. Six elective units of 500-, 600- and 700-numbered courses approved by the graduate adviser.

Electrical Engineering

Specific Requirements for the Degree: The student's program, prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:

1. Eighteen units of 600- and 700-numbered courses in electrical engineering (excluding Electrical Engineering 797, 798 and 799A).
2. At least six additional units of 500-, 600- or 700-numbered courses in the College of Engineering or, with the approval of the graduate adviser, in the College of Sciences.
3. Six elective units of 500-, 600- or 700-numbered courses approved by the graduate adviser.

Mechanical Engineering

Specific Requirements for the Degree: The student's program, prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:

1. Fifteen units of 600- and 700-numbered courses in mechanical engineering excluding Mechanical Engineering 798, 799A.
2. At least nine additional units of 500-, 600- or 700-numbered courses in the College of Engineering.
3. Six elective units of 500-, 600- and 700-numbered courses approved by the graduate adviser.

Courses Acceptable on Master's Degree Programs

UPPER DIVISION COURSES IN ENGINEERING

510. Methods of Analysis (3) I, II

Prerequisite: Engineering 310.

Selected topics from vector calculus, partial differential equations, and complex analysis, with engineering applications.

511. Digital Solutions of Engineering Problems (3) I, II

Prerequisites: Engineering 120 or Mathematics 107, and Engineering 310.

Digital solution of classes of engineering problems. Application of numerical methods with consideration of limitations imposed by computer and programming language characteristics.

596. Advanced Engineering Topics (1-3) I, II

Prerequisites: Minimum grade point average of 2.0 in engineering or approval of the Academic and Ethical Standards Committee of the School of Engineering.

Modern developments in engineering. Maximum credit six units for any combination of Engineering 496, 499 and 596.

UPPER DIVISION COURSES IN AEROSPACE ENGINEERING

510. Matrix Methods in Aerospace Structures (3)

Prerequisite: Aerospace Engineering 310B.

Static and dynamic analysis of aerospace structures utilizing matrix methods.

520. Intermediate Aerospace Flight Mechanics (3) I

Prerequisite: Aerospace Engineering 320.

A continuation of Aerospace Engineering 320 to include orbit determination techniques, general and special perturbations, artificial satellites, rocket dynamics and transfer orbits, earth-moon trajectories, and interplanetary trajectories.

530. Aircraft Propulsion Systems (3)

Prerequisite: Aerospace Engineering 301 or Mechanical Engineering 450.

Theory and performance characteristics of aircraft propulsion systems including reciprocating engines, turbojets, ramjets, etc.

GRADUATE COURSES IN AEROSPACE ENGINEERING

600. Seminar (1-3)

Prerequisite: Consent of the graduate adviser and instructor.

Intensive study of one of the following topics: Aeroelasticity, aerodynamic noise, aerothermal structural analysis, hydrodynamic stability, hypersonic flow theory, magnetofluidmechanics, rarified and real gas flows, electromagnetic propulsion, boundary layers, and other areas of aerospace engineering. Topic to be announced in class schedule.

612. Compressible Fluid Flow (3)

Prerequisite: Aerospace Engineering 302 and credit or concurrent registration in Engineering 510.

Theory of flow at supersonic speeds. Linearized theory, three-dimensional wings in steady flight, slender-body theory, methods of characteristics.

671. Flight Dynamics—Theory of Flight Paths (3)

Prerequisite: Aerospace Engineering 302.

Analysis of trajectories of aircraft, missiles, satellites, and spacecraft subjected to uniform or central gravitational forces, aerodynamic forces, and thrust.

716. Aerodynamics of Flight (3)

Prerequisite: Aerospace Engineering 612.

Trans-sonic flight, VSTOL, and related topics.

796. Advanced Topics in Aerospace Engineering (2 or 3)

Advanced study in the field of aerospace engineering. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

797. Research (1-3) Cr/NC

Prerequisite: Consent of graduate adviser.

Research in engineering. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with department chair and instructor.

Individual study. Maximum credit three units.

799A. Thesis or Project (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

799B. Thesis or Project Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.

UPPER DIVISION COURSES IN CIVIL ENGINEERING**518. Advanced Surveying and Photogrammetry (3) I**

Two lectures and three hours of laboratory.

Prerequisite: Civil Engineering 218 with minimum grade of C.

Theory and application of precise control surveys; specialized survey operations. Principles of metrical photogrammetry as applied to engineering. Map compilation from aerial photographs.

521. Structural Analysis II (3) I

Prerequisite: Civil Engineering 321 with minimum grade of C.

Analysis of statically indeterminate structures by virtual work. Advanced treatment of slope deflection, moment distribution. Arch analysis, secondary stresses in trusses. Advanced treatment of influence lines.

523. Timber Design (3) I

Prerequisite: Civil Engineering 321.

Structure and characteristics of wood; strength properties; loads and stresses; fasteners; working stress design of structural connections and members.

525. Design of Steel Structures (3) II

One lecture and six hours of laboratory.

Prerequisite: Civil Engineering 321.

Behavior of structural steel components under load. Design of steel beams, girders, columns, rigid frames and industrial building. Design of various types of connections of steel structures.

555. Water and Wastewater Engineering (2) I

Prerequisite: Civil Engineering 455 with minimum grade of C.

Examination of water and wastewater. Physical, chemical and biological methods of treatment. Advanced waste treatment processes. Water reclamation.

562. Applied Soil Mechanics and Foundation Engineering (3) II

Prerequisite: Civil Engineering 462.

Soil mechanics theories applied to the design of shallow and deep foundations; lateral pressure of soils, design of retaining walls.

579. Highway Materials (3) II

Two lectures and three hours of laboratory.

Prerequisite: Credit or concurrent registration in Civil Engineering 462 or 482.

Selection, design, and control of mixes of various materials used in highway construction practice. Emphasis on strength and properties of plain concrete and asphalts.

596. Advanced Civil Engineering Topics (1-3) I, II

Prerequisites: Minimum grade point average of 2.0 in engineering or approval of the Academic and Ethical Standards Committee of the College of Engineering.

Modern developments in civil engineering. See class schedule for specific content. Maximum credit six units for any combination of Civil Engineering 496, 499 and 596.

GRADUATE COURSES IN CIVIL ENGINEERING**600. Seminar (2 or 3)**

Prerequisite: Consent of the graduate adviser and instructor.

An intensive study in advanced civil engineering. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

605. Prestressed Concrete Structures (3)

Prerequisite: Civil Engineering 421 with minimum grade of C.

Fundamental concepts of prestressed concrete theory. Design applications to various types of structures.

606. Matrix Analysis of Structures (3)

Prerequisite: Civil Engineering 321 with minimum grade of C.

Development of matrix methods for the analysis of structural systems. Force methods, displacement methods. Application of the digital computer to structural analysis.

607. Dynamics of Structures (3)

Prerequisite: Civil Engineering 321 with minimum grade of C.

Dynamic disturbances, structures with variable degrees of freedom, free vibrations of slender elastic beams; continuous beams, rigid frames, floor systems. Energy methods in structural dynamics.

610. Finite Element Analysis of Structures (3)

Prerequisites: Engineering 120 and Civil Engineering 321 with minimum grade of C.

General procedure, various types of finite elements; analysis and design of isotropic and orthotropic plates and shells, deep beams, and shear walls using finite element technique; use of digital computers for solutions. Application to civil engineering structures.

620. Traffic Engineering (3)

Prerequisite: Civil Engineering 481 with minimum grade of C.

Traffic characteristics and studies. Control and regulation of street and highway traffic. Parking facilities, mass transportation, traffic engineering administration.

622. Mass Transit Engineering (3)

Prerequisite: Civil Engineering 481 with minimum grade of C.

Urban transportation and land use, characteristics of urban travel patterns, estimation of transit usage, planning of transit systems, economic problems of mass transportation. Case studies of existing and proposed systems.

630. Open Channel Hydraulics (3)

Prerequisite: Civil Engineering 444 with minimum grade of C.

Open channel flow theory, analysis, and problems, including studies of critical flow, uniform flow, gradually varied and rapidly varied flow, all as applied to the design of channels, spillways, energy dissipators, and gravity pipelines.

635. Water Quality Engineering (3)

Prerequisite: Civil Engineering 555 with minimum grade of C.

Development of water quality criteria. Survey of current methods of water treatment, wastewater treatment and water renovation. Economic considerations of water quality management.

636. Water Quality Processes (3)

Prerequisite: Civil Engineering 555 with minimum grade of C.
Two lectures and three hours of laboratory.
Theoretical and laboratory study of the chemical and microbiological processes which govern modern water and wastewater treatment.

640. Advanced Soil Mechanics (3)

Prerequisite: Civil Engineering 462 with minimum grade of C.
Advanced theories of soil mechanics and their applications to design, including physicochemical behavior of soils, theories of compaction, consolidation, stress distribution, shear strength, settlement analyses, lateral pressures, and bearing capacity of soils.

641. Advanced Foundation Engineering (3)

Prerequisite: Civil Engineering 462 with minimum grade of C.
Advanced theories of soil bearing capacity and stress distribution in soils. Analysis and design of foundations and retaining walls. Shallow foundations, piles, piers and caissons. Design of foundations for dynamic loads. Dewatering and other field problems.

642. Seepage and Earth Dams (3)

Prerequisite: Civil Engineering 462 with minimum grade of C.
Principles governing the flow of water through soils and their application in the design of earth and rock fill dams. Stability analysis and design of earth dams.

780. Seminar in Structural Engineering (2 or 3)

Prerequisite: Consent of the graduate adviser and instructor.
An intensive study in structural engineering. Maximum credit six units applicable on a master's degree.

781. Seminar in Transportation Engineering (2 or 3)

Prerequisite: Consent of the graduate adviser and instructor.
An intensive study in transportation engineering. Maximum credit six units applicable on a master's degree.

782. Seminar in Soil Mechanics and Foundation Engineering (2 or 3)

Prerequisite: Consent of the graduate adviser and instructor.
An intensive study in soil mechanics and foundation engineering. Maximum credit six units applicable on a master's degree.

785. Seminar in Construction Engineering (2 or 3)

Prerequisite: Consent of the graduate adviser and instructor.
An intensive study in construction engineering. Maximum credit six units applicable on a master's degree.

796. Advanced Topics in Civil Engineering (2 or 3)

Advanced study in the field of civil engineering. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

797. Research (1-3) Cr/NC

Prerequisite: Consent of graduate adviser.
Research in engineering. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Three units maximum credit.

799A. Thesis or Project (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis or Project Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.

UPPER DIVISION COURSES IN ELECTRICAL ENGINEERING**520. Feedback Control Systems (3) I**

Prerequisites: Electrical Engineering 420.
Analysis of regulatory systems including servomechanisms by the Laplace transform method. System performance and stability; Nyquist, Bode, and root-locus diagrams; elementary synthesis techniques. Practical components and examples of typical designs.

521. Advanced Feedback Control Systems (3) II

Prerequisite: Electrical Engineering 520.
A continuation of Electrical Engineering 520 to include feedback compensation, advanced compensation techniques, signal flow theory, state-variable techniques, introduction to nonlinear and sampled-data control systems.

530. Transistor Circuit Analysis (3) I, II

Prerequisite: Electrical Engineering 430.
Analysis and design of transistor voltage and power amplifier circuits by use of duality and matrix methods. Feedback amplifiers, audio amplifiers, video amplifiers, power supplies and oscillators; transient analysis and noise considerations.

534. Solid-State Devices (3) I

Prerequisite: Electrical Engineering 430.
Conduction theory of solids. Characteristics of tunnel, backward, breakdown, multilayer and varactor diodes; silicon controlled rectifiers and switches, unijunction transistors, hot electron devices. Lasers and laser applications.

540. Microwave Communications (3) II

Prerequisites: Electrical Engineering 430 and 450.
Applications of Maxwell's equations to wave propagation; skin effect, circuit impedance elements; vector potential, and other time-varying electrical phenomena; waveguides and resonators, strip line circuits, electromagnetic radiation.

540L. Microwave Measurements Laboratory (1) II

Three hours of laboratory.
Prerequisites: Credit or concurrent registration in Electrical Engineering 430L and 540.
Experimental study of microwave generation including klystrons, Gunn and IMPATT oscillators. TWT and microwave transistor amplifiers. Microwave modulation and detection. Microwave transmission and antennas.

553. Stochastic Signals (3) II

Prerequisite: Engineering 310 or Mathematics 340A.
Random signals, correlation functions, power spectral densities, the Gaussian process, narrow band processes. Applications to communication systems.

554. Communication Principles and Circuits (3) I, II

Prerequisite: Electrical Engineering 430.
Signal transmission in linear networks; modulators and detectors; wide-band and narrow-band amplifiers; oscillators; AM, FM, and phase modulation; transient response of amplifiers.

554L. Communication Circuits Laboratory (1) I

Three hours of laboratory.
Prerequisite: Electrical Engineering 430L.
Regulated power supply systems; oscillator, modulator, detector, and switching circuits; superheterodyne receivers and television circuitry.

555. Modulation Theory (3) I

Prerequisite: Electrical Engineering 410.
Theory and performance characteristics of modulation and demodulation; spectral characteristics and noise performance of carrier systems: amplitude, frequency and phase, pulse coded, and compound modulation.

570. Advanced Pulse and Digital Circuits (3) II

Prerequisite: Electrical Engineering 470.
Digital system design using linear elements. Microcircuit amplifiers, sweep circuits, JFETs and MOS devices, A/D and D/A converters.

571. Advanced Logic Design and Switching Circuits (3) I, II

Prerequisite: Electrical Engineering 370.

Detailed synthesis of synchronous and asynchronous sequential circuits. Impact of microcircuit technology on practical logic design.

573. Computer Organization (3) I, II

Prerequisites: Engineering 120 or Mathematics 107, and Electrical Engineering 370.

Data and information structure, machine and assembly language programming, arithmetic and control units microprogramming, memory devices, input-output devices, channels and operating systems concepts.

575. Microprocessors (3) I, II

Prerequisites: Electrical Engineering 470 and 573.

Microprocessor organization and operation. Comparative analysis of commercially available microprocessors. Circuit design and programming of microprocessor-based computing and controller systems.

580. Modern Power Systems I (3) I

Prerequisites: Engineering 310, Electrical Engineering 310 and 380.

Modern power system elements; calculation of load flow, fault currents, and system stability.

581. Modern Power Systems II (3) II

Prerequisite: Electrical Engineering 580.

Transient response of modern power system elements; positive, negative and zero sequence impedance; subharmonic effects.

596. Advanced Electrical Engineering Topics (1-3) I, II

Prerequisites: Minimum grade point average of 2.0 in engineering or approval of the Academic and Ethical Standards Committee of the College of Engineering.

Modern developments in electrical engineering. See class schedule for specific content. Maximum credit six units for any combination of 496, 499 and 596.

GRADUATE COURSES IN ELECTRICAL ENGINEERING**600. Seminar (1-3)**

Prerequisite: Consent of the graduate adviser and instructor.

An intensive study in advanced electrical engineering. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

605. Seminar in Communications Systems (1-3)

Prerequisite: Consent of the graduate adviser and instructor.

An intensive study in communication theory and systems. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

606. Seminar in Computer Engineering (1-3)

Prerequisite: Consent of the graduate adviser and instructor.

Intensive study in computer engineering topics. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

610. Linear System Analysis (3)

Prerequisites: Electrical Engineering 310 and credit or concurrent registration in Engineering 510 or Mathematics 340B.

Loop and nodal system equations based on topological considerations, four-terminal network theory using matrices. Fourier integral transform theory as applied to linear system analysis. Positive real functions and associated testing methods.

622. Sampled-Data Systems (3)

Prerequisite: Electrical Engineering 520.

Analysis and synthesis of sampled-data and digital control systems; techniques for the design of time optimal sampled-data control systems; z-transform calculus and difference equation synthesis techniques for determining stability and system response.

625. State Space Analysis of Control Systems (3)

Prerequisite: Electrical Engineering 520.

State space representation of control systems, state transition flow graphs, methods of solution of the state equation, controllability and observability, and introduction to optimal control systems.

630. Synthesis of Active and Passive Networks (3)

Prerequisite: Electrical Engineering 610.

Frequency-domain synthesis of driving point and transfer impedances in passive and active networks. Canonical forms and network equivalents. Time-domain synthesis and considerations of pulsed-data systems.

631. Integrated Circuits (3)

Prerequisite: Electrical Engineering 470.

Fabrication methods, logic gates, multivibrators, medium- and large-scale integration techniques and devices. Linear integrated circuits and MOS technology. Emphasis on proper application of devices through knowledge of circuit operation and interpretation of manufacturers' specification sheets.

634. Semiconductor RF Circuit Design (3)

Prerequisite: Electrical Engineering 554.

Wide band amplifiers, low level RF amplifiers and mixers, IF amplifiers, AGC, tuning and stability problems, unilateralization and mismatching techniques, harmonic oscillators, VHF power amplifiers including varactor multipliers.

636. Noise in Electrical Devices (3)

Prerequisite: Electrical Engineering 530.

Major types and origins of electrical noise and the effects of noise on system behavior. Emphasis on concepts of noise as a random process, as distinguished from systematic or periodic interference.

640. Quantum Electronics (3)

Prerequisite: Electrical Engineering 534.

Quantum mechanics for engineers concerned with its application to solid-state devices. Basic principles and engineering applications of lasers.

642. Optical Communications (3)

Prerequisite: Electrical Engineering 640.

Fundamentals of electro-optical technology from ultraviolet through infrared. Characteristics of thermal and laser radiation including generation, transmission, detection, data processing and display.

645. Antennas and Propagation (3)

Prerequisite: Electrical Engineering 540.

Impedance characteristics and radiation patterns of thin linear antenna elements; field intensity calculations. Tropospheric and ionospheric propagation; propagation anomalies.

647. Radar Systems (3)

Prerequisite: Electrical Engineering 540.

The radar equation; characteristics of CW, FM, MTI, pulse-doppler and tracking radar system; transmitters, antennas and receivers; detection of signals in noise, extraction of information; propagation effects; system engineering and design.

650. Modern Communication Theory I (3)

Prerequisite: Electrical Engineering 553 or Mathematics 550.

Probability theory, random variables, random processes, Gaussian process, random signals through linear systems, noise considerations, optimum receiver design, applications to digital and wave-form communication.

651. Modern Communication Theory II (3)

Prerequisite: Electrical Engineering 650.

Estimation of signal parameters in noise. Estimation of spectral densities and correlation functions. Intersymbol interference. Adaptive and feedback systems.

653. Coding Theory (3)

Prerequisite: Electrical Engineering 553.

The theory of coding to combat noise over communication channels. Redundancy added to messages to assure arbitrarily small error rates at a given information rate. Discussion of channels and capacity. Block codes, cyclic codes, BCH codes, convolutional code.

658. Digital Processing of Signals (3)

Prerequisite: Electrical Engineering 555.

Theory of digital signal processing. Emphasis on digital filters, discrete spectrum analysis, and windows. Fast Fourier transforms. Generalized linear filtering; Cepstral analysis and delftic loops.

670. Microprogramming (3)

Prerequisite: Electrical Engineering 573.

Fundamentals of microprogramming and read only storage technology as related to the design of digital computers.

671. Computer Input/Output Devices and Systems (3)

Prerequisite: Electrical Engineering 573.

Control programs, interrupt procedures, I/O programming techniques, interfaces, channels, magnetic recording techniques, I/O devices.

672. Minicomputer Design and Applications (3)

Prerequisite: Electrical Engineering 573.

Current minicomputer architectures. CPU-oriented and universal bus-oriented machines.

676. Fault Tolerant Computing (3)

Prerequisite: Electrical Engineering 370.

Triple modular redundancy, standby sparing, quaded logic, parity and residue checking of computer systems and subsystems. Diagnostic programming and fault testing fundamentals.

677. Topics in Logic Design (3) II

Prerequisite: Electrical Engineering 571.

Review of current technical periodic literature in logic design and digital systems. Stress on specialized synthesis techniques and recent theoretical developments.

678. Electronic Digital Systems (3)

Prerequisite: Electrical Engineering 573.

Design of arithmetic, control and memory units. Detailed comparative analysis of the system organization and operation of several digital computers, with special attention to the interdependence of design decisions and their dependence upon the intended system application.

797. Research (1-3) Cr/NC

Prerequisite: Consent of graduate adviser.

Research in engineering. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with department chair and instructor.

Individual study. Three units maximum credit.

799A. (299.) Thesis or Project (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

799B. Thesis or Project Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.

UPPER DIVISION COURSES IN ENGINEERING MECHANICS**520. Intermediate Dynamics (3)**

Prerequisites: Engineering Mechanics 220 or 221, Electrical Engineering 210, and Engineering 310.

Kinematics and kinetics of systems of particles and rigid bodies. Dynamic analysis procedures for studying mechanical, electrical, and electromechanical systems. Variational methods.

540. Intermediate Fluid Mechanics (3)

Prerequisites: Credit or concurrent registration in Engineering Mechanics 340, and Engineering 510 or Mathematics 340B.

Kinematics of fluid motion. Conservation of mass, momentum, and energy. Ideal and viscous flows and applications. Boundary layer approximations.

541. Hydrodynamics (3)

Prerequisites: Engineering Mechanics 220 or 221, and Engineering 310 or Mathematics 340A or 530 or 533.

Kinematics, equations of continuity, energy, and momentum of perfect fluids. Introduction to conformal transformations. Three-dimensional and two-dimensional irrotational motion, with applications to physical problems. Vector notation will be used.

596. Advanced Engineering Mechanics Topics (1-3) I, II

Prerequisites: Minimum grade point average of 2.0 in engineering or approval of the Academic and Ethical Standards Committee of the College of Engineering.

Modern developments in engineering mechanics. See class schedule for specific content. Maximum credit six units for any combination of Engineering Mechanics 496, 499 and 596.

GRADUATE COURSES IN ENGINEERING MECHANICS**600. Seminar (1-3)**

Prerequisite: Consent of the graduate adviser and instructor.

Intensive study of one of the following topics: Nonlinear vibrations, random vibrations, continuum mechanics, anisotropic elasticity, energy methods, plasticity, and other areas of engineering mechanics. May be repeated with new content. Topic to be announced in class schedule. Maximum credit six units applicable on a master's degree.

601. Advanced Dynamics (3)

Prerequisites: Engineering Mechanics 220 or 221, and Engineering 310 or Mathematics 340A.

Kinematics and kinetics of systems of particles and rigid bodies with special reference to engineering problems. Moving reference axes, generalized coordinates, Lagrangian equations, Hamilton's principle and variational methods.

621. Theory of Elasticity (3)

Prerequisites: Engineering Mechanics 301 and credit or concurrent registration in Engineering 510 or Mathematics 340B.

Analysis of stress and strain: stress-strain relations; the equations of elasticity; uniqueness theorem; compatibility conditions; flexure and torsion.

643. Advanced Fluid Mechanics I (3)

Prerequisites: Engineering Mechanics 340 and credit or concurrent registration in Engineering 510 or Mathematics 340B.

Fluid kinematics and kinetics. Conservation of mass, energy, and momentum, applied to Newtonian fluids. Navier-Stokes equations. Couette and Poiseuille flow. Potential flow. Introduction to turbulence and boundary layer theory. Vector and tensor notation will be used.

703. Theory of Vibrations (3)

Prerequisites: Engineering Mechanics 601 and credit or concurrent registration in Engineering 510 or Mathematics 340B.

Linear and nonlinear periodic phenomena as applied to discrete systems and continuous media with application to physical problems.

725. Theory of Plates (3)

Prerequisite: Engineering Mechanics 621.

Bending and buckling theory of plates; application of small deflection and large deflection theories to plates with various boundary conditions; use of approximate methods and exact methods in solution.

726. Theory of Shells (3)

Prerequisite: Engineering Mechanics 621.

Membrane and bending theory of shells of revolution and shells of arbitrary shape; exact and approximate methods of solution of shells subjected to axisymmetric and arbitrary loads.

727. Theory of Elastic Stability (3)

Prerequisite: Engineering Mechanics 621.

Stability of elastic systems. Differential equations of stability by summation of forces and movements, and by the variational method. Applications.

797. Research (1-3) Cr/NC

Prerequisite: Consent of graduate adviser.

Research in engineering. Maximum credit six units applicable on a master's degree.

UPPER DIVISION COURSES IN MECHANICAL ENGINEERING**510. Advanced Machine Design (3) I, II**

Prerequisite: Mechanical Engineering 314.

Application of advanced topics in strength of materials to the design of mechanical elements. Energy methods, stress concentrations, curved beams, and thick-walled cylinders. Practical application of principles through case studies or design projects.

512. Simulation of Engineering Systems (3) I, II

Two lectures and three hours of laboratory.

Prerequisites: Engineering 120 and 310.

Analysis and design of engineering systems using modern analog and digital computers. Simulation of dynamic systems. Application to problems in mechanics, heat transfer, thermodynamics, and control systems.

514. Experimental Stress Analysis (3)

Prerequisite: Mechanical Engineering 314.

Advanced study of resistance of materials, failure theories and experimental stress analysis. Methods will include photoelasticity, brittle lacquers, strain gauges, grid methods, and analogs for determining static and dynamic stress distributions. Laboratory demonstrations.

516. Engineering Design: Mechanisms (3)

Prerequisite: Mechanical Engineering 512.

Design of linkages, cams, and gears wherein displacement, velocity and acceleration are paramount considerations. (Not open to students with credit in Mechanical Engineering 312 or Mechanical Engineering 613.)

520. Introduction to Mechanical Vibrations (3)

Prerequisites: Mechanical Engineering 512 and Engineering Mechanics 301.

Analysis of mechanical vibration; single- and multi-degree of freedom systems; free and forced vibrations; vibration isolation; vibration absorbers. Theory of vibration measuring instruments.

521. Vibration, Shock and Noise Measurements (3)

Prerequisites: Mechanical Engineering 512 and Engineering Mechanics 301.

Experimental problems utilizing vibration excitation equipment, recording systems, transducers, sound analysis systems and analog computers.

530. Automatic Control Systems (3)

Prerequisites: Engineering 510 and credit or concurrent registration in Mechanical Engineering 512.

Analysis of the dynamic characteristics of control components and systems. Stability and response of closed loop systems. Design of control systems.

540. Nonmetallic Materials (3)

Two lectures and three hours of laboratory.

Prerequisite: Mechanical Engineering 340.

Fundamentals of plastics, reinforced plastics, and ceramics. Analysis of effect of physical properties upon selection of a material for use in design.

560. Gas Dynamics (3)

Prerequisites: Engineering Mechanics 340 and Mechanical Engineering 350.

Thermodynamics of high velocity compressible fluid flow. Shock regions; adiabatic and diabatic flow. Applications to the propulsive duct and discharge nozzles.

580. Elements of Energy Conversion (3)

Prerequisite: Mechanical Engineering 350.

Principles of physics and chemistry applied to the analysis of a broad spectrum of energy conversion devices from an engineering point of view.

582. Thermal Environmental Engineering (3)

Prerequisite: Mechanical Engineering 470.

Psychrometrics. Mass transfer. Two-phase flow. Heat transfer. Thermoelectric refrigeration. Change of phase.

584A-584B. Principles of Chemical Engineering (3-3)

(Same course as Chemistry 500A-500B.)

Prerequisite: Credit or concurrent registration in Mechanical Engineering 350 or Chemistry 310A or 410A.

Industrial stoichiometry; fluid flow and heat transfer as applied to unit operations such as evaporation, distillation, extraction, filtration, gas-phase mass transfer, drying, and others. Problems, reports, and field trips.

596. Advanced Mechanical Engineering Topics (1-3) I, II

Prerequisites: Minimum grade point average of 2.0 in mechanical engineering or approval of the department chairman.

Modern developments in mechanical engineering. See class schedule for specific content. Maximum credit six units for any combination of Mechanical Engineering 496, 499 and 596.

GRADUATE COURSES IN MECHANICAL ENGINEERING**614. Engineering Design: Analytical Methods (3)**

Prerequisites: Mechanical Engineering 512 and Engineering 510.

Classical Optimization Techniques, Digital Computer Methods of Optimization, Design Decision Theory, Reliability in Design.

621A-621B. Mechanical Vibrations (3-3)

Prerequisites: Engineering 510, Mechanical Engineering 512 and 520.

Topics in vibration relating to mechanical design such as nonlinear vibrations, distributed mass systems, random vibrations, mobility analysis, isolator design.

631. Fluid Power and Control Systems (3)

Prerequisite: Mechanical Engineering 530.

Analysis of dynamic performance of physical systems such as pneumatic, hydraulic and hot-gas. Transient forces and valve instability. Servo characteristics.

632. Advanced Topics in Automatic Controls (3)

Prerequisite: Mechanical Engineering 530.

Synthesis of linear control systems. Analysis of nonlinear systems by describing function and phase plane methods. Sampled data systems analysis; statistical design techniques and adaptive control.

645. Mechanical Metallurgy for Engineers (3)

Prerequisites: Mechanical Engineering 340 and 350.

Fundamentals of plastic deformation of crystalline solids; elementary theory of statics and dynamics of dislocations, deformation, fracture and metallurgical variables on mechanical properties; environment-failure interactions.

651. Analytical Thermodynamics (3)

Prerequisite: Engineering 310.

Advanced concepts of macroscopic thermodynamics. Application of thermodynamics to special systems.

661. Gas Dynamics (3)

Prerequisites: Engineering 510 and Mechanical Engineering 560.

Further consideration of the flow of compressible fluids in conduits. Shock fronts, unsteady flow and real gases.

663. Boundary Layers in Internal Flows (3)

Prerequisites: Engineering 510 and Mechanical Engineering 470.

Conservation laws applied to boundary layers in viscous, heat conducting fluids; analysis of the boundary layer equations; applications to internal flows.

671. Heat Transfer I (3)

Prerequisites: Mechanical Engineering 470 and Engineering 510.

Conduction Heat Transfer; Multidimensional Conduction Processes, Transient Analysis. Convection Heat Transfer; Advanced Theories of Forces and Free Convection.

675. Heat Transfer II (3)

Prerequisites: Mechanical Engineering 470 and Engineering 510.

Radiation Heat Transfer, Solar Radiation, Multimode Heat Transfer in Systems that involve change of phase.

681. Cryogenic Engineering (3)

Prerequisite: Mechanical Engineering 450.

Analysis of low-temperature processes and equipment. Physical properties of structural and other materials used in producing, maintaining, and using low temperatures.

684. Theory of Turbomachines (3)

Prerequisite: Aerospace Engineering 301 or Mechanical Engineering 560.

Application of the fundamental laws of fluid mechanics to the problems of energy transfer between fluid and rotor. Performance characteristics of turbomachines. Study of loss mechanisms.

700. Seminar (1-3)

Prerequisite: Consent of the graduate adviser and instructor.

An intensive study in advanced mechanical engineering. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

796. Advanced Topics in Mechanical Engineering (2 or 3)

Advanced study in the field of mechanical engineering. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

797. Research (1-3) Cr/NC

Prerequisite: Consent of graduate adviser.

Research in engineering. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with department chair and instructor.

Individual study. Maximum credit three units.

799A. Thesis or Project (3) Cr/NC

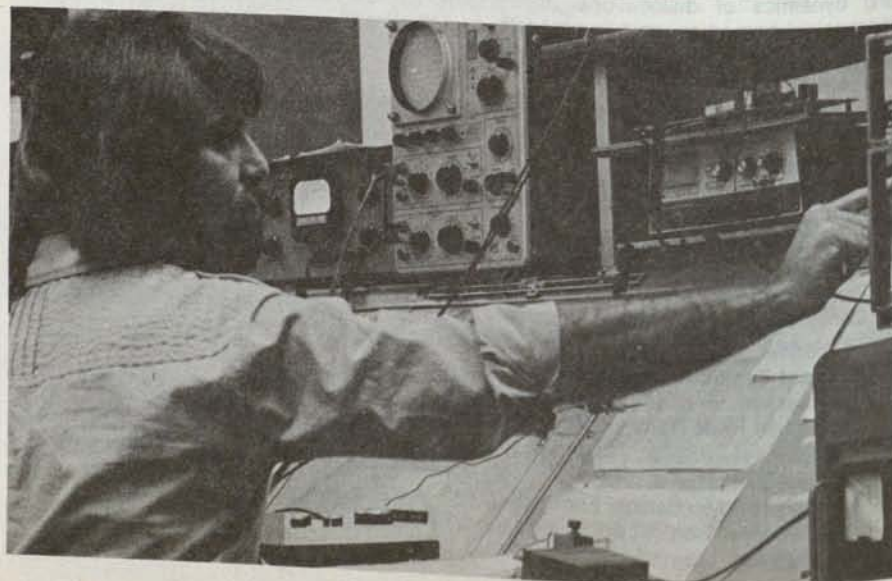
Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

799B. Thesis or Project Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.



English and Comparative Literature

Faculty

Graduate faculty in Literature is selected each semester from the general faculty listed below and from visiting professors.

Chair: D. McLeod

Graduate Advisers: G. Sanderlin (Coordinator), G. Davis, W. Rogers, D. Shojai, K. Vanderbilt

Professors: Adams, Baker, Benson, Brashers, Bumpus, Davis, Dickinson, Gellens, Henig, Ingham, Keller, McLeod, Monteverde, Moramarco, Nelson, Neumeyer, Perkins, Rother, Sanderlin, Sandstrom, Santangelo, Savvas, Stiehl, Tozer, Vanderbilt, Widmer

Associate Professors: Borkat, Brown, Farber, Hinkle, Kehler, H., Kohler, Nichols, Patterson, Redding, M., Redding, R., Rogers, Rush, Sheres, Shojai, Taylor, Thrane, Tunberg, Wall

Assistant Professors: Aninger, Boe, Butler, Forche, Foster, Gervais, Karnath, Kehler, D., McCaffery, O'Reilly, Sullivan, Wheeler

Assistantships and Scholarships

Graduate teaching assistantships in English are available to a limited number of qualified students. Application blanks and additional information may be secured from the Graduate Coordinator.

The Dorothy Cranston Stott scholarship of \$100 is awarded each June to an English major who is graduating from San Diego State University and who is continuing work toward a higher degree or credential.

For California State Fellowships, see Part Three, Scholarships, Fellowships section of this bulletin.

General Information

The English and Comparative Literature faculty, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in English and to postbaccalaureate (nondegree) study.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. Students may be admitted to the graduate program in literature in one of three categories:

1. Unconditional Classified Graduate Standing
For unconditional acceptance to the graduate program in English students must meet the following requirements:
 - a. 24 units of upper division work in English
 - b. 2.75 overall on a 4.0 Grade Point Scale
 - c. 3.0 grade point average in the English major
 - d. 950 on the Graduate Record Examination
2. Conditional Classified Graduate Standing
 - a. Conditional acceptance will be granted to a candidate who is below requirements in one of the above. A student may be granted conditional acceptance if there is a deficiency in two or more of the above requirements. A student accepted conditionally must achieve an average of 3.25 in nine units of English or comparative literature courses before proceeding to further study and is limited to 12 units. Any units taken above this quota will not count toward the 30 units for the master's degree in English.
 - b. English major unit deficiencies. Students who lack 24 units of credit in upper division courses in English will receive conditional acceptance if they meet the requirements of 2.75 overall and 950 on the GRE. After the completion of 24 units in the major students will then be given classified graduate standing if they meet the other requirements.
3. Postbaccalaureate Standing (Unclassified-No Degree Objective). See description in Part Three, Admission Section of this bulletin.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement, as stated in Part Three of this bulletin. All candidates may fulfill the foreign language requirement by passing the Graduate School Foreign Language Test, by passing a local examination administered by one of the university's foreign language departments, or by completing one three-unit upper division foreign language literature course with readings in the original language with a grade of C (2.0) or better. If a language is not offered by the university, a Comparative Literature student may petition to work with a qualified instructor in three semester units of special studies (with CR considered a satisfactory grade). Students should consult their adviser for the language most appropriate for advanced graduate study.

To be advanced to candidacy in the Creative Writing program, a student must submit a sample of his or her writing or work in progress for approval as thesis level achievement by a committee of three of the faculty in the Creative Writing area.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program, approved by a graduate adviser and the graduate coordinator of the department, which includes a major consisting of 30 units, with at least 18 units of 600- and 700-numbered courses. The student may take up to six units of electives outside the Department with the approval of his or her adviser. (Students in Comparative Literature may also take up to six units of foreign language literature courses numbered 500 or above as part of their program area, with approval of adviser.) This major will include emphasis in one program area (British Literature, American Literature, Comparative Literature, Creative Writing) and will fulfill requirements of one of the four plans described below. Literature students will follow Plan A (I) with thesis, Plan A (II) with starred papers, or Plan B. Creative Writing students will follow Plan A (III) with creative project.

Plan A (I) Thesis:

Thirty units, including English 600 (or 601 for Comparative Literature students), 799A (Thesis) and a second 700-level course (other than 798). The program of courses developed with the student's adviser will emphasize breadth; a minimum of nine units must be selected from English and Comparative Literature courses outside the program area. The thesis (usually 75-125 pages in length) will be in the student's program area.

Plan A (II) Starred Papers and Oral Examination:

Thirty units, including English 600 (or 601 for Comparative Literature students), at least three 700-level (seminar) courses in the Department, and a minimum of nine units from English and Comparative Literature courses outside the program area. The program developed by the student and the graduate adviser will emphasize breadth. Three seminar papers of about 35 pages, each recommended as a "Starred Paper" by a seminar instructor, will be revised to meet the approval of a thesis committee. Two of these papers must be from the student's program area, the third from outside that area (for example, two from British literature, one from American literature). In addition, the student will be required to pass an oral examination covering the area of specialization as defined by his or her thesis committee (e.g., British Literature Since 1800, American Literature Since 1865, 20th-Century World Literature).

Plan A (III) Creative Writing:

Thirty units, including English 600, 799A (a creative work), a second 700-numbered English and Comparative Literature course (other than 798), at least nine units of graduate writing courses, and a minimum of nine units in literature courses apart from Creative Writing. The creative work will normally be a novel or a collection of poems or short stories. In addition, the student must pass an oral or written examination in the genre of the creative work.

Plan B Oral and Written Examination:

Thirty units of course work, including English 600 (or 601 for Comparative Literature students), three 700-level courses (seminars), and nine units in English and Comparative Literature courses outside the program area. In addition the student must pass (1) a three-

hour written examination in one broad area of emphasis (e.g., American Literature, British Literature Before 1800, Modern French Literature), and (2) a two-hour comprehensive oral examination covering American and British Literature (or equivalent areas in Comparative Literature).

Details concerning various committees and arrangements for the papers and examinations involved in the various plans are available from the graduate advisers.

Courses Acceptable on the Master's Degree in English

UPPER DIVISION COURSES IN ENGLISH

GENERAL

All 500-level courses—Prerequisite: Six lower division units in English.

500. Advanced Composition (3) I, II

The theory and practice of expository writing, including the contributions of semantics, rhetoric, and logic.

505. The Bible as Literature (3) I, II

(Same course as Comparative Literature 505.)
Prose and poetry of the King James version.

507. The History of Literary Criticism (3) I

Principles and practices of literary criticism from Greek times to the nineteenth century.

508. Modern Criticism (3) II

The theory and practice of selected nineteenth and twentieth century critics, with emphasis on the distinctive features of their approaches to literature.

AMERICAN LITERATURE

521. Major and Minor Periods in American Literature (3) I, II

American literary history treated chronologically, such as a survey of early American literature, the literature of the American Renaissance, literature of the period of Realism and Naturalism, American literature of the first half of this century, or smaller, more specific historical units. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

522. Individual American Author (3) I, II

In-depth study of a major American writer. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

523. Individual Movement in American Literature (3) I, II

Literary facets of a movement important to American literary history; such as a study of Puritanism, Imagism, Transcendentalism, Southern Gothic, Realism, or Parafiction. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

524. Individual Issues in American Literature (3) I, II

Study of a particular issue in American writing; such as American women writers, the erotic in American literature, transatlantic literary relations, the American writer in exile, a particular region and its writers. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

525. Studies in American Fiction (3) I, II

Courses in the history of American fiction from the beginning, in particular periods of fiction writing, in special groups of writers, and in contemporary American fiction. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

526. Studies in American Poetry (3) I, II

Courses in the history of American poetry from the beginning, in particular periods of poetry writing, in special groups of poets, and in contemporary American poetry. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

527. Studies in American Drama (3) I, II

Courses in the history of American drama from the beginning, in particular periods of drama writing, and in contemporary American drama. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

528. History of American Literature (3) I, II

American literary history from the Colonial period to the present. Recommended for English majors.

BRITISH LITERATURE**530. Chaucer (3) I, II**

Chaucer's works, with emphasis on *The Canterbury Tales* and *Troilus and Criseyde*.

531. Renaissance Literature (3) I, II

English poetry and prose from 1485 to 1603.

533. Shakespeare (3) I, II

An introduction to the writings of Shakespeare.

534. Study of Shakespeare (3) II

Prerequisite: English 533.

Advanced study of Shakespeare's achievement as a poet and playwright.

536. Seventeenth Century Literature (3) II

English poetry and prose from 1603 to 1660.

537. Milton (3) II

Milton's writings, with emphasis on *Paradise Lost*.

538A-538B. Restoration and Eighteenth Century Literature (3-3) I, II

English literature in the neoclassical era. Semester I: Dryden, Swift, Pope, and their contemporaries. Semester II: Writers of the middle and late eighteenth century.

540A-540B. English Fiction (3-3) I, II

The development of English fiction from its beginnings to the end of the nineteenth century. Semester I: The eighteenth century. Semester II: The nineteenth century.

541A-541B. English Drama (3-3) I, II

English dramatic literature from its beginnings to the nineteenth century. Semester I: The period from the beginning to 1642. Semester II: The period following reopening of the theatres in 1660.

542A-542B. Nineteenth Century British Poetry (3-3) I, II

Semester I: The Romantic movement. Semester II: The Victorian period.

543. Nineteenth Century British Prose (3) I, II

Nonfictional prose of the Romantic and Victorian periods.

544A-544B. Modern British Fiction (3-3) I, II

Semester I: English fiction from 1890 to World War II. Semester II: English fiction from 1939 to the present. (Formerly numbered English 544.)

545. Modern British Poetry (3) I, II

British poetry since 1900.

546. Modern British Drama (3) I, II

British drama since 1890.

549. Topics in English Literature (3) I, II

The Works of Spenser, The Metaphysical School of Poetry, The English Satirists, Major Movements in Contemporary English Fiction, and the like. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

560A-560B. A History of English Literature (3-3) I, II

Survey of major English writers, with emphasis on reading of complete works. Semester I: From the beginning to the neo-classical period. Semester II: Begins with the Romantic survey requirements, for those who have not satisfied the lower division on to graduate study.

CREATIVE WRITING**570. Techniques of Poetry (3) I, II**

A study of the critical and theoretical literature of poetry, from the creative writer's viewpoint, together with reading and discussion of appropriate examples.

571A-571B. Techniques of Fiction (3-3) I, II

A study of the critical and theoretical literature of fiction, from the creative writer's viewpoint, together with reading and discussion of appropriate examples. Semester I: Short Fiction. Semester II: The Novel.

572. Techniques of Drama (3) I

A study of the critical and theoretical literature of drama, from the creative writer's viewpoint, together with reading and discussion of appropriate examples.

579. Topics in Techniques of Writing (3) I, II

A study of the critical and theoretical literature of literary technique or topic such as satire, science fiction, myth and fantasy, children's literature, the long poem, the literary anatomy, etc. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

580. The Writing of Poetry (3) I, II

Prerequisite: English 280.

A writing workshop in poetry. May be repeated with new content. Maximum credit six units.

581. The Writing of Fiction (3) I, II

Prerequisite: English 280.

A writing workshop in fiction. May be repeated with new content. Maximum credit six units.

582. The Writing of Nonfiction (3) I

Prerequisite: English 280.

A writing workshop in nonfictional prose. May be repeated with new content. Maximum credit six units.

589. Senior Workshop in Creative Writing (3) I, II

An advanced workshop intended only for students who have an extensive background in creative writing. Different sections of the course may treat advanced poetry writing, advanced fiction writing, or other special topics. See class schedule for specific content.

**UPPER DIVISION COURSES IN
COMPARATIVE LITERATURE****505. The Bible as Literature (3) I, II**

Same course as English 505.

Prose and poetry of the King James version.

510. Medieval Literature (3)

Representative selections from authors of the Middle Ages.

511. Continental Renaissance (3)

Representative selections from authors of the Renaissance period in continental Europe.

512. Seventeenth and Eighteenth Century European Literature (3)

Selected works by European writers prior to 1800.

513. Nineteenth Century European Literature (3)

Selected works by European writers between 1800 and 1900.

514. Modern European Literature (3)

Selected works by European writers of the 20th Century.

525. Yiddish Literature (3) I, II

Selected works from the Jewish communities of Central Europe.

526. Modern Jewish Literature (3) I, II

Selected works by Jewish authors from the last half of the nineteenth century to the present, with emphasis on the United States and Israel.

530. Asian Literature (3)

Selections from the literature of Asia: Chinese, Japanese, Indian, etc. Topic to be announced in class schedule. May be repeated with new content. Maximum credit six units.

535. Near Eastern Literature (3) I, II

Selections from the literature of the Near East: Persian, Arabic, Turkish, etc. Specific topic to be announced in class schedule. May be repeated with new content. Maximum credit six units.

540. African Literature (3)

Comparative study of African literature as well as Black literature of North and South America and the Caribbean; intercontinental influences and the theme of Black identity.

545. Modern Latin American Literature (3) I, II

Reading selections from major Latin American authors.

550. Seminar (3)

An intensive study of a topic to be selected by the instructor. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

560. The Epic (3)

Selected epic poems from world literature; emphasizes the Western epic tradition from Homer to the present. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

561. Fiction (3)

A comparative approach to themes and forms in fiction (novel and short story). Focus of course to be set by instructor. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

562. Drama (3)

Forms and themes in drama. Focus of course to be set by instructor. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

563. Poetry (3)

A comparative approach to themes and forms in poetry. Focus of course to be set by instructor. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

570. Folk Literature (3)

Studies in the ballad, bardic poetry, oral and popular literature and folklore. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

571. Literary Use of Legend (3)

Literary treatment of such legendary figures as Don Juan, Faust, and Ulysses, in a wide range of literature and genres.

577. Major Individual Authors (3)

In-depth study of the works of a major author, such as Sophocles, Dante, Cervantes, Goethe, Dostoyevsky or Proust. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

580. Concepts in Comparative Studies (3)

Basic concepts in comparative studies in literature (e.g., influence, movement, figure, genre, etc.); their validity, usefulness and limitations. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

581. Literary Uses of Languages (3)

Study of the functions of language in literary writings. May take the form of translation workshop, stylistic studies, etc. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

595. Literature and Other Arts (3)

Prerequisite: Six lower division units in English, comparative literature or the arts. Comparative study of literature and such arts as painting, sculpture, architecture, music, dance and film. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

GRADUATE COURSES IN ENGLISH

600. Introduction to Graduate Study (3)

Prerequisite: Twelve upper division units in English. Introduction to research methods and critical approaches common in the graduate study of literature, with attention to basic reference works, scholarly and critical journals, bibliographical techniques, editorial procedures, etc. Recommended for first semester graduate students. Prerequisite to graduate seminars.

601. Comparative Literature Theory (3)

Introduction to methods of comparative study involving history and theory of Comparative Literature as a discipline. Strongly recommended for first semester students who choose an emphasis in Comparative Literature.

610. Literature of the Middle Ages (3)

Prerequisite: Twelve upper division units in English. Selected works in the literature of the Middle Ages with emphasis on Middle English prose and poetry exclusive of Chaucer.

612. Renaissance Literature (3)

Prerequisite: Twelve upper division units in English. Selected works in the literature of the Renaissance.

614. Restoration and Eighteenth Century Literature (3)

Prerequisite: Twelve upper division units in English. Selected works in the literature of the late seventeenth and the eighteenth centuries.

616. Earlier Nineteenth Century Literature (3)

Prerequisite: Twelve upper division units in English. Selected works in the literature of the early nineteenth century.

617. Later Nineteenth Century Literature (3)

Prerequisite: Twelve upper division units in English. Selected works in the literature of the later nineteenth century.

620. Twentieth Century Literature (3)

Prerequisite: Twelve upper division units in English. Selected works in the literature of the twentieth century.

624. British Literature (3)

Prerequisite: Twelve upper division units in English. Selected works of an author, period, or subject in English literature. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

625. American Literature (3)

Prerequisite: Twelve upper division units in English, with courses in American literature strongly recommended. Selected works of an author, period, or subject in American literature. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

630. Poetry (3)

Prerequisite: Twelve upper division units in English. Poetry as a literary form.

631. Fiction (3)

Prerequisite: Twelve upper division units in English. Fiction as a literary form.

632. Drama (3)

Prerequisite: Twelve upper division units in English. The drama as a literary form.

640. Workshop in Creative Writing (3)

Prerequisite: Consent of instructor and departmental adviser. Criticism and coaching in the larger forms. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

642. Tutorial in Creative Writing (3)

Prerequisites: Twelve upper division units in English, including at least six units in creative writing.

Individual guidance for advanced writers who wish to work on special projects in creative writing.

700. Seminar: A Major Author (3)

Prerequisite: An appropriate upper division or graduate level background course, and English 600.

The critical study of a major author, such as Shakespeare, Dickens, Mark Twain. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

710. Seminar: A Cultural Period (3)

Prerequisite: An appropriate upper division or graduate level background course, and English 600.

Advanced study, through its literature, of a cultural period such as the Renaissance, the Enlightenment, the Romantic revolution. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

720. Seminar: Special Topics (3)

Prerequisite: English 600.

Advanced study of such literary problems as Regionalism in America and Continental Influences on British Literature, or such topics as esthetics, the creative process, literary translation, teaching of composition and literature, and others. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

730. Seminar: A Literary Type (3)

Prerequisite: English 600.

Advanced study of a literary type, such as the Personal Essay, Epic, Tragedy. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with department chair and instructor. Individual study. Maximum credit six units.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

Family Studies and Consumer Sciences**Faculty**

Director, Family Studies and Consumer Sciences: G. C. Cooke

Graduate Adviser: K. J. Martin

Credential Adviser: K. J. Martin

Professors: Cannon, Cooke, Fulcomer, Gunning

Associate Professors: Flottman, Hawkins, Hewes, Josephson, Milne, Price, Ross

Assistant Professors: Dickerson, Kwallek, Martin, Mikitka, Schupp, Spindler

Assistantships

Graduate teaching assistantships and graduate nonteaching assistantships in home economics are available to a limited number of qualified students. Application blanks and additional information may be secured from the Director, Family Studies and Consumer Sciences.

General Information

Family Studies and Consumer Sciences, in the College of Professional Studies, offers graduate study leading to the Master of Science degree in Home Economics.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Three of this bulletin. In addition, the student must have a bachelor's degree in home economics or a related field, and satisfy the prerequisites of the courses selected. If a student's undergraduate preparation is deemed insufficient, the student will be required to complete specified courses in addition to the minimum of 30 units required for the master's degree in home economics. The student must have a grade point average of 3.0 in the last 90 semester units attempted, and a minimum score of 950 on the GRE Aptitude Test. The applicant must submit a letter stating reasons for choosing graduate work in Family Studies and Consumer Sciences at San Diego State University, professional goals, special interests in the discipline, and background preparation. The student must be approved for admission by graduate faculty of Family Studies and Consumer Sciences.

COMPLETE APPLICATIONS MUST BE RECEIVED BY THE ADMISSIONS OFFICE AND THE DEPARTMENT OF FAMILY STUDIES AND CONSUMER SCIENCES BY OCTOBER 1 FOR THE SPRING SEMESTER, AND MARCH 1 FOR THE FALL SEMESTER.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Three of this bulletin.

Specific Requirements for the Master of Science Degree in Home Economics

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units including at least 24 units from courses listed as acceptable on master's degree programs in home economics. At least 18 units must be in 600- and 700-numbered courses, including Family Studies and Consumer Sciences 790, Research Methods.

In Plan A, all students will be expected to include Family Studies and Consumer Sciences 799A, Thesis.

In Plan B, students will be expected to (a) pass a comprehensive examination; and (b) complete Family Studies and Consumer Sciences 797, Research, culminating in a paper acceptable to the student's committee.

Courses Acceptable on Master's Degree Programs in Home Economics

UPPER DIVISION COURSES

- 507. Processing Food and Nutrition Data (3) II**
One lecture and six hours of laboratory.
Prerequisites: Family Studies and Consumer Sciences 402A and 403.
Application of computer logic to food service management, diet planning and analysis.
- 508. Advanced Food Systems Management (3) II**
Prerequisite: Family Studies and Consumer Sciences 404.
Analysis of current topics in food systems management. Application of management principles in individual special projects.
- 510. Nutrition and Community Health (3) Irregular**
Two lectures and three hours of laboratory.
Prerequisites: Family Studies and Consumer Sciences 402A and 402B.
Exploration of nutrition problems in the community with consideration of current and potential means of resolving them.
- 518. Clothing Design: Flat Pattern (3)**
Two lectures and three hours of laboratory.
Prerequisite: Family Studies and Consumer Sciences 315.
Problems involving principles and techniques of flat pattern construction. Development of basic sloper for purpose of interpreting new designs. Investigation of sources of inspiration and their relationship to significant trends in design.
- 519. Textile Analysis and Testing (3) II**
One lecture and six hours of laboratory.
Prerequisites: Family Studies and Consumer Sciences 119 and Chemistry 130, 130L.
Analysis based on physical and chemical tests for quality differences due to variation in fibers, content, structure, and finishes and their suitability for specified uses.
- 520. Clothing and Human Behavior (3)**
Socioeconomic influences on consumer clothing behavior patterns.
- 521. Clothing Design: Draping (3)**
One lecture and six hours of laboratory.
Prerequisite: Family Studies and Consumer Sciences 315.
Experience in creative designing through fabric manipulation. Designer problems related to mass-production techniques.
- 522. Clothing Design: Historical Influences (3) I**
Two lectures and three hours of laboratory.
Prerequisite: Family Studies and Consumer Sciences 315.
Chronological analysis of men's and women's fashions providing inspiration for original creations in clothing design.
- 536. Family Study (3)**
Prerequisites: Family Studies and Consumer Sciences 135 and Sociology 101.
Dynamics of family living; attitudes, practices, social and psychological interaction and family life patterns in different cultures, social classes and ethnic groups.
- 539. Family Relationships in Literature (3)**
Insights through creative literature into the variations in relationships between the sexes and between generations in various cultures and subcultures. Fiction viewed as social documents which reveal changing expectations and ways of coping with stress.
- 541. Consumer Interest (3) II**
Prerequisite: Family Studies and Consumer Sciences 240 or 440.
Analysis of consumer legislation, consumer information and consumer protection programs.
- 545. Family Housing (3)**
Two lectures and three hours of laboratory.
Prerequisite: Family Studies and Consumer Sciences 245.
Advanced housing problems at various stages of the family life cycle and the different socioeconomic levels.

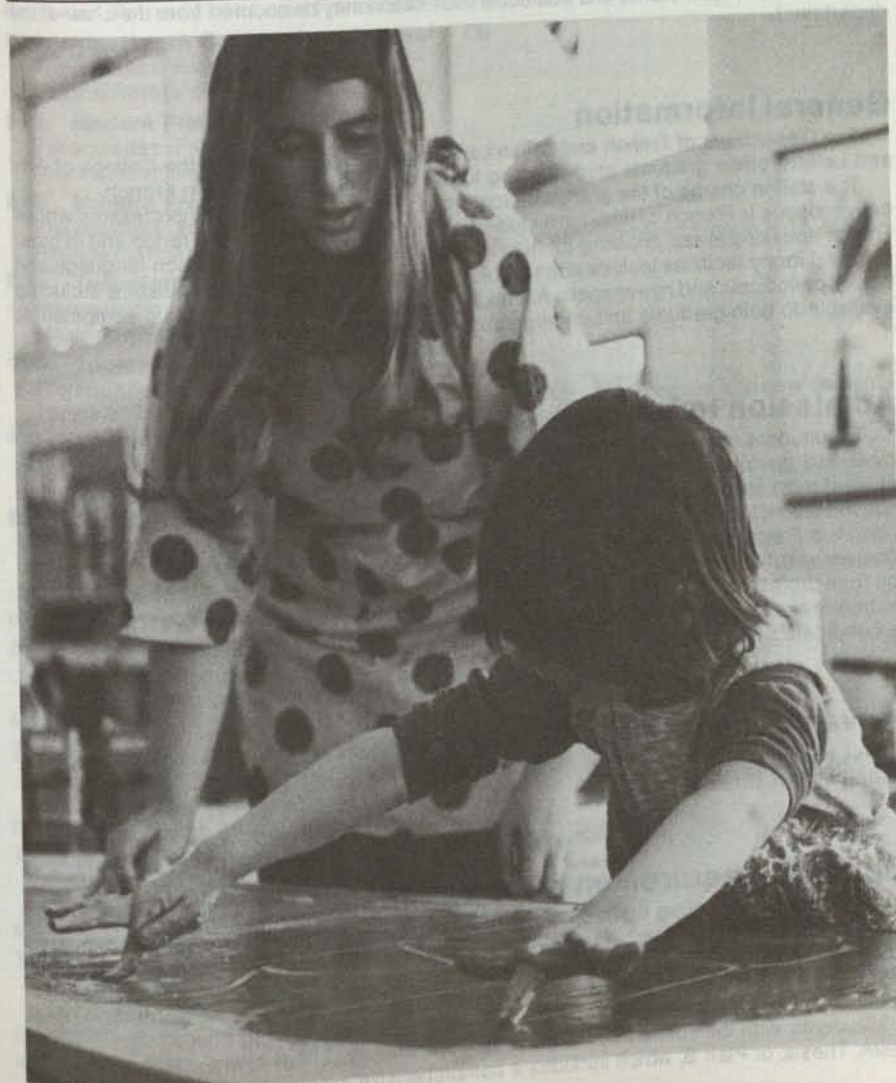
- 546. Environmental Factors of Housing (3) II**
Prerequisite: Family Studies and Consumer Sciences 245.
Problems of developing effective housing for families in various cultural situations. Investigation of sociopsychological, economic and legislative factors of housing.
- 553. Supervised Field Work in Home Management (3)**
One lecture and six hours of laboratory.
Prerequisites: Family Studies and Consumer Sciences 271, 451, 536.
Management and social problems as they relate to the home and family. Supervised field work with various community agencies and selected families.
- 570. Human Development: Infancy (3)**
Two lectures and three hours laboratory.
Prerequisites: Family Studies and Consumer Sciences 270 or Psychology 330; Psychology 260. Biology 350 recommended.
Physiological, psychological, social and cultural development of the human organism from birth through age two with directed observation and laboratory demonstration with infants.
- 576. Supervised Experiences with Young Children (3) I, II**
One lecture and six hours of field work.
Prerequisite: Nine units in child development.
Directed experiences in various community settings. Emphasis on application of child development principles in working with young children. May be repeated with new content. Maximum credit six units.
- 577. Administration and Supervision in Nursery Schools (3) I, II**
Prerequisite: Family Studies and Consumer Sciences 375 and 375L or teaching experience in a nursery school.
Problems of organization in conducting schools for young children; interrelationships of staff; personnel practices; communication with teaching staff, parents, and community; records and reports.
- 579. Advanced Child Study (3) Irregular**
Prerequisite: Nine units in child development courses.
Physical, social, and psychological factors which determine the direction of child behavior. Readings and interpretations of scientific literature which contribute to an understanding of theories of human development.
- 584. Occupational Home Economics Programs (3) I**
Prerequisite: Twelve upper division units in Family Studies and Consumer Sciences.
Vocational education legislation; development and administration of occupational and career programs in all areas of home economics.
- 590. Advanced Studies in Family Studies and Consumer Sciences (1-6) Irregular**
Prerequisite: Twelve upper division units in Family Studies and Consumer Sciences.
Advanced study of selected topics. See class schedule for specific content. Maximum credit nine units. No more than six units may be applied toward either the bachelor's or master's degree.

GRADUATE COURSES

- 600. Seminar: Foods and Nutrition (3)**
Prerequisites: Family Studies and Consumer Sciences 401 and 402A.
Introductory seminar of research and research publications in foods and nutrition.
- 603. Seminar in Food Science (3)**
Prerequisite: Family Studies and Consumer Sciences 600.
Reading and analysis of basic and applied research in food science.
- 605. Assay for Nutrients in Foodstuffs and Tissues (3)**
Two lectures and three hours of laboratory.
Prerequisites: Family Studies and Consumer Sciences 401 and 402A-402B.
Determination of energy values, organic nutrients, and minerals in foodstuffs and tissues by chemical, biological, and microbiological methods.

- 606. Physiological Bases of Diet Therapy (3)**
Prerequisite: Family Studies and Consumer Sciences 406. Chemistry 361B or 560B is recommended.
The biochemical and/or physiological lesions in pathological states and the modifications of diet which should accompany medical treatment to prevent or alleviate patient symptoms.
- 607. Child Nutrition (3)**
Two lectures and three hours of laboratory.
Prerequisite: Family Studies and Consumer Sciences 402A-402B.
Nutrition, health, and biochemical growth in children. Conditions leading to malnutrition, the prevention and correction of same.
- 609. Advanced Studies: Food Proteins (3)**
Prerequisites: Family Studies and Consumer Sciences 402A, 402B and 405.
Availability, composition, structure, and physical chemical properties of conventional and new food proteins and protein-based products; methods of analysis; nutritional evaluation; processing-induced changes; and food product functionality.
- 615. Seminar: Clothing (3)**
Prerequisite: Nine units in the area of clothing.
Selected problems in the field of clothing.
- 631. Family Life and Sex Education (3)**
Prerequisite: Six units in child development and family relations.
Content, resources and alternative methods of presentation of family life and sex education for schools, colleges, churches and social agencies.
- 634. Seminar: Marriage Adjustment (3)**
Prerequisite: Family Studies and Consumer Sciences 335.
Individual study, seminar reports, and group discussion of selected topics in marriage adjustment.
- 670. Seminar: Child Development and Guidance (3)**
Prerequisite: Family Studies and Consumer Sciences 270 and 579.
Emphasis on personality theories and on research and clinical findings relevant to a systematic study of human development and the guidance of children.
- 671. Seminar in Advanced Readings in Human Development (3)**
Prerequisites: Family Studies and Consumer Sciences 270 and 579.
Analysis of selected research in human development.
- 681. Seminar: Home Economics Education (3)**
Prerequisite: Eighteen units in family studies and consumer sciences.
The study and evaluation of home economics research and philosophical principles which have implications for the secondary homemaking teacher.
- 682. Current Development in Home Economics Education (3)**
Prerequisite: Family Studies and Consumer Sciences 483 or the equivalent, and 18 units in Family Studies and Consumer Sciences.
Current issues and recent developments in home economics education with implications for secondary, adult and post-secondary programs.
- 700. Seminar in Nutrition (3)**
Prerequisite: Family Studies and Consumer Sciences 600.
Reading and analysis of basic and applied research in nutrition.
- 790. Research Methods (3)**
Prerequisite: Twelve upper division or graduate units in Family Studies and Consumer Sciences.
Analysis of research in the area of Family Studies and Consumer Sciences; criteria and procedures for conducting research.
- 791. Research Seminar (1)**
Prerequisite: Consent of Graduate Faculty.
Discussion of current research by students, faculty and visiting scientists. Each student will participate and presentations will be based on current literature and research projects. Maximum credit three units applicable on a master's degree.

- 797. Research (3) Cr/NC**
Prerequisites: Family Studies and Consumer Sciences 790.
Research in one of the areas of Family Studies and Consumer Sciences.
- 798. Special Study (1-3) Cr/NC**
Prerequisite: Consent of staff; to be arranged with the director and instructor.
Individual study. Maximum credit six units.
- 799A. Thesis (3) Cr/NC**
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree.
- 799B. Thesis Extension (0) Cr/NC**
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.



French

Faculty

Chair, Department of French and Italian Languages and Literatures: E. R. Jackson
 Credential Adviser: T. J. Cox
 Graduate Adviser: H. Nelson
 Professors: Jackson, Max, Messier, Nelson, Piffard
 Associate Professors: Branan, Glasgow, Woodle
 Assistant Professor: Cox

Assistantships

Graduate teaching assistantships in French are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the department.

General Information

The Department of French and Italian Languages and Literatures, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in French.

The staff in charge of the graduate program in French is composed of professors whose native tongue is French, or who have studied and traveled extensively in France and in other French-speaking areas, enabling them to represent authoritatively the French language and culture. Library facilities include rich resources in French literature and linguistics, including books, periodicals and newspapers. A foreign language laboratory with modern equipment is available to both graduate and undergraduate students.

Admission to Graduate Study

The student must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, the student must satisfy the following requirements: (1) an undergraduate major in French, or its equivalent, including 24 upper division units, at least six units of which must be in a survey course in French literature; (2) a GPA of 3.0 (on a 4-point scale) in all upper division French courses; (3) three letters of recommendation from professors, at least two of which should be from professors of French at the institution where the degree was granted; and (4) a short entrance examination, administered early in the semester by the graduate committee, to test a candidate's basic written and oral command of the language.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as stated in Part Three of this bulletin.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units which includes a major consisting of at least 24 units in French, of which at least 18 units must be in 600- and 700-numbered courses in French, including French 799A, Thesis, for those following Plan A.

Students, with the consent of the graduate staff, may elect Plan A, which includes French 799A, Thesis, or Plan B, which includes a comprehensive examination in lieu of the thesis.

Courses Acceptable on Master's Degree Programs in French

UPPER DIVISION COURSES

- 503. History of French Language (3)**
 Prerequisites: French 301 and 302.
 The history of the French language from the beginnings through the sixteenth century. (Formerly numbered French 611.)
- 521. Seventeenth Century French Literature (3)**
 Prerequisites: French 301 and 302.
 Major seventeenth century dramatists with emphasis on Corneille, Moliere and Racine. (Formerly numbered French 521A-521B.)
- 531. Eighteenth Century French Literature (3)**
 Prerequisites: French 301 and 302.
 Major eighteenth century writers of fiction, with emphasis on Voltaire, Diderot and Rousseau. (Formerly numbered French 531A-531B.)
- 541. Nineteenth Century French Novel (3)**
 Prerequisites: French 301 and 302.
 Major novelists of the nineteenth century.
- 543. Modern French Theatre (3)**
 Prerequisites: French 301 and 302.
 Major dramatists of modern France.
- 545. Modern French Poetry (3)**
 Prerequisites: French 301 and 302.
 Representative French poets of the modern era. (Formerly numbered French 501A-501B.)
- 551. Twentieth Century French Novel (3)**
 Prerequisites: French 301 and 302.
 Major novelists of twentieth century France.
- 596. Topics in French Studies (1-4)**
 Prerequisites: French 301 and 302.
 Topics in French language, literature and linguistics. May be repeated with new content. Maximum credit nine units. Taught in French. See class schedule for specific content.

GRADUATE COURSES

- 601. Seminar in Introduction to Graduate Study (3)**
 Prerequisite: Eighteen upper division units in French.
 Purposes and methods of research in the fields of the language and literature, the collection and collation of bibliographic material, and the proper presentation of the results of such investigation.
- 621. Seminar in Methods of Literary Criticism (3)**
 Prerequisite: Eighteen upper division units in French.
 Theory and practice of various traditional and modern critical approaches to specific literary texts.
- 701. Seminar in Medieval French Literature (3)**
 Prerequisites: Eighteen upper division units in French including French 503.
 Readings in the principal movements, trends and genres of medieval French literature from the beginnings through Francois Villon.
- 711. Seminar in Literature of the French Renaissance (3)**
 Prerequisite: Eighteen upper division units in French.
 Literature and thought of the 16th century as represented in the works of Rabelais, Montaigne, Ronsard, DuBellay, etc.
- 721. Seminar in Seventeenth Century French Literature (3)**
 Prerequisite: Eighteen upper division units in French.
 Directed research in the works of a representative author, genre or movement. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

731. Seminar in Eighteenth Century French Literature (3)

Prerequisite: Eighteen upper division units in French.

Directed research in the works of a representative author, genre or movement. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

741. Seminar in Nineteenth Century French Literature (3)

Prerequisite: Eighteen upper division units in French.

Directed research in the works of a representative author, genre or movement. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

751. Seminar in Twentieth Century French Literature (3)

Prerequisite: Eighteen units of upper division French.

Directed research in the works of a representative author, genre or movement. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

796. Seminar in Topics in French Literature (3)

Prerequisite: Eighteen upper division units in French.

Study of movement, genre, theme, myth or individual author. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Prerequisites: Eighteen upper division units in French and consent of staff; to be arranged with department chair and instructor.

Individual study. Maximum credit three units applicable on a master's degree.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.



Geography

Faculty

Chair, Department of Geography: E. C. Griffin
 Graduate Adviser: E. A. Keen
 Professors: Eidemiller, Finch, Ford, Greenwood, Griffin, Johnson, Keen, Kiewiet de Jonge, O'Brien, Pryde, Quastler, Stutz, Wright, Yahr
 Associate Professors: Blick, Fredrich, Heiges, McArthur
 Assistant Professor: Colombo

Assistantships

Graduate teaching assistantships and graduate nonteaching assistantships in geography are available to a limited number of qualified students. Application blanks and additional information may be secured from the department.

General Information

The Department of Geography, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Geography. In addition to the standard program, it is possible to pursue an emphasis in either conservation of environmental quality or transportation.

The Master of Arts degree is designed to provide advanced training for (a) students who plan to terminate their graduate studies at the master's level, and (b) those who anticipate additional work leading to the doctoral degree in geography or related fields.

Research and instructional facilities provided by the Department of Geography include an excellent map library, a research center, laboratories for physical geography, soils, cartography, and meteorology, and equipment for remote sensing studies, aerial photograph interpretation, and field studies. The Social Science Research Laboratory, located adjacent to the Department, provides specialized data collections in the social sciences, and a well equipped data processing center.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified standing as described in Part Three of this bulletin. Candidates whose preparation is deemed insufficient by the graduate advising committee will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as stated in Part Three of this bulletin. In addition, the student must pass a comprehensive oral examination administered by the Department of Geography covering the basic elements of the discipline and his area of specialization.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units of upper division and graduate courses selected with the approval of the Geography Graduate Committee.

Standard Program

Students electing the standard geography program must complete at least 24 units selected from courses in geography listed below as acceptable on master's degree programs. The student's program must include a minimum of 21 units in 600- and 700-numbered geography courses including Geography 600 and 610.

Students in the program may elect one of two plans, A or B, to complete the requirements for the degree. Plan A requires the writing of a thesis under Geography 799A as part of the outlined course program. If Plan B is elected, the student must complete two research

papers, a minimum of three units in Geography 797, and pass a comprehensive written examination in lieu of the thesis.

Emphasis in Conservation of Environmental Quality

The requirements for students electing an emphasis in conservation of environmental quality are as follows:

1. A minimum of 30 units, including 21 units of 600- and 700-numbered courses.
 2. Geography 600 Seminar in Geographic Research and Techniques of Presentation (3).
 3. Geography 670 Seminar in Environment and Resource Conservation Theory (3).
 4. At least nine units to be taken from 500- and 600-numbered courses as approved by the Graduate Advising Committee.
 5. At least nine units taken from any of the following:
 - Biology 501 Population Biology (4)
 - Biology 525 Agricultural Ecology (3)
 - Biology 528 Ecology of Renewable Resources (3)
 - Biology 530 Limnology (4)
 - Biology 531 Biological Oceanography (4)
 - Biology 532 Fisheries Biology (3)
 - Biology 580 Regional Field Studies in Biology (1-3)
 - Biology 615 Biogeography (3)
 - Biology 621 Physiological Ecology (3)
 - Biology 622 Behavioral Ecology (3)
 - Biology 625 Physical Aspects of Ecology (3)
 - Biology 626 Aquatic Ecology (3)
 - Biology 630 Seminar in Terrestrial Ecology (2)
 - Biology 631 Seminar in Aquatic Ecology (2)
 - Biology 663 Seminar in Environmental Radiation (2) Business Administration 785 Seminar in Urban Land Policy (3)
 - Economics 758 Seminar in Urban and Regional Economics (3)
 - Economics 777 Seminar in Utilities and Energy Resources (3)
 - History 540 Environmental History of the United States (3)
 - History 635 Seminar in United States History (3)
 - Public Administration 512 The Metropolitan Area (3)
 - Public Administration 620 Seminar in Management of Urban Governments (3)
 - Public Administration 621 Seminar in The Metropolitan Area (3)
 - Public Administration 660 Administration and Public Policy Development (3)
 - City Planning 700 Urban Design and Land Use Planning Studio (3)
 - City Planning 710 Seminar in Theories of Urban Design (3)
 - City Planning 720 Seminar in Land Use and Environmental Law (3)
 - City Planning 730 Seminar in Urban Transportation Planning (3)
 - Sociology 550 Population and Contemporary Issues (3)
 - Sociology 557 Urban Sociology (3)
 - Sociology 750 Seminar in the Community (3)
 - Sociology 770 Seminar in Population and Demography (3)
- Graduate or 500-level courses in other departments that are not listed above may be taken if approved by the geography graduate advisory committee.
6. Three units selected from:
 - Geography 795 Geographic Internship (3)
 - Geography 798 Special Study (1-3) Cr/NC
 - Biology 798 Special Study (1-3) Cr/NC
 - Economics 798 Special Study (1-3) Cr/NC
 - History 798 Special Study (1-3) Cr/NC
 - Public Administration 798 Special Study (1-3) Cr/NC
 - City Planning 798 Special Study (1-3) Cr/NC
 - Sociology 798 Special Study (1-3) Cr/NC
 7. Three units in:
 - Geography 799A Thesis (3) Cr/NC
 - or
 - Geography 797 Research (1-3) Cr/NC

8. A student should have completed a quantitative methods course prior to initiating the program, or take Geography 585, Quantitative Methods in Geographic Research (3), concurrently.

Emphasis in Transportation

The requirements for students electing an emphasis in transportation are as follows:

1. A minimum of 30 units, including 21 units of 600- and 700-numbered courses.
2. Geography 600 Seminar in Geographic Research and Techniques of Presentation (3)
3. Geography 658 Seminar in Geography of Transportation (3).
4. At least 12 units to be taken from 500- and 600-level geography courses, as approved by the Graduate Advising Committee.
5. At least six units to be taken from the courses listed below:
 - Civil Engineering 620 Traffic Engineering (3)
 - Civil Engineering 622 Mass Transit Engineering (3)
 - Civil Engineering 781 Seminar in Transportation Engineering (2 or 3)
 - City Planning 730 Seminar in Urban Transportation Planning (3)
 - Geography 798 Special Study (3) Cr/NC
 - 6. Geography 795 Geographic Internship (3)
 (Must be in approved transportation activity.)

Courses Acceptable on Master's Degree Programs in Geography

UPPER DIVISION COURSES

501. Advanced Physiography (3)

Prerequisite: Geography 401.
Climatic and structural physiography.

504. Coastal and Submarine Physiography (3)

Prerequisite: Geography 378 or 401.
Analysis of marine waves, of their modification in shallow waters, of coastal currents and tides. Interpretation of coastal and submarine relief in relation to environmental processes and their modification by man. Occasional field trips may be arranged.

505. Geography of Soils (3) II

Prerequisite: Geography 101.
The nature, properties and distribution of soils and their relationships to the influence of climates, landforms, and human activity. Occasional field trips may be arranged.

506. Geography of Soils Laboratory (1)

Three hours of laboratory.
Prerequisite: Credit or concurrent registration in Geography 505.
Theories of soil genesis, edaphology and structure related to empirical phenomena through laboratory experimentation and observation. Best suited to concurrent enrollment in Geography 505. Occasional field trips may be arranged.

507. Geography of Natural Vegetation (3) I, II

Prerequisite: Geography 101.
The natural vegetation associations of the world, their distribution, classification and development, including relationship to human activities. Maximum credit three units.

- A. Lecture course (occasional field trips may be arranged)
- B. Fieldwork course

508. Physical Climatology (3) I

Prerequisite: Geography 103.
Effects of latitude, altitude, mountains, ocean currents, wind systems, and various surfaces on the distribution of solar radiation, temperature, precipitation, and other climatic elements. Statistical reduction and interpretation of climatic data.

509. Regional Climatology (3) II

Prerequisite: Geography 103.
The causes of climatic types as they occur throughout the world. Principles of several climatic classifications.

521. Urbanization and Modernization in Latin America (3)

Prerequisite: Geography 102, 323 or 324.

Analysis of specific aspects of urbanization and modernization processes in Latin America. Emphasis on changing spatial relationships resulting from rapid urban growth and culture change. Occasional field trips.

522. Historical Geography of Latin America (3)

Prerequisite: Geography 102, 323 or 324.

Changes in the Latin American cultural landscape over time. The peopling, exploration, settlement and changing geographical patterns of all or a part of the region. Origin and diffusion studies will be stressed.

556. Location and Spatial Structure of Cities (3)

Prerequisite: Geography 154 or 354 or three units of upper division course work in a related field.

Principles and characteristics of urban growth and settlement; the internal structure and functioning of urban centers; spatial models of urban land use; growth management, transportation problems, and sociopolitical urban problems. Occasional field trips may be arranged.

557. Methods in Urban Transportation Analysis (3)

Prerequisites: Geography 585 and six units of upper division urban or transportation course work in geography or related field.

Methods and techniques employed in transportation and urban analysis; spatial models of urban activities, land use, population distribution and urban transportation systems.

558. Advanced Transportation Geography (3)

Prerequisite: Geography 358 or 559.

Topics in the spatial analysis of transportation, e.g., spatial interaction patterns, diffusion process, models in spatial analysis. Occasional field trips may be arranged.

559. Urban Transportation Geography (3)

Prerequisite: Three units of upper division urban or transportation course work in geography or related field.

Urban transportation networks and their effects, past, present and future, on the economy and physical structure of the urban region. Occasional field trips may be arranged.

566. Environmental Perception and Spatial Behavior (3)

Prerequisite: Geography 102.

Effects of social and cultural factors on man's perception and cognitive structuring of his spatial and regional physical and social environment. Effect of perceived images on migration and travel behavior.

570. Land Use Analysis (3) II

Prerequisite: Geography 370.

Problems of maintaining environmental quality in the process of land conversion from rural to urban uses with emphasis on land capability and suitability studies. Occasional field trips may be arranged.

573. Geography as Human Ecology (3)

Prerequisite: Geography 170 or 370.

Human ecology related to resource geography. Occasional field trips may be arranged.

574. Water Resources (3) II

Prerequisites: Geography 101 or 102; and 170 or 370 or 371.

Occurrence and utilization of water resources and the problems of water resource development. Occasional field trips may be arranged.

575. Geography of Recreational Land Use (3) I, II

Prerequisite: Geography 170 or 370 or 371.

Importance of location and environment in the use, management, and quality of recreation areas. Maximum credit three units.

- A. Lecture course (occasional field trips may be arranged)
- B. Fieldwork course

576. Geography of Marine Resources (3)

Prerequisite: Geography 101 or 102.

Economic geography of use of marine biotic and mineral resources. Occasional field trips may be arranged.

581. Advanced Cartography (3)

Two lectures and three hours of laboratory.

Prerequisite: Geography 381.

Advanced laboratory instruction and practice in cartographic techniques.

582. Automated Cartography (3)

Two lectures and three hours of laboratory.

Prerequisite: Geography 380, 381, 382, 585, 587, or 589.

Computerized methods in presenting for comprehension spatially variable information of a quantitative nature; examination of existing automated mapping systems.

585. Quantitative Methods in Geographic Research (3) I, II

Prerequisite: Mathematics 119 or equivalent course in statistical methods.

Quantitative methods in geographic research, including computer solutions.

587. Remote Sensing of the Environment (3) I, II

Two lectures and three hours of laboratory.

Prerequisites: Geography 101, 102 and consent of instructor.

Multiband spectral reconnaissance of the environment. Emphasis on multispectral photography, infrared, microwave scanning systems and multifrequency radar systems, and their uses in the study of cultural and biophysical phenomena.

589. Field Geography (3)

Two lectures and three hours of laboratory.

Prerequisites: Senior or graduate standing and the completion of at least 12 units in geography.

Geocoding systems and instrument and computer techniques used in the large scale mapping and evaluation of land use, land quality, and land capability in rural and urban environments.

GRADUATE COURSES**600. Seminar in Geographic Research and Techniques of Presentation (3)**

Prerequisite: Approval of departmental graduate advisory committee.

Seminar in the use of research materials in the different aspects of geography and the effective presentation of research findings in written and oral form.

610. Seminar in History of Geography (3)

Prerequisite: Approval of graduate adviser.

The evolution of concepts concerning the nature, scope, and methodology of geography.

620. Seminar in Regional Geography (3)

Prerequisite: Approval of departmental graduate advisory committee.

Intensive study of a major world region, such as South America, Southeast Asia, or Northern Europe. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

- A. Lecture course (occasional field trips may be arranged)
- B. Fieldwork course

650. Seminar in Systematic Geography (3)

Prerequisite: Approval of departmental graduate advisory committee.

Intensive study of an aspect of systematic geography, such as climatology, economic geography, or graphic presentation. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

- A. Lecture course (occasional field trips may be arranged)
- B. Fieldwork course

654. Seminar in Urban and Settlement Geography (3)

Prerequisites: Geography 556 and approval of departmental graduate advisory committee.

Selected topics in urban geography. Field reconnaissance in the local urban "laboratory" is essential part of the research undertaken. Maximum credit three units applicable on a master's degree.

- A. Lecture course (occasional field trips may be arranged)
- B. Fieldwork course

655. Seminar in Location of Urban Activities (3)

Prerequisites: Geography 556 and approval of departmental graduate advisory committee.

Systematic analysis of the locations and linkages of activities in urban areas. Maximum credit three units applicable on a master's degree.

- A. Lecture course (occasional field trips may be arranged)
- B. Fieldwork course

658. Seminar in Geography of Transportation (3)

Prerequisite: Geography 358.

Principles, concepts, and theories in transportation geography.

659. Seminar in Urban Transportation (3)

Prerequisites: Geography 559 and approval of departmental graduate advisory committee.

Intensive study and research on topics in urban transportation geography. Emphasis on transport innovations and their impact on urban spatial patterns. Occasional field trips may be arranged.

660. Seminar in Spatial Structure of Transport Systems (3)

Prerequisites: Geography 358 and approval of departmental graduate advisory committee.

Investigation of specific aspects of transportation systems and spatial interaction. Occasional field trips may be arranged.

670. Seminar in Environment and Resource Conservation Theory (3)

Prerequisites: Geography 370 and 371, and approval of departmental graduate advisory committee.

Theory and general principles involved in natural resources conservation and in attaining and preserving a high level of environmental quality. Maximum credit three units applicable on a master's degree.

- A. Lecture course (occasional field trips may be arranged)
- B. Fieldwork course

671. Seminar in Problems of Environment and Resource Conservation (3)

Prerequisites: Geography 670 and approval of departmental graduate advisory committee.

Investigation of specific problem areas in natural resources conservation or in the maintenance of environmental quality. May be repeated once for credit with different content. See class schedule for specific content.

- A. Lecture course (occasional field trips may be arranged)
- B. Fieldwork course

675. Seminar in Recreational Geography (3)

Prerequisites: Geography 575 and approval of departmental graduate advisory committee. Geography 170 or 370 and 371 are recommended.

Design and management of recreational areas. Emphasis on man-land relationship in natural parks of San Diego County. Maximum credit three units applicable on a master's degree.

- A. Lecture course (occasional field trips may be arranged)
- B. Coursework course

680. Seminar in Cartography (3)

Prerequisites: One course in cartography and approval of departmental graduate advisory committee.

Use of the map in geographic analysis. Problems and recent trends in cartography. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

687. Seminar in Remote Sensing of the Environment (3)

Prerequisite: Geography 587.

The use of remote sensing techniques in the study of man's cultural and biophysical environment.

689. Techniques of Field Research (3)

Three lectures and three hours of laboratory.

Prerequisites: Geography 589 and approval of departmental graduate advisory committee.

Detailed and reconnaissance field work including classification of natural and cultural features and preparation of geographical reports and maps based on field data. Maximum credit six units applicable on a master's degree.

- A. Lecture course (occasional field trips may be arranged)
- B. Fieldwork course

795. Geographic Internship (3)

Prerequisites: Approval of departmental graduate advisory committee, and consent of instructor.

Students will be assigned to various government agencies and industry and will work under the joint supervision of agency heads and the course instructor. Maximum credit six units; three units applicable on a master's degree.

797. Research (1-3) Cr/NC

Research in one of the fields of geography. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with department chair and instructor.

Individual study. Maximum credit six units.

799A. Thesis (3) Cr/NC

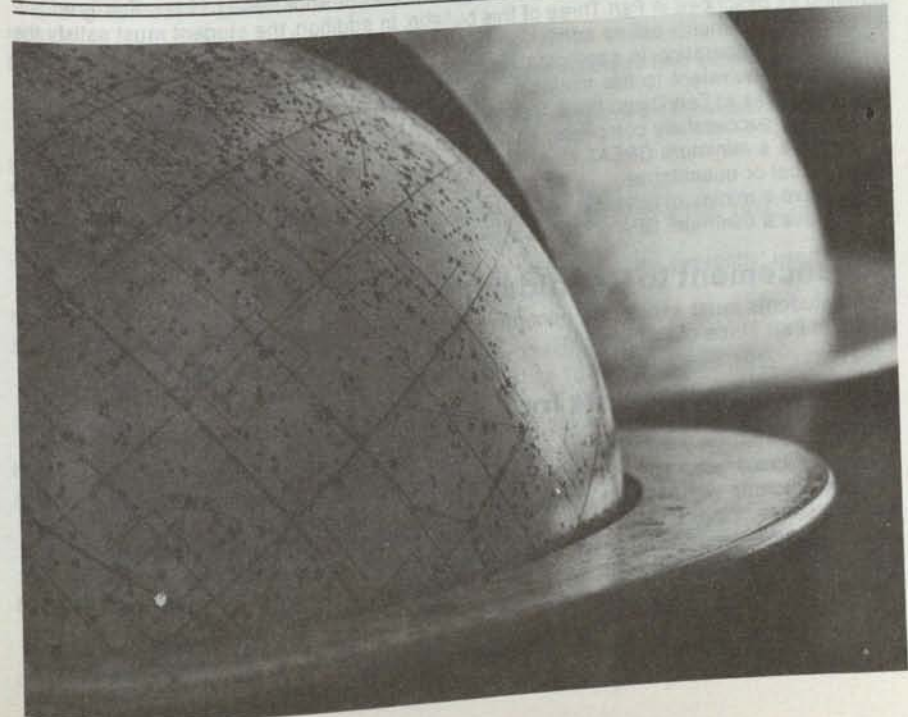
Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.



Geological Sciences

Faculty

Chair, Department of Geological Sciences: R. W. Berry
 Graduate Adviser: M. J. Walawender
 Professors: Abbott, Berry, Gastil, Kern, Krummenacher, McEuen, Peterson, Roberts, Threet
 Associate Professors: Bertine, Dorman, Ptacek, Walawender
 Assistant Professors: Huntley, Marshall, Miller

Assistantships

Graduate teaching assistantships in geology are available to a limited number of qualified students. Application blanks and additional information may be secured from the graduate adviser of the department.

General Information

The Department of Geological Sciences, in the College of Sciences, offers graduate study leading to the Master of Science degree in Geology. The curriculum provides a wide variety of advance training enabling the graduate to qualify for employment in most branches of earth science.

The present geology facilities were completed in 1960 and consist of 18,000 square feet of space equipped for classroom and laboratory instruction at both graduate and undergraduate levels and for graduate research within the basic specialties of geology, geochemistry, and geophysics. In addition to these physical facilities, the interesting and diverse geological environment of the San Diego area, and the mild climate which permits year-round field work, place San Diego State University in a highly favorable location for graduate work in the geological sciences.

Admission to Graduate Standing

All students must satisfy the general requirements for admission to classified graduate standing as described in Part Three of this bulletin. In addition, the student must satisfy the following requirements before admission to classified standing is recommended:

1. Have preparation in geological sciences, mathematics, chemistry, and physics at least equivalent to the minimum required for the bachelor's degree in geological sciences at San Diego State University.
2. Have successfully completed all courses listed as deficiencies.
3. Have a minimum GREAT combined score of 1000, with no less than 450 in either verbal or quantitative.
4. Have a minimum advanced GRE (Geology) score of 650.
5. Have a minimum GPA of 3.0 as a graduate student at San Diego State University.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as stated in Part Three of this bulletin.

Specific Requirements for the Master of Science Degrees

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Three of this bulletin. Students will normally be assigned to Plan A with the thesis, but in exceptional circumstances, Plan B with the comprehensive examination may be substituted with approval of the department. The student's graduate program must include 24 units of 600- and 700-numbered courses in geological sciences to include 797 (3 units), and 799A, Thesis, and six units of upper division or graduate electives approved by the departmental adviser or, if Plan B is elected, 18 units of 600- and 700-numbered courses and 12 units of upper division or graduate electives. Geological Sciences 308 and 508, Field Geology, or their equivalent as approved by the graduate adviser, are required as a part of the program if

they were not a part of the student's undergraduate work. The student is required to pass a final oral examination on the thesis.

Courses Acceptable on Master's Degree Programs in Geological Sciences

UPPER DIVISION COURSES

502. Geology of North America (3) I

Prerequisite: Geological Sciences 105.

A regional analysis of North American geology, its structural, stratigraphic, and tectonic patterns and hypotheses concerning their origin and evolution.

505. Photogeology (3) II

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 305 and 314.

Geologic interpretation of aerial photographs, elementary stereoscopy and stereometry applied to structural and stratigraphic problems, and compilation of geologic maps from annotated aerial photographs.

506. Paleontology (3) I, II

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 105 and either Biology 100 and 100L or Zoology 100 and 100L.

Principles and methods, exemplified by a study of the morphology, classification, habit, and geologic significance of fossil invertebrates.

Vertebrate Paleontology, see Zoology 560.

507. Stratigraphy (3) II

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 105 and 224.

Stratigraphic principles and practices. Consideration of the North American stratigraphic record.

508. Field Geology (4) I, II

One lecture and three hours of laboratory and twelve Saturday field sessions.

Prerequisite: Geological Sciences 308.

Geologic investigation of an assigned area with preparation of an individual report and a geologic map.

510. Petroleum Geophysics (3) I

Two lectures and three hours of laboratory. Occasional field trips.

Prerequisites: Geological Sciences 305, Mathematics 152, Physics 195, 195L, 196, 196L, 197, 197L.

Airborne, surface, and bore-hole geophysical techniques as presently used in oil exploration.

512. Mining Geophysics (3) II

Two lectures, and three hours of laboratory or occasional field trips.

Prerequisites: Geological Sciences 305, Mathematics 152, Physics 195, 195L, 196, 196L, 197, 197L.

Airborne, surface, and bore-hole geophysical techniques used for delineation of ore bodies.

516. Micropaleontology (3) II

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 506.

The morphology, classification and geologic significance of the various microfossils.

520. Ore Deposits (3) I

Prerequisites: Credit or concurrent registration in Geological Sciences 224 and 305.

Geologic relations, origin, distribution, and economics of metallic and nonmetallic mineral deposits.

521. Petroleum Geology (3) II

Prerequisites: Credit or concurrent registration in Geological Sciences 224 and 305.

Geologic occurrence of petroleum and the application of geologic principles in exploration and production.

524. Optical Mineralogy (3) I

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 221.

Theory and use of the polarizing microscope for determining optical properties of minerals as an aid to their identification.

525. Petrography (3) II

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 524.

A study of rocks with the polarizing microscope; identification of mineral constituents; interpretation of textures; classification of rocks; problems of genesis.

526. Sedimentology (3) I

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 105 and 224.

Origin, description, and classification of sedimentary rocks and structures.

530. Geochemistry (3) I, II

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 224; Chemistry 201, 201L; Mathematics 121 and 122, or 150.

The relationship of basic chemical principles to geologic phenomena and environments, including applications to geologic exploration problems.

540. Marine Geology (3) I

Prerequisites: Geological Sciences 105, and either Geological Sciences 224, 314, 502, or 506.

Plate tectonic origin and history of the ocean basins. Formation and distribution of sediments in response to biological, chemical and geological processes.

545. Descriptive Physical Oceanography (3) I, II

Prerequisites: Mathematics 121 and 122 or 150; Physics 194A or 195.

Physical environment of oceans including heat, water, and salt budgets, physical properties of sea water, sea ice, air-sea relationships, effects of light and sound, distribution of temperature, salinity, density, surface current, deep circulation, water mass formation, instruments and methods of study.

546. Advanced Physical Oceanography (3) I

Prerequisites: Mathematics 121 and 122 or 150; Physics 194A or 195.

Physical principles behind the dynamics of oceans. Covers physical principles behind surface waves, internal waves, seiches, tsunamis, storm surges, wind wave generation and forecasting, tidal currents, air-sea interaction, heat and light transmission.

548. Coastal and Estuarine Physical Oceanography (3) II

Prerequisites: Mathematics 121 and 122 or 150; Physics 194A or 195.

Physical processes of marine coastal areas and estuaries. Includes longshore currents, rip currents, real waves in shallow water, wave refraction and diffraction, mechanics of sediment transport, forces and dynamics of estuarine circulations and tides.

550. Engineering Geology (3) II

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 305.

Case histories selected to demonstrate the application of geology to the location, design, and maintenance of engineering projects.

551. Groundwater Geology (3) I

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 305 and Mathematics 150.

Geologic factors controlling the occurrence, movement and development of groundwater.

560. X-Ray Diffraction (2) II

One lecture and three hours of laboratory.

Prerequisites: Chemistry 200, 200L, 201, 201L; Mathematics 150; Physics 124A-124B and 125A-125B, or 195, 195L, 196, 196L, 197, 197L; and credit or concurrent registration in either Chemistry 310A or 410A, Engineering Mechanics 260, Geological Sciences 221, or Physics 354A.

Theory and application of x-ray diffraction to the study of materials.

Related Fields: Appropriate courses in the Departments of Biology, Botany, Chemistry, Engineering, Mathematics, Physics, and Zoology may be selected in consultation with and approval of the graduate adviser.

GRADUATE COURSES**600. Seminar (1-3)**

Prerequisite: Consent of instructor.

An intensive study in advanced geology. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

609. Igneous Petrology (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 525.

Investigation of problems in igneous petrology, using petrography, geochemistry, and experimental methods.

611. Metamorphic Petrology (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 525.

Investigation of problems in metamorphic petrology using petrography, geochemistry, and experimental methods.

612. Petrology of Carbonates (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 524.

Thin-section and hand-specimen description and classification of carbonate and other nonterrestrial rocks. Emphasis on recent depositional processes, texture analysis, paleoenvironment interpretation, and diagenesis.

615. Geology of Clays (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 526 or 530.

Systematic mineralogy of clays and routine methods of identification. Geologic interpretation of clay minerals with respect to environmental conditions or origin, deposition and diagenesis.

620. Biostratigraphy (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 507.

Development of concepts and practices in stratigraphic and geochronologic synthesis critically reviewed in context of current knowledge of the fossil record.

625. Paleogeology (3)

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 506 and Biology 411.

Problems and methods in the study of relationships between fossil organisms and their environment: interpretation of paleoenvironment, paleoclimate, and biologic relationships among fossil organisms.

629. Seminar: Advanced Studies in Stratigraphy (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 507.

Regional stratigraphic patterns in North America and their historical implications.

635. Petrology of Terrigenous Rocks (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 524.

Thin-section and hand-specimen description and classification of sandstones, conglomerates, and mudrocks. Emphasis on mineralogy, provenance, diagenesis, and paleogeographic reconstructions.

640. Geotectonics (3)

Prerequisite: Geological Sciences 305.

A consideration of topics on continental genesis and evolution, orogeny, plate tectonics theory, and a survey of classic geologic provinces.

645. Advanced Structural Geology (3)

Prerequisite: Geological Sciences 305.

Topics in advanced structural geology in the light of petrographic, geophysical, and experimental data, combined with classic field observations.

650. Seminar: Physical Properties of Earth Materials (3)

Prerequisite: Geological Sciences 510 or 512.

Theoretical principles and instrumental techniques used to remotely determine the physical properties of earth materials.

655. Paleomagnetism and Plate Tectonics (3)

Prerequisites: Geological Sciences 100 and Physics 124B, 196 or 194B.

Contribution of paleomagnetism to origin and current models of plate tectonics, estimating paleolatitude, magnetostratigraphy, and structural deformation. Review of rock magnetism, magnetic mineralogy, and the geomagnetic field.

660. Isotope Geology (3)

Two lectures and three hours of laboratory.

A survey of isotopic and geochronologic topics with individual projects in isotopic analysis.

669. Depositional Systems (3)

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 506 and 507.

Analysis of sedimentologic and biologic characteristics of sediments and applications to the interpretation of the sedimentary rock record.

680. Sedimentary Geochemistry (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 530.

Problems in low temperature geochemistry, including clay mineralogy and diagenesis.

685. Genesis of Ore Deposits (3)

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 520, 525; and Geological Sciences 530 or four units of physical chemistry.

Application of mineralogy, petrography, and chemistry to an understanding of the origin of ore deposits.

797. Research (1-3) Cr/NC

Prerequisite: Consent of the department.

Supervised research in an area of geology. Maximum credit six units applicable on a master's degree.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

German**Faculty**

Chair, Department of Germanic and Slavic Languages and Literatures: L. Kozlik

Graduate Adviser: Julian Wulbern

Credential Adviser: H. W. Paulin

Professors: Boney, Dukas, Paulin, Schaber, Tanaka, Westervelt, Wulbern

Associate Professor: Dunkle

General Information

The Department of Germanic and Slavic Languages and Literatures, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in German.

The master of arts degree provides advanced training for (a) students who plan to terminate their graduate studies at the master's level, and (b) those who plan to proceed to a doctoral degree in German or in Germanic linguistics.

There is a full range of graduate courses in German literature and in Germanic linguistics, and the student may concentrate in the area of preference. Library resources, both books and periodicals, provide excellent research bases in both areas. A taped German dialect library, among the most extensive in the country, is also available for research use.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. An undergraduate major in German, including 24 upper division units, must have been completed, at least six units of which must have been in a survey course in German literature.

Advancement to Candidacy

In addition to meeting the requirements for advancement to candidacy as described in Part Three of this bulletin, students may be required to pass a qualifying examination in German given by the Department of Germanic and Slavic Languages and Literatures.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units which includes at least 24 units in German, of which at least 18 units must be in 600- and 700-numbered courses including German 600, 601, and 799A. If Plan B is followed, the student must pass a comprehensive examination in lieu of German 799A.

Courses Acceptable on Master's Degree Programs in German**UPPER DIVISION COURSES****505. Applied German Linguistics (3)**

Prerequisite: German 301 and 302.

Linguistic study of modern German; integration of modern linguistic theory with the language classroom.

510. German Phonetics (3)

Prerequisites: German 202 and 212.

Sounds and intonation of German.

515. Germanic Linguistics (3)

Prerequisites: German 202 and 212.

Structural and comparative Germanic linguistics.

- 540. German Literature from its Beginning to the Reformation (3)**
Prerequisites: German 202 and 212.
Literature from the eighth century to about 1500.
- 545A-545B. German Literature of the Eighteenth Century (3-3)**
Prerequisites: German 202 and 212.
The literature of the German Enlightenment, the "Storm and Stress," the Classical Age. Outside readings and reports.
- 549. Goethe's Faust (3)**
Prerequisites: German 202 and 212.
Goethe's *Faust*, Parts 1 and 2: its philosophical content and its position in German and European literature; lectures, reading, reports.
- 555A-555B. German Literature of the Nineteenth Century (3-3)**
Prerequisites: German 202 and 212.
The literature of German Romanticism, Young Germany, Realism, and Naturalism. Outside readings and reports.
- 561A-561B. Contemporary German Literature (3-3)**
Prerequisites: German 202 and 212.
The main developments in German literature from Neo-Romanticism to the present. Outside readings and reports.
- 563. Contemporary German Drama (3)**
Prerequisites: German 202 and 212.
German drama from Hauptmann to the present.

GRADUATE COURSES

- 600. Research and Criticism (3)**
Prerequisite: Twelve upper division units in German.
Purposes and methods of research in the language and in the literature; theories and practice of literary criticism. Recommended for the first semester of graduate study.
- 601. History of the German Language (3)**
Prerequisite: Twelve upper division units in German.
The historical development of the German language, with source readings from the Gothic Bible to Luther's translation of the Bible.
- 610. Middle High German (3)**
Prerequisite: Twelve upper division units in German or six upper division units in linguistics.
The grammatical structure of Middle High German; reading and analysis of selected literary works.
- 620. Gothic (3)**
Prerequisites: German 515 or 601 or three graduate units in linguistics or six upper division units in linguistics.
Phonology, grammar and reading of Gothic texts; the relationship of Gothic to Indo-European and to other Germanic languages.
- 650. Seminar in Renaissance and Baroque Literature (3)**
Prerequisite: Twelve upper division units in German.
German literature of the sixteenth and seventeenth centuries.
- 655. Seminar in Goethe (3)**
Prerequisite: Twelve upper division units in German.
Goethe's lyric, epic, and dramatic poetry excluding *Faust*.
- 665. Seminar in the German Drama of the Nineteenth Century (3)**
Prerequisite: Twelve upper division units in German.
Representative works of German dramatic literature from Kleist to Hauptmann.
- 670. Seminar in German Lyric Poetry from Hoelderlin to Rilke (3)**
Prerequisite: Twelve upper division units in German.
The major German lyric poets from the beginnings of Romanticism to Rilke.
- 675. Seminar in the German Novelle (3)**
Prerequisite: Twelve upper division units in German.
The development of the Novelle as a literary form from Goethe to the present.
- 680. Seminar in the German Novel in the Twentieth Century (3)**
Prerequisite: Twelve upper division units in German.
Selected German novels of the twentieth century.
- 700. Seminar in Germanic Linguistics (3)**
Prerequisite: Eighteen upper division or graduate units in German.
Directed research in a specialized area of Germanic linguistics or philology. Maximum credit six units applicable on a master's degree.
- 710. Seminar in Eighteenth Century Literature (3)**
Prerequisite: Eighteen upper division units in German.
Directed research in the works of an important author or in a problem, type, or movement of German literature of the eighteenth century. Maximum credit six units applicable on a master's degree.
- 720. Seminar in Nineteenth Century Literature (3)**
Prerequisite: Eighteen upper division units in German.
Directed research in the works of an important author or in a problem, type, or movement of German literature of the nineteenth century. Maximum credit six units applicable on a master's degree.
- 730. Seminar in Twentieth Century Literature (3)**
Prerequisite: Eighteen upper division units in German.
Directed research in the works of an important author or in a problem, type, or movement of German literature of the twentieth century. Maximum credit six units applicable on a master's degree.
- 797. Research (3) Cr/NC**
Prerequisite: Advancement to candidacy.
Individual research in a specialized subject in German literature or linguistics.
- 798. Special Study (1-3) Cr/NC**
Individual study. Maximum credit six units.
Prerequisites: Eighteen upper division units in German and consent of staff; to be arranged with department chair and instructor.
- 799A. Thesis (3) Cr/NC**
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree.
- 799B. Thesis Extension (0) Cr/NC**
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.



Health Science and Safety

Faculty

Chair, Department of Health Science and Safety: R. Grawunder
 Credential Adviser: R. Grawunder
 Graduate Adviser: A. C. McTaggart
 Professors: Bender, Burgess, Grawunder, Harper, McTaggart, Sorochan
 Associate Professors: Barnes, Boskin, Kessler, Noto, Sleet
 Assistant Professor: Senn

Assistantships

Graduate teaching assistantships and graduate nonteaching assistantships in health science and safety are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the department.

General Information

The Department of Health Science and Safety, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Health Science.

Close liaison among the departments concerned and with community agencies provides opportunities for realistic field experiences.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy which are described in Part Three of this bulletin.

Specific Requirements for the Master of Arts Degree in Health Science

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the Master of Arts degree as described in Part Three of this bulletin. The minimum 30-unit program consists of at least 24 units in health science and safety selected from those courses listed as applicable on master's degree programs, 21 units of which must be in 600- and 700-numbered courses.

Students electing Plan A must include Health Science and Safety 520, 606, 620, 621, 660, 791, 793, and 799A. Those electing Plan B must include Health Science and Safety 520, 606, 620, 621, 660, 791, 793, and pass a final comprehensive examination which carries no credit in lieu of the thesis. The examination may be repeated only once.

Courses Acceptable on Master's Degree Programs in Health Science

UPPER DIVISION COURSES

510. Workshop in Health Science and Safety (1-3)

Selected problems in health science and safety are used as a basis for workshop experiences. Maximum credit six units; maximum credit three units applicable on a master's degree.

520. Administration of the School Health Program (3) II

Administrative responsibilities of the school health program. Principles, policies, and practices involved in health instruction, health services, environment, legal implications, and community relationships.

552. Safety Administration (3) I

Prerequisite: Health Science and Safety 341.
 Designed to acquaint the student with the basic administrative elements of a modern safety program. (Formerly numbered Health Science and Safety 352.)

560. Introduction to Public Health (3) I, II

Prerequisites: Health Science and Safety 102 and 400.
 Philosophy, development, organization, administration, and legal aspects of public health in the United States. Disease prevention and control, health education, and the other functions and activities of official health departments, voluntary agencies, private physicians and others engaged in professional health work.

561. Health and Medical Care (3) I, II

Prerequisite: Senior or graduate standing with a major or minor in health education or a closely related area.

Health values, concepts, and attitudes; health products and facilities; hospital care and hospitalization plans; governmental health controls; economic and cultural influences on health and medical care; professional contributions, relationships, and careers; national and international health programs. Not open to students with credit in Sociology 526.

562. International Health (3) I, II

Prerequisite: Health Science and Safety 102.
 Population dynamics, vital statistics, global disease patterns, and analysis of variations among nations and cultures with respect to health problems and health care services.

573. Health in Later Maturity (3) I, II

An approach to the conservation of human resources, with emphasis on understandings, attitudes, and practices related to health in later maturity. Designed for those with a personal or professional interest in the field.

574. Habit-Forming Substances (3) I, II, S

Prerequisite: Health Science and Safety 101 or 301.
 Tobacco, alcohol, and other drugs; their use, misuse and abuse.

575. Sex Education (3) I, II, S

Prerequisite: Health Science and Safety 475.
 Philosophy, current procedures, and materials needed for development of healthy attitudes and scientific knowledge appropriate for the understanding of human sexuality.

GRADUATE COURSES

600. Seminar (3)

Prerequisite: Fifteen units in Health Science and Safety.
 An intensive study of advanced problems in health education. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

606. Motivating Health Behavior (3)

Prerequisite: Health Science and Safety 401, 15 units in Health Science and Safety or admission to graduate program in health.
 Application of behavioral change techniques and health education methodology in health promotion activities within the school-community setting.

620. Health Science Curriculum Development (3)

Prerequisite: Health Science and Safety 320 or 321.
 Structuring educational experiences in health science and health education, developing curriculum materials, performance standards and ways of incorporating health education in open learning environments.

621. Theoretical Foundations of Health Education (3)

Prerequisite: Fifteen units in health science and safety or admission to graduate program in health.
 History and philosophy of health education. Psychological, sociological, economic, political theories relevant to the mission and processes of health education with special reference to schools and colleges.

640. Administration of Traffic Safety (3)

Prerequisites: Health Science and Safety 341 and 347.
 Research and trends in traffic safety with emphasis on the problems of administration.

645. School Safety Programs and Procedures (3)

Prerequisite: Health Science and Safety 341.

Advanced consideration of school safety programs including legal bases and requirements, personnel responsibilities, liability, instruction, maintenance, and school transportation.

660. Program Planning and Evaluation in Health Education (3)

Prerequisite: Fifteen units in health science and safety or admission to graduate program in health.

Program planning and evaluation theories, systems and procedures in school-community health education.

680. Health Education Communications Theory and Design (3)

Prerequisite: Fifteen units in health science and safety or admission to graduate study in health education.

Theory, design, and implementation of health education communications in school and community contexts. Extensive use of student design, analysis, and projects.

791. Health Science and Safety Research (3)

Prerequisites: Health Science and Safety 490 and advancement to candidacy.

Methods and techniques of research appropriate to health science, the process by which potential problems in health science are analyzed, and the standards for the writing of research papers and theses.

792. Seminar in Analysis of Professional Literature (3)

Prerequisite: Health Science and Safety 490.

Investigation and study of literature in the fields which have an important bearing on health science and safety programs in the school and community.

793. Evaluation Instruments (3)

Prerequisite: Health Science and Safety 490.

Construction, selection and analysis of evaluation instruments in health science and safety.

797. Research (3) Cr/NC

Prerequisites: Health Science and Safety 791, 792, and advancement to candidacy.

Supervised research in an area of health science and safety. Limited to students following Plan B for the Master of Arts degree in Health Science.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with department special study adviser and instructor.

Individual study. Maximum credit six units.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

History

Faculty

Chair, Department of History: P. Flemion

Graduate Advisers: A. Appleby, T. Davies, C. Hamilton, F. Stites

Graduate Coordinator: C. D. Smith

Credential Adviser: A. O'Brien

Professors: Appleby, J., Berge, Cheek, Coox, Cox, Davies, Detweiler, Dunn, Flemion, J., Hamilton, Hanchett, Munter, Norman, Phillips, Pincetti, Rader, Ruetten, Schatz, Smith, C., Smith, R., Starr, Steele, Stites, Strong, Vanderwood

Associate Professors: Appleby, A., Chu, Cuniff, DuFault, Filner, Flemion, P., Heyman, Hoidal, McDean, O'Brien, Peterson, Vartanian, Weinberg

Assistant Professors: Bartholomew, Oades

General Information

The Department of History, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in History and to the Master of Arts degree for teaching service with a concentration in History.

The Master of Arts degree is designed to provide advanced training for (1) students who plan to terminate their graduate studies at the master's level, and (2) those who anticipate further study leading to a doctoral degree in history or related fields.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. As an additional requirement, the student must have completed a bachelor's degree with an undergraduate major in history. Applicants who do not have an undergraduate major in history may be admitted to conditionally classified graduate standing on the recommendation of the department, but they will be held responsible for completing the minimum requirements for an undergraduate major in history. The GPA required for admission to the M.A. program in history is 2.75 for the last 60 units of the student's undergraduate work and 3.0 in the major (not necessarily history), plus a score of 950 on the GRE Aptitude Test. Students with a GPA in the major of 2.75-3.0 will be admitted if their score on the GRE Aptitude Test is 1050 or better. Conditional admission is possible pending the taking of the Aptitude Test during the first semester of enrollment and the attainment of a satisfactory score.

APPLICATIONS FOR THE FALL SEMESTER SHOULD BE RECEIVED BY THE ADMISSIONS OFFICE AND BY THE HISTORY DEPARTMENT BY APRIL 1. APPLICATIONS FOR THE SPRING SEMESTER SHOULD BE RECEIVED BY THE ADMISSIONS OFFICE AND BY THE HISTORY DEPARTMENT BY NOVEMBER 1. APPLICATIONS CAN BE SUBMITTED AFTER THESE DATES BUT ADMISSIONS MAY BE MORE RESTRICTIVE IN LIGHT OF PREVIOUS ACCEPTANCES.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as stated in Part Three of this bulletin, as well as the specific requirements of the department. All students should consult the graduate coordinator.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes a major consisting of at least 24 units in history from courses listed below as acceptable on the master's degree programs, at least 18 units of which must be in 600- and 700-numbered courses. Students may elect either Plan A, requiring a thesis, or Plan B, requiring a comprehensive written and oral examination in both a major and minor field of history chosen in consultation with the graduate adviser. Required courses are History 601; six units selected from History 610, 620, 630, 640, 650, or 680; three units selected from History 615, 625, 635, 645, 655; History 797; and History 799A for those

students electing Plan A. Students electing Plan B must enroll in History 795 (six units) in lieu of History 797 and 799A.

Three additional units in a research seminar in history may be substituted for History 601 (in either Plan A or Plan B) with the consent of the graduate adviser. Candidates for this degree must demonstrate knowledge of either a relevant foreign language or an approved substitute in computer language or statistical methods. Other substitutes may be approved where the skills involved are directly related to the student's research interests.

Specific Requirements for the Master of Arts Degree for Teaching Service

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes a major consisting of at least 24 units in history from courses listed below as acceptable on the master's degree programs, at least 18 units of which must be in 600- and 700-numbered courses. Students may elect either Plan A, requiring a thesis, or Plan B, requiring a comprehensive written and oral examination in both a major and minor field of history chosen in consultation with the graduate adviser. Required courses are History 601; six units selected from History 610, 620, 630, 640, 650, or 680; three units selected from History 615, 625, 635, 645, 655; History 797; and History 799A for those students electing Plan A. Students electing Plan B must enroll in History 795 (six units) in lieu of History 797 and 799A.

Three additional units in a research seminar in history may be substituted for History 601 (in either Plan A or Plan B) with the consent of the graduate adviser. No foreign language competency is required in this degree option.

Scholarships

The K. W. Stott Scholarship, in the amount of \$100, is awarded each June to a student who has attended San Diego State University for at least two years and who is being graduated or who has been graduated by San Diego State University with a major in history. The recipient must continue work in San Diego State University, or in any other accredited college or university, toward a higher degree or credential. The selection is made by the Department of History with approval of the Committee on Scholarships.

A Copley Scholarship of \$200 is awarded annually to a graduate student who is writing his thesis on some aspect of San Diego history. Selection is made by the Department of History with the approval of the Committee on Scholarships.

Courses Acceptable on Master's Degree Programs in History

UPPER DIVISION COURSES

Field (a). Ancient and Medieval

500A-500B. Ancient History (3-3)

Semester I: Greece to the Roman Conquest. Semester II: Rome to the 5th Century A.D.

503A-503B. Europe in the Middle Ages (3-3)

European social, cultural, and political developments from the fall of Rome to the Renaissance.

505. The Byzantine Empire (3)

The social, political, cultural, and economic development of the Eastern Roman Empire from the crisis of the third century to the fall of Constantinople in 1453.

Field (b). Modern Europe

508. The Renaissance (3)

The intellectual, artistic, and social transformation of Europe from the 14th through the early 16th century.

509A-509B. Early Modern Europe (3-3)

Continental Europe in the 16th and 17th centuries: the religious revolt and religious wars, rise of monarchy, baroque culture, the revolutions in commerce and science. Semester I: The century after Luther. Semester II: The 17th century.

510A-510B. Europe in the 18th Century (3-3)

The "Old Regime" and the influence of the Enlightenment and the Enlightened Despots are emphasized. Semester I: The 18th century to 1763. Semester II: Intellectual and social changes in the quarter century before the French Revolution.

511A-511B. Europe in the 19th Century (3-3)

Social, political, and economic developments of 19th century Europe.

512A-512B. Europe in the 20th Century (3-3)

Political and social developments from 1870 to the present.

513A-513B. History of Scandinavia (3-3)

The major political, social and economic developments in Scandinavia from the Viking Age to the present. Semester I: From the Viking Age to the end of the Napoleonic Wars. Semester II: Modern Scandinavia, 1814 to the present.

514A. The French Revolution and Napoleonic Era (3) I

Prerequisite: History 105A-105B.

France on the eve of the Revolution; the Great Revolution, 1789-1799, the Napoleonic Era.

514B. Modern France (3) II

Prerequisite: History 105A-105B.

The development of France since 1815.

515A-515B. The Iberian Peninsula (3-3)

Survey of Spain and Portugal and their empires, with emphasis on economic, social, and cultural developments. Semester I: From the beginnings to the early sixteenth century. Semester II: From the sixteenth century to the present.

517A-517B. Germany and Central Europe (3-3)

A social and political history of Germany and Central Europe. Semester I: From the Reformation to 1848. Semester II: From 1848 to the present.

518A-518B. Russia and the Soviet Union (3-3)

Semester I: Political, social and economic development of Russia in Europe and Asia from the earliest times to the close of the 19th century. Semester II: Emphasis on the 20th century.

519. Modern Italy (3)

The development of Italy from 1815 to the present.

520A-520B. England (3-3)

Prerequisite: History 520A is prerequisite to 520B.

Political and social history of England from the earliest times to the present day, stressing the origins of American institutions and social patterns. Recommended for majors in English.

521A-521B. Constitutional History of England (3-3)

Evolution of the common law and the development of parliamentary institutions.

522A-522B. Tudor and Stuart England (3-3)

Semester I: The Age of the Tudors. Semester II: England during the Stuart Dynasty, 1603-1714.

523A-523B. Modern Britain (3-3)

Semester I: The development of constitutional and social patterns from the Glorious Revolution to the French Revolution, emphasizing the immediate background to the American Revolution. Semester II: From the 19th century to the present, including the rise of Parliamentary democracy, imperialism and the Victorian age, and political thought from the Utilitarians to the Fabians.

526A-526B. Intellectual History of Modern Europe (3-3)

Selected problems in European intellectual history beginning with the 17th century, with special attention to social and political thought.

527A-527B. Diplomatic History of Modern Europe (3-3)

Prerequisite: History 105A-105B.

Diplomatic relations of the various European states with European and non-European powers. Semester I: From the Concert of Europe (1815) to the Era of *Realpolitik* in the late 19th century. Semester II: The diplomatic backgrounds and results of two wars.

Field (c). United States

530. Colonial America (3)

Settlement of British colonies in North America and their development into a distinctive American civilization through modification of Old World institutions in the new environment. (Formerly numbered History 531A.)

531. The American Revolution (3)

Development of colonial resistance to British rule after 1760, the War for Independence, the Confederation, and the Constitution of 1787. This course meets the requirements in United States Constitution. (Formerly numbered History 531B.)

532. The United States, 1789-1828 (3)

Political, economic, and social development of United States from Washington through John Quincy Adams. This course meets the requirements in United States Constitution. (Formerly numbered History 532A-532B.)

533A-533B. Jacksonian Democracy, Civil War and Reconstruction (3-3)

Semester I: Territorial expansion, democratic politics, revivalism, and the slavery controversy. Semester II: The Civil War and Reconstruction, emphasizing political affairs and the role of Lincoln.

534. The Rise of Modern America, 1868-1900 (3)

Economic, social, political, and intellectual developments from the end of the Civil War to the close of the 19th century.

535A-535B. The United States, 1901-1945 (3-3)

The age of reform and the United States as leader of the free world.

536. The United States in the Nuclear Age (3)

The United States since World War II.

537A-537B. The Westward Movement (3-3)

The American frontier: Expansion, exploration, settlement and building of the new states, with emphasis on frontier problems of defense, communications, finance, etc.; the development of cultural institutions. The causes, effects and results of the frontier experiences of the American people. This year course meets the graduation requirement in American history, institutions and ideals.

538A-538B. The American Southwest (3-3)

Semester I: Exploration, colonization and development of the Southwest under Spanish and Mexican rule. Emphasis on frontier institutions and Indian policy. Semester II: Anglo American penetration and acquisition of the Southwest. Themes such as boundary problems, mining, transportation, water, ranching and ethnic relations.

539A-539B. Black American Civilization (3-3)

Semester I: The Black minority group and its contributions and challenges to American civilization. African backgrounds, slavery, the abolitionists, the free Black. Semester II: Ghetto life, leadership personalities, and protest movements.

540. Environmental History of the United States (3)

The relationship of Americans to their environment from colonial times to the present with emphasis on how attitudes and values have affected personal behavior and public policy toward the land.

541A-541B. California (3-3)

Political institutions; social, cultural, economic and intellectual development; international background. Semester I: To 1850; Spanish and Mexican heritage. Semester II: 1850 to the present. History 541B will fulfill the requirement in California state and local government.

543A-543B. The City in American History (3-3) I, II

Development, character and role of city in American history. Through study of the city as a social-cultural organization and political-economic center, course will examine urban institutions, populations, problems, values, decision making, services.

544A-544B. American Foreign Policy (3-3)

Semester I: The development of American foreign policy from the Colonial Period to the First World War. Semester II: Developments from the First World War to the present. This year course meets the graduation requirements in American history, institutions, and ideals.

545A-545B. Constitutional History of the United States (3-3)

American constitutional history since the establishment of the federal government. This year course meets the graduation requirement in U.S. Constitution and in American history, institutions and ideals.

546A-546B. Development of American Capitalism (3-3)

The changes in agriculture, industry, labor, banking, transportation and commerce in a capitalist society with emphasis on the prominent personalities who made the changes possible.

547A-547B. Intellectual History of the American People (3-3)

Survey of American thought from 1620 to the present, focusing on the ideas of individuals, groups and movements in religion, politics, society, the arts and reform. Emphasis on liberal and conservative impulses and their role in the making of the modern American mind. This year course meets the graduation requirements in American institutions, U.S. Constitution, and California state and local government.

548A-548B. Social History of the United States (3-3)

Historical survey of American society emphasizing demographic trends, the changing role of the family, social structure, immigration patterns, religious movements, developments in education, the economy and entertainment.

Field (d). Latin America

551A-551B. Mexico (3-3)

Prerequisite: History 115A-115B or 315A-315B.

Semester I: Colonial and modern Mexico. Semester II: Emphasis on the 20th century.

552A-552B. History of Brazil (3-3)

Semester I: Colony and empire, 1500-1889, with focus on Portuguese heritage, plantation society, African slavery and its abolition and development of classes and regions. Semester II: The 20th century, with focus on messianism and social banditry, creation of the industrial and military state, Afro-Brazilians, and the conquest and destruction of the Amazonian forest and Indians. Recommended for persons minoring in Portuguese.

553A-553B. The Caribbean Area (3-3)

Development of the Caribbean area with emphasis on the 20th century.

554. The West Coast Nations of South America (3)

The historical development of Chile, Bolivia, Peru and Ecuador with emphasis on race relations and social revolutions in the 20th century.

557. History of Latin American Popular Culture and Social Thought (3)

Examination of the ways Latin Americans have historically viewed their cultures and societies from the dual perspective of elites and the masses. Popular Culture—the Latin American self-image reflected in family relations, folklore, myth, legend, popular music and art and mass expression.

558A-558B. Diplomatic History of Latin America (3-3)

Origins of Inter-Americanism; relations among the Latin American nations; the origins and development of the American States; Latin America in World Affairs.

Field (e). South, Southeast and East Asia

561A-561B. The Far East (3-3)

Particular, but not exclusive, emphasis on Asian-Western relations. Semester I: Through the 19th century. Semester II: The 20th century.

562. Civilization of India: The Great Traditions (3)

From earliest times to the eighteenth century including Hindu, Buddhist, and Muslim contribution to Indian society, changing political ideas and institutions, and historic trends in art and literature. (Formerly numbered and entitled History 562A, India—Hindu, Muslim and Modern.)

563. The Modern Indian Subcontinent (3)

British conquest and colonial policy, Hindu and Muslim nationalism, Gandhi's significance, and the emergence of independent India, Pakistan, and Bangladesh. (Formerly numbered and entitled History 562B, India—Hindu, Muslim and Modern.)

564A-564B. Southeast Asia (3-3)

Semester I: Cultural traditions of Southeast Asian peoples. Indigenous institutions and the influence of China, India and Islam. Semester II: Southeast Asia in the modern world. Patterns of foreign stimulus and local response among the peoples of the area.

565. Revolution and Social Change in Asia (3)

Comparative study of contemporary problems in Asia emphasizing how indigenous peoples responded to the challenges of nationalism, reform, revolution, modernization, and neo-colonialism. Topics include social structure, education, peasant movements, urbanization, search for cultural identity, and national integration.

566. Chinese Civilization (3) I

Chinese internal history and institutions during the period of relative isolation; religions, philosophy, literature and the arts.

567A-567B. Modern and Contemporary Chinese History (3-3)

Semester I: Impact of the West on China's history and civilization, particularly in the 19th and early 20th centuries. Semester II: Selected historical problems of contemporary China since the development of Chinese Communist Party. Theory and practice of the party, Red Army, rural soviets, socialist economic and cultural systems, and revolutionary foreign policies.

569. Japanese Civilization (3) I

Japanese internal history and institutions during the period of indigenous development and Chinese influence including religions, philosophy, literature and the arts.

570. Modern Japan (3)

Japan's development as a modern state, particularly in the 19th and 20th centuries.

571A-571B. Intellectual History of Modern Asia (3-3)

Asian intellectual history during the 19th and 20th centuries, with special attention to social and political thought.

Field (f). Africa and Middle East

573A-573B. History of the Near East from the 7th Century to World War I (3-3)

Semester I: Medieval Islam from the 7th century A.D. to the rise of the Ottoman Turks. Semester II: The Ottoman Empire to 1914.

574. The Near East in the Twentieth Century, 1914 to Present (3)

Analysis of sociopolitical and intellectual developments in the Near East during and after World War I.

575A-575B. Africa (3-3)

Semester I: Civilization of precolonial Africa both north and south of the Sahara from the advent of Islam to 1880. Semester II: Colonial and postcolonial Africa.

Field (g). Topical Subjects

581A-581B. The Contemporary World in Historical Perspective (3-3)

Trends and developments in the recent past which can contribute to an understanding of the problems of our age.

582A-582B. War and Civilization (3-3)

The political and social implications of warfare, of the development of military technologies, and of changing concepts of military organization. Semester I: Through the eighteenth century. Semester II: Napoleonic Wars to the present.

583A-583B. The Quest for Peace (3-3)

Prerequisite: Six units in history.

Historical analysis of man's efforts to control violence from the Greeks to the present.

584A-584B. Science and Society (3-3)

The historical development of the interaction between science and other aspects of society, including politics, economics, philosophy, religion and technology. Semester I: The rise of modern science. Semester II: Revolutions in scientific thought and 20th century problems in science and society.

596. Selected Studies in History (1-4)

Topics in the various fields of history, such as biography, war, science, technology, urbanization, minority groups, immigration and capitalism. See class schedule for specific content. Maximum credit six units.

GRADUATE COURSES

All graduate courses in the Department of History have a prerequisite of 12 units of upper division courses in history, or consent of the instructor.

601. Seminar in Historical Method (3)

General historical bibliography. The use of libraries and archives. Methods of critical historical investigation. The interpretations of history.

610. Directed Reading in Ancient and Medieval History (3)

Prerequisite: Six upper division units in Ancient or Medieval history.

Selected readings in source materials and historical literature in a designated area of Ancient or Medieval history. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

615. Seminar in Ancient and Medieval History (3)

Prerequisite: Six upper division units in Ancient or Medieval history.

Directed research on topics selected from a designated area of Ancient or Medieval history. Maximum credit six units applicable on a master's degree.

620. Directed Reading in European History (3)

Prerequisite: Six upper division units in European history.

Selected readings in source materials and historical literature in a designated area of European history. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

625. Seminar in European History (3)

Prerequisite: Six upper division units in European history.

Directed research on topics selected from a designated area of European history. Maximum credit six units applicable on a master's degree.

630. Directed Reading in United States History (3)

Prerequisite: Six upper division units in United States history.

Selected readings in source materials and historical literature in a designated area of United States history. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

635. Seminar in United States History (3)

Prerequisite: Six upper division units in United States history.

Directed research on topics selected from a designated area of United States history. Maximum credit six units applicable on a master's degree.

640. Directed Reading in Latin American History (3)

Prerequisite: Six upper division units in Latin American history.

Selected readings in source materials and historical literature in a designated area of Latin American history. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

645. Seminar in Latin American History (3)

Prerequisite: Six upper division units in Latin American history.

Directed research on topics selected from a designated area of Latin American history. Maximum credit six units applicable on a master's degree.

650. Directed Reading in Asian History (3)

Prerequisite: Six upper division units in Asian history.

Selected readings in source materials and historical literature in a designated area of Asian history. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

655. Seminar in Asian History (3)

Prerequisite: Six upper division units in Asian history.

Directed research on topics selected from a designated area of Asian history. Maximum credit six units applicable on a master's degree.

680. Directed Reading in Selected Topics (3)

Prerequisite: Consent of the instructor.

Selected readings in source materials and historical literature of various fields of history such as war, science, technology, urbanization, minority groups, immigration, capitalism, conservation, and imperialism. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

795. Area Studies in History (1-3) Cr/NC

Prerequisite: Advancement to candidacy.

Preparation for the comprehensive examinations in the major and minor fields of history for those students taking the M.A. under Plan B. Maximum credit six units applicable on a master's degree.

797. Research (3) Cr/NC

Prerequisite: Advancement to candidacy and written approval of the History Department graduate coordinator.

Independent research in a specialized subject in history.

798. Special Study (1-3) Cr/NC

Individual study. Maximum credit six units.

Prerequisite: Consent of staff; to be arranged with department chair and instructor.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.



Industrial Studies

Faculty

Chair, Department of Industrial Studies: H. L. Marsters

Graduate Adviser: G. K. Hammer

Credential Adviser: D. A. Dirksen

Professors: Anderson, Bailey, Dirksen, Guentzler, Hammer, Irgang, McMullen, Thiel

Associate Professors: Lybarger, Marsters, McEowen, Rasmussen

Assistant Professor: Lawrence

Assistantships

Graduate teaching assistantships in industrial arts are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the department.

General Information

The Department of Industrial Studies, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Industrial Arts. The Department of Industrial Studies makes it possible for students to gain advanced experiences in two of the most modern industrial arts buildings in the West. Well-equipped instructional facilities are devoted to work in woods, metals, transportation, graphic arts, electricity-electronics, photography, industrial drawing, and industrial crafts.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, the student must have completed a bachelor's degree with an undergraduate major in industrial arts. Applicants who do not have an undergraduate major in industrial arts may be admitted to conditionally classified graduate standing on the recommendation of the department, but they will be held responsible for completing the minimum requirements for an undergraduate major in industrial arts.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, as described in Part Three of this bulletin.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units which includes a major consisting of a minimum of 24 units in industrial arts from courses listed below as acceptable on the master's degree program. The program must contain at least 24 units of 600- and 700-numbered courses, including Industrial Arts 720 and 790; nine units selected from Industrial Arts 721, 722, 723, and 724; and either Industrial Arts 799A (Plan A) or 795 (Plan B). Students electing Plan B must pass a comprehensive examination upon completion of Industrial Arts 795 and in lieu of the thesis.

Courses Acceptable on Master's Degree programs in Industrial Arts

UPPER DIVISION COURSES IN INDUSTRIAL ARTS

503. Advanced Industrial Crafts (3)

Six hours of laboratory.

Prerequisite: Industrial Arts 402.

Advanced techniques of industrial crafts. Concentration on the design of craft projects with best utilization of materials. Development, in at least three areas specified by the instructor, of individual exhibits showing originality.

- 517. Thermoset Plastics (3)**
Six hours of laboratory.
Prerequisite: Industrial Arts 315.
Composition and selection of materials; evaluation of physical and mechanical properties of various thermoset plastics, special techniques for processing and production of thermoset plastics.
- 523. Industrial Arts Drawing (3) I, II**
Six hours of laboratory.
Prerequisite: Industrial Arts 121. Practice in and analysis of modern industrial drafting techniques and theories.
- 533. Applied Metal Forming Operations (3) I, II**
Six hours of laboratory.
Prerequisite: Industrial Arts 131.
Theory of conventional and high energy industrial forming processes augmented with laboratory forming experiences.
- 540. Photography for Teachers (3)**
Six hours of laboratory.
Photographic skills useful in teaching. Not open to students with credit in Industrial Arts 140 or Journalism 150.
- 542. Advanced Photography (3) I, II**
Six hours of laboratory.
Prerequisite: Industrial Arts 140 or 540.
A consideration of advanced negative control, projection printing techniques, composition and editorial content, architectural and illustrative photography, and flood photoflash techniques.
- 553. Advanced Woodworking (3) I, II**
Six hours of laboratory.
Prerequisite: Industrial Arts 351.
Wood finishing, residential building construction techniques, and advanced machine operations.
- 563. Industrial Electronics (3)**
Six hours of laboratory.
Prerequisite: Industrial Arts 361.
Advanced problems in industrial electronics circuit development, analysis, theory and application.
- 573. Accessory Power Systems (3) I, II**
Six hours of laboratory.
Prerequisite: Industrial Arts 371.
Study of accessory power systems and technological innovations in education and power related industries.
- 583. Industrial Arts Graphic Arts (3)**
Six hours of laboratory.
Prerequisite: Industrial Arts 381.
Advanced techniques in developing skills involved in graphic arts facilities.
- 594. Recent Trends in Industrial Arts Education (2)**
Current trends and practices in the field of industrial arts in secondary education. There will be opportunity for individual work on related problems of interest to members of the class.
- 596. Experimental Industrial Arts (1 or 2)**
Prerequisite: Consent of instructor.
Individual laboratory work on complex projects on an experimental basis. Maximum credit six units.

INDUSTRIAL TECHNOLOGY COURSES

- 591. Industrial Safety (3)**
The integration of accident prevention into management functions. The organization of training and safety programs emphasizing the detection and control of hazards, analysis of data, investigations and environment modifications for safety effectiveness.

- 592. Industrial Materials (3)**
A survey of various types of manufacturing materials used in industry. Evaluation of materials composition, physical and mechanical properties with emphasis on processing requirements and product design.
- 593. Manufacturing Processes (3)**
A survey of manufacturing processes used in industry. Evaluation of forming, shaping, assembly and finishing processes as they relate to characteristics of material and product design.
- 594. Industrial Proposals and Specifications (3)**
Research, practice and investigation in the planning and writing of industrial proposals and plant manufacturing systems specifications.

GRADUATE COURSES IN INDUSTRIAL ARTS

- 600. Seminar (3)**
An intensive study in industrial arts; topic to be announced in the class schedule.
- 601. Advanced Research (3)**
Prerequisite: Consent of instructor.
Materials and advanced techniques of research in specific activity areas, such as (a) industrial drawing; (b) general metalworking; (c) general woodworking; (d) electricity-electronics; (e) transportation; (f) graphic arts; (g) photography; (h) industrial crafts; (i) plastics. Stress on project design and visual materials. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.
- 610. Problems in Industrial Crafts (3)**
Six hours of laboratory.
Prerequisite: Industrial Arts 503.
Research in selected areas of industrial crafts with emphasis on instructional materials and techniques. Specifically designed for teachers, recreation workers and therapists.
- 615. Problems in Plastics (3)**
Six hours of laboratory.
Prerequisite: Industrial Arts 517.
Research with selected plastics processes and materials. Development of projects, aids, resource material, oral and written presentations.
- 620. Industrial Arts Problems in Graphics and Design (3)**
Six hours of laboratory.
Prerequisite: Industrial Arts 523.
The theories and procedures of industrial drafting, including nomographs, descriptive geometry, and graphic solutions. Emphasis on special applications to industrial arts.
- 630. Industrial Arts Problems in Metalworking (3)**
Six hours of laboratory.
Prerequisite: Industrial Arts 533.
Problems involved in industrial arts metalworking. Individual research project dealing with instructional materials or processes.
- 640. Problems in Photography (3)**
Six hours of laboratory.
Prerequisite: Industrial Arts 443, 444 or 542.
Advanced problems in photography in industry and photography in education. Individual research project dealing with instructional materials or industrial processes.
- 650. Industrial Arts Problems in Woodworking (3)**
Six hours of laboratory.
Prerequisite: Industrial Arts 553.
Intensive study in selected areas of the woodworking industry as it relates to materials, production and construction. Presentation of research findings.
- 660. Problems in Electronics (3)**
Six hours of laboratory.
Prerequisite: Industrial Arts 563.
Recent developments in the electronics areas. Special research projects and resource materials.

670. Research in Power Systems for Industrial Arts (3)

Six hours of laboratory.
Prerequisite: Industrial Arts 573.
Research in selected areas of the power systems and effective presentation of findings in oral and written form.

680. Industrial Arts Problems in Graphic Arts (3)

One lecture and six hours of laboratory.
Prerequisite: Industrial Arts 583.
Selected areas of the graphic arts industry related to materials, production methods, and allied pursuits. Techniques of presentation of findings in effective written and oral form.

720. History and Philosophy of Industrial Education (3)

A study of the philosophical foundations and development of industrial education and its continuing role in American culture. Contemporary practices and trends will be given consideration.

721. Curriculum Construction in Industrial Arts Education (3)

Selection of teaching content for school situations in compliance with the best known procedures regarding analysis, objectives, methods and learning, and development of instructional devices related directly to course content.

722. Instructional Resources for Industrial Arts Education (3)

Survey, selection, and compilation of materials used in the development of resource units for instruction in industrial education, involving publications, organized talks, field trips, visual materials, technical literature and related materials. Organization and evaluation of such materials.

723. Evaluation in Industrial Arts Education (3)

Principles, methods, and criteria of evaluation including the special problems of measuring growth, achievement, and performance in various phases of industrial education.

724. Organization, Administration and Supervision of Industrial Education Programs (3)

The principles, objectives, methods and techniques employed in the supervision of industrial education programs. Emphasis on organizing and administering programs at all levels in industry and education.

790. Research Procedures in Industrial Arts (3)

Location, selection and analysis of scientific and professional literature, research data and specialized bibliographies.

795. Selected Topics in Industrial Arts (3)

Prerequisites: Industrial Arts 790 and advancement to candidacy for the Master of Arts degree.

Study in selected topics of industrial arts culminating in a research paper.

796. Field Work in Industrial Arts (3)

Prerequisites: Teaching experience in industrial arts and consent of instructor.
Application of the principles of laboratory organization, management and planning in reference to the objectives of industrial arts in development of school programs.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis in industrial arts for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

Latin American Studies**Faculty**

Graduate Coordinator: T. M. Davies, Jr.

Graduate Advisers:

Anthropology: J. W. Ball

Economics: N. C. Clement

Geography: E. C. Griffin

History: P. F. Flemion

Political Science: B. E. Loveman

Spanish: R. D. Weeter

Faculty Latin Americanists: E. M. Barrera, T. E. Case, C. B. Christensen, N. C. Clement, R. L. Cunniff, J. B. Esser, R. A. Griswold, G. L. Head, W. C. Kennedy, J. B. Kelley, J. D. Kitchen, L. V. Padgett, G. V. Segade, M. B. Watson, J. R. Weeks, R. C. Young.

Committee on Latin American Studies

J. W. Ball	E. C. Griffin, Chairman	M. N. Silverman
S. A. Colston	P. F. Flemion	P. J. Vanderwood
T. M. Davies, Jr.	B. E. Fredrich	R. D. Weeter
	B. E. Loveman	

General Information

The Master of Arts degree in Latin American Studies is an interdisciplinary degree offered by designated faculty members in the departments of Anthropology, Art, Economics, Geography, History, Political Science, and Spanish and Portuguese Languages and Literatures. It is administered by the Center for Latin American Studies.

The program is designed to provide a systematic advanced training (a) for those planning to enter business or government service in the Latin American field, and (b) for those in a specific academic discipline who have a regional interest in Latin America. It is not intended as a complete vocational preparation.

Admission to Graduate Study

In addition to meeting the requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin, the student must present the Bachelor of Arts degree with not less than 18 units of courses of Latin American content in three areas. A student whose preparation is deemed insufficient by his graduate adviser or by the Latin American Studies Committee will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Three of this bulletin. In addition, students must demonstrate an oral and reading proficiency in either Spanish or Portuguese through either the satisfactory completion of an oral and written examination, or: (1) satisfactory completion of Spanish or Portuguese 201 and 212, and a reading examination administered by the Department of Spanish and Portuguese Languages and Literatures, or (2) satisfactory completion of three units of upper division or graduate course work in Spanish or Portuguese. Course work at or above the 500 level may be included as a part of the official program with the approval of the graduate coordinator. Students are further encouraged to acquire a reading knowledge of the alternate language.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Three of this bulletin, the student must complete at least 30 units of upper division and graduate course work with not less than 24 units in courses of Latin American content, distributed as follows:

	600- and 700-numbered Courses	500-, 600- and 700-numbered Courses
Department A	6 units	6 units
Department B	3 units	3 units
Department C	3 units	3 units
	12 units	12 units

The total program shall include a minimum of 18 units in 600- and 700-numbered courses. Students may select either Plan A or Plan B in consultation with the graduate adviser. In addition to meeting the distribution requirements given above, students electing Plan A must complete the 799A (Thesis) course offered by the department selected for the 12-unit concentration (Department A). Students electing Plan B must pass a comprehensive written and oral examination in lieu of the thesis.

All programs will be approved by the Latin American Studies Committee.

Courses Acceptable on Master's Degree Programs in Latin American Studies

UPPER DIVISION COURSES

Latin American Studies Course

580. Special Topics (1-4)

Prerequisite: Six upper division units in Latin American content courses.

Interdisciplinary study of selected Latin American topics. Credit will vary depending on the scope and nature of the topic. Whenever appropriate, the course will be taught by a team of instructors representing two or more disciplines. May be repeated with different content. See class schedule for specific content. Maximum credit eight units.

Anthropology Course

582. Regional Anthropology (3)*

Art Courses

561. Arts of the Pre-Hispanic Americas (3)
562. Colonial Art of Latin America (3)

Geography Courses

521. Urbanization and Modernization in Latin America (3)
522. Historical Geography of Latin America (3)

History Courses

538A. The American Southwest (3)
551A-551B. Mexico (3-3)
552A-552B. History of Brazil (3-3)
553A-553B. The Caribbean Area (3-3)
554. The West Coast Nations of South America (3)
557. History of Latin American Popular Culture and Social Thought (3)
558A-558B. Diplomatic History of Latin America (3-3)
596. Selected Studies in History (1-4)*

Political Science Courses

566. Political Change in Latin America (3)
567. Political Systems of Latin America (3)
568. The Mexican Political System (3)

Portuguese Course

535. Brazilian Literature (3)

Spanish Courses

306A-306B. Survey of Spanish-American Literature (3-3)
515A-515B. Mexican Literature (3-3)
520. Caribbean Area Countries Literature (3)
522. Andean Countries Literature (3)
524. River Plate Literature (3)
570. Spanish-American Poetry (3)
571. Spanish-American Short Story (3)
572. Spanish-American Theatre (3)
596. Selected Studies in Spanish (3-6)*

APPLICABLE GRADUATE COURSES

Refer to graduate course descriptions in the sections of this bulletin under the departments of Anthropology, Art, Economics, Geography, History, Political Science, and Spanish and Portuguese Languages and Literatures.

Anthropology Courses

600. Seminar (3)*
797. Research (3) Cr/NC
798. Special Study (1-3) Cr/NC
799A. Thesis (3) Cr/NC
799B. Thesis Extension (0) Cr/NC

Art Courses

798. Special Study (1-3) Cr/NC
799A. Thesis or Project (3) Cr/NC
799B. Thesis or Project Extension (0) Cr/NC

Economics Courses

660. Seminar in International Economics (3)*
665. Seminar in the Economics of Underdeveloped Countries (3)
797. Research (3) Cr/NC
798. Special Study (1-3) Cr/NC
799A. Thesis (3) Cr/NC
799B. Thesis Extension (0) Cr/NC

Geography Courses

620. Seminar in Regional Geography (3)*
650. Seminar in Systematic Geography (3)*
797. Research (1-3) Cr/NC
798. Special Study (1-3) Cr/NC
799A. Thesis (3) Cr/NC
799B. Thesis Extension (0) Cr/NC

History Courses

640. Directed Reading in Latin American History (3)
645. Seminar in Latin American History (3)
795. Area Studies in History (1-3) Cr/NC*
797. Research (3) Cr/NC
798. Special Study (1-3) Cr/NC
799A. Thesis (3) Cr/NC
799B. Thesis Extension (0) Cr/NC

Political Science Courses

655. Seminar in General Comparative Political Systems (3)*
661. Seminar in the Political Systems of the Developing Nations (3)*
667. Seminar in Latin American Political Systems (3)
795. Problems Analysis (3)*
797. Research in Political Science (3) Cr/NC
798. Special Study (1-3) Cr/NC
799A. Thesis (3) Cr/NC
799B. Thesis Extension (0) Cr/NC

Spanish Courses

640. The Spanish-American Novel (3)
650. The Gaucho Epic (3)
660. Modernism (3)
690. The Spanish-American Essay (3)
695. Contemporary Spanish-American Prose Fiction (3)
750. Seminar in Spanish-American Literature (3)
755. Seminar in Spanish-American Culture and Thought (3)
798. Special Study (1-3) Cr/NC
799A. Thesis (3) Cr/NC
799B. Thesis Extension (0) Cr/NC

*Acceptable when of relevant content.

Linguistics

Faculty

Chair, Department of Linguistics: G. F. Drake
 Graduate Adviser: T. Donahue
 Credential Adviser: C. Webb
 Professors: Drake, Frey
 Associate Professors: Donahue, Elgin, Seright, Underhill
 Assistant Professor: Webb

Assistantships

Graduate teaching assistantships in linguistics are occasionally available to a limited number of qualified students. Application blanks and additional information may be obtained from the chair of the department.

General Information

The Department of Linguistics, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Linguistics. The program, interdisciplinary in nature, is designed to provide systematic advanced training in the field of linguistics, which is increasingly relevant to our humanistic-scientific culture.

Admission to Graduate Study

In addition to meeting the requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin, the student must present the Bachelor of Arts degree in Liberal Arts and Sciences at San Diego State University, or its equivalent with a grade point average of 3.0 in the last 60 semester units attempted. A student whose preparation is deemed insufficient by his graduate adviser will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

Advancement to Candidacy

All candidates must satisfy the general requirements for advancement to candidacy as described in Part Three of this bulletin. In addition, a reading knowledge of at least one foreign language must be demonstrated prior to advancement to candidacy.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Three of this bulletin, the student must complete at least 30 units of upper division and graduate course work to include the following required courses:

1. Linguistics 621, Phonology; and Linguistics 622, Structure of English.
2. Three units of graduate seminar—Linguistics 795, Seminar in Linguistics.
3. At least nine units chosen from Linguistics 500, 510, 520, 521, 522, 523, 524, 525, 550, 551, 552, 553, 610, 611, 612, 640, 641, 660, 750, 790, 798.
4. Up to nine units chosen from Anthropology 511, 604, 630; French 503; German 505, 510, 601, 610, 700; Philosophy 631; Russian 580, 581, 610, 650A, 650B, 680; Spanish 548, 549, 610, 770.
5. Linguistics 799A, Thesis, 3 units.
6. At least 15 units, including the thesis, must be from 600- and 700-numbered courses.

All programs will be approved by the graduate adviser.

Certificate in Applied Linguistics

The Linguistics Department offers a Basic and an Advanced Certificate in Applied Linguistics. The Advanced Certificate requires 12 units of study consisting of Linguistics 525, 621, 622, and 795. The prerequisite to the Advanced Certificate is the Basic Certificate

or its equivalent. Under certain circumstances comparable courses taken at other institutions may count towards the certificate. Such courses must be evaluated and approved by the Certificate adviser. For information on the Basic Certificate, please see the *General Catalog*.

Courses Acceptable on Master's Degree Programs in Linguistics

UPPER DIVISION COURSES IN LINGUISTICS

- 500. General Linguistics (3) I**
 Open only to seniors and graduate students. Recommended: Reading knowledge of Latin, French, Spanish or German.
 The principles of linguistic development illustrated chiefly from the Classical, Romanic, and Germanic language groups.
- 510. History of English (3) I, II**
 The history of English and its present-day use.
- 520. Modern English (3) I, II**
 The structure of modern English, including the various approaches to linguistic analysis.
- 521. Phonology (3) I, II**
 Prerequisite: Linguistics 101.
 Introduction to the theoretical principles of transformational-generative phonology.
- 522. Syntax (3) I, II**
 Prerequisite: Linguistics 101.
 Introduction to the theoretical principles of transformational-generative syntax.
- 523. Phonemics and Morphemics (3)**
 The study of procedures for arriving at the phonetic inventory of languages and the structuring of sound units (both linear and intonational) into phonemic systems; the study of morphemic hierarchies and their arrangements in forming words.
- 524. American Dialectology (3) I, II**
 The development of American English; regional and cultural differences in pronunciation, grammar and vocabulary.
- 525. Semantics and Pragmatics (3)**
 Prerequisite: Linguistics 101.
 Advanced semantic theory; systematic analysis of the interaction of sequences of language with real world context in which they are used.
- 550. Theory and Practice of English as a Second Language (3) I, II**
 The nature of language learning; evaluation of techniques and materials for the teaching of English as a second language.
- 551. Sociolinguistics (3) I, II**
 Prerequisite: Three units in linguistics or sociology.
 Investigation of the correlation of social structure and linguistic behavior.
- 552. (187.) Psycholinguistics (3) I, II**
 Prerequisite: Three units in linguistics or psychology.
 Psychological aspects of linguistic behavior.
- 553. Functional Bilingual Linguistics (3) I, II**
 Prerequisites: Knowledge of Spanish, Linguistics 520, and consent of instructor.
 Recommended prerequisites: Speech Pathology and Audiology 528 and 532.
 English and Spanish linguistic differences as related to children's second language acquisition; assessment of children's linguistic competence in second language learning through contrastive analyses of English and Spanish phonology, morphology and syntax. Research on current linguistic theories in second language acquisition and in bilingualism.
- Anthropology Course**
511. Field Methods in Linguistics (3)

German Courses

505. Applied German Linguistics (3)
510. German Phonetics (3)

Russian Courses

580. Russian Syntax and Stylistics (3)
581. Russian Phonetics and Morphology (3)

Spanish Courses

548. (149.) Spanish Linguistics (3)
549. (150.) Phonetics and Phonemics (3) II

GRADUATE COURSES IN LINGUISTICS**610. Indo-European (3)**

Prerequisite: Anthropology 304 or Linguistics 622.
Phonology, morphology, and syntax of the Indo-European language community, with special attention to "Centum" and "Satem" relationships.

611. Old English (3)

Study of Old English phonology, morphology and syntax.

612. Middle English (3)

Modern linguistic analyses of the Middle English language; emphasis on the development of historical English dialects.

621. Phonology (3)

Prerequisite: Linguistics 500 or 510 or 520.

Phonetics, phonetic transcription, theories of phonology and phonological description.

622. Structure of English (3)

Prerequisite: Linguistics 500 or 510 or 521.

Advanced study of linguistic theory and its application to the analysis of English.

640. Field Methods in Linguistics (3)

Prerequisites: Three units of linguistics, including some knowledge of phonetic transcription and consent of instructor.

Principles and techniques of linguistic analysis working directly with native informants, including phonemic, grammatical, and syntactic analysis and text collection and interpretation.

641. Structure of a Non-Indo-European Language (3)

The structure of a non-Indo-European language, to be chosen by the instructor, including grammar, reading of texts, and sessions with a native speaker of the language, if possible.

660. History of Linguistics (3)

Prerequisite: Two courses in linguistics or equivalent background.

Background and development of modern linguistic theory.

750. Directed Language Study (3)

Prerequisite: Consent of instructor.

Directed independent study of a foreign language not offered within the course structure at San Diego State University with the aim of applying the techniques of intensive linguistic analysis to the syntax, phonology and/or semantic structure of that language. No instruction in speaking or understanding the spoken language is included in this course. Maximum credit six units.

790. Bibliography and Methods of Linguistic Research (3)

Prerequisite: Twelve upper division units in linguistics.

Basic reference works, scholarly and critical journals; introduction to bibliographical techniques; exercises and problems in methods and exposition of research, including editorial procedures. Recommended for the first semester of graduate work.

795. Seminar in Linguistics (3)

Prerequisite: Completion of three units of 600- and 700-numbered courses in the master's program for linguistics.

Research in linguistics, course content varying according to instructor. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the University; also student must be registered in the course when the completed thesis is granted final approval.

Anthropology Courses

604. Seminar in Linguistics (3)
630. Seminar in Historical Linguistics (3)

French Course

503. History of French Language (3)

German Courses

601. History of the German Language (3)
610. Middle High German (3)
700. Seminar in Germanic Linguistics (3)

Philosophy Course

631. Seminar in Semantics and Logical Theory (3)

Russian Courses

610. History of the Russian Language (3)
650A-650B. Old Church Slavic (3-3)
680. Seminar in Slavic Linguistics (3)

Spanish Courses

610. History of the Spanish Language (3)
770. Applied Spanish Linguistics for Teachers (3)



Mass Communications

Faculty

Coordinator, Graduate Programs in Mass Communications: E. Odendahl

Department of Journalism

Professors: Brown, Buckalew, Holowach, Odendahl, Sorensen

Associate Professor: Whitney

Assistant Professors: Hartung, Spevak, Wulfemeyer

For faculty members in other departments participating in the degree program (Psychology, Sociology, Speech Communication, and Telecommunications and Film), see the appropriate sections of this bulletin.

Mass Communications Committee

E. Odendahl, Chair,

H. L. Anderson, Telecommunications and Film

R. L. Benjamin, Speech Communication

B. Hartung, Journalism

M. M. El-Assal, Sociology

F. W. Hornbeck, Psychology

L. A. Samovar, Speech Communication

F. C. Whitney, Journalism

D. G. Wylie, Telecommunications and Film

General Information

The Master of Science degree in Mass Communications is an interdisciplinary degree offered by designated faculty members of the departments of Journalism, Psychology, Sociology, Speech Communication, and Telecommunications and Film. It is administered by the Mass Communications Committee.

The program is designed to offer systematic training for students (1) who plan to continue their study in doctoral or other advanced programs in mass communications or in disciplines emphasizing areas of mass communications; (2) who plan a career in secondary or community college teaching; or (3) who seek a broad background for careers in the mass media, business, or government service.

Admission to Graduate Study

Students will be admitted to the graduate program in mass communications only after careful consideration of their qualifications by the Mass Communications Committee. Initial applications must be received prior to March 1 for the fall semester, and November 1 for the spring semester, in order to be considered.

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, a student applying for admission to the graduate program in mass communications must meet the following requirements:

1. A bachelor's degree in journalism, radio-television, advertising, communications, sociology, or psychology.
2. A grade point average of not less than 2.75 overall, and 3.0 in the last 60 units of the undergraduate program.
3. A total score (verbal and quantitative) on the GRE Aptitude Test of 950.

To be considered for admission to the graduate program in mass communications, an applicant must submit the following in addition to the common admissions form:

1. Two copies of all undergraduate transcripts as required by Part Three of this bulletin.
2. Three letters of recommendation, one of which must be from an academic reference and another from an occupational reference.
3. A written personal statement by the applicant discussing background, interests, abilities, and career goals as they apply to the applicant's desire for an advanced degree, and in particular a graduate degree in mass communications.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Three of this bulletin.

Specific Requirements for the Master of Science Degree

In addition to meeting the requirements for the Master of Science degree as described in Part Three of this bulletin, the student must complete a minimum of 30 units from courses listed below as acceptable on master's degree programs. These units must be distributed among three of the departments cooperating in the degree program, with a minimum of 18 units in one department (Department A), and six units each in two other departments (Departments B and C). At least 18 units in the total program must be in graduate-numbered courses, to be distributed among the selected three departments as follows:

	Graduate-numbered Courses	Upper Division for Graduate Credit or Graduate-numbered Courses
Department A	12 units	6 units
Department B	3 units	3 units
Department C	3 units	3 units
	18 units	12 units

A student whose preparation is deemed insufficient by his adviser or by the Mass Communications Committee for graduate level study in his selected A, B, or C department will be given conditionally classified graduate standing. Students with conditionally classified graduate standing will be required to complete specified courses to remove any deficiencies in addition to the minimum of 30 units required for the degree. All such deficiencies must be completed within one year after admission to the graduate program and with a minimum grade average of "B" before the student will be given full classified graduate standing.

Candidates may elect to follow Plan A, requiring a thesis, or Plan B, which requires a comprehensive examination agreed upon by the Mass Communications Committee in lieu of the thesis.

All programs will be approved by the Mass Communications Committee.

Courses Acceptable on Master's Degree Programs in Mass Communications

UPPER DIVISION COURSES

Journalism Courses

- 500. Current Problems in Mass Communications (3) I, II**
Forces affecting American mass communications today: Government restrictions, economics, pressure groups, censorship, mechanical developments, interrelationships of the media and society; professional ethics.
- 502. Law of Mass Communications (3) I, II**
Libel, defamation, privacy, censorship, advertising laws, postal regulations, and constitutional guarantees affecting press, radio, television; rights and responsibilities of communicators in reporting public affairs.
- 503. History of Mass Communications (3)**
American journalism from colonial times to the present, with special attention to radio and other mass media which have entered the news and entertainment field; the relation of their development to society.
- 505. The Foreign Press (3)**
The four theories of the press. Flow of international news. Analysis of the foreign media. Problems of propaganda, governmental control, language, and economic support.

508. Mass Communications and Society (3)

Prerequisite: Sociology 101.

Social factors underlying nature, functions of mass media. Theories, models, research in media as culture carriers, as opinion shapers, and in relation to government.

509. Research Methods in Mass Communications (3)

Prerequisite: Sociology 201.

Investigate tools and methods of mass media; content analysis, readership studies, audience measurement, experimental designs, and representative studies.

522. Reporting of Public Affairs (3)

Prerequisite: Journalism 320.

Coverage of the city hall, courthouse, police headquarters, federal agencies, courts, and other public and political centers.

526. Advanced Editing Techniques (3)

Prerequisite: Journalism 326.

Principles of typography, page layouts, and use of pictorial material; selection, evaluation, editing, and display of news.

529. Investigative Reporting (3)

One lecture and four hours of laboratory.

Prerequisite: Journalism 320.

Development of articles of substance and depth in specialized fields. Research, analysis, and interpretation of complex issues in the news. Maximum credit six units.

583. Problems in Public Relations (3)

Prerequisite: Journalism 481.

Current public relations problems of industry, public agencies and other institutions.

585. Public Relations Practices (3) I

Prerequisite: Journalism 481.

Examination of current public relations practices in a wide variety of local commercial, industrial, financial, governmental, cultural and social organizations. Use of the local community's public relations resources. (Formerly numbered Journalism 485.)

Sociology Courses

537. Political Sociology (3)

545. Sociology of Mass Communication (3)

Speech Communication Courses

530. Semantics (3) I, II

535. Theories of Human Communication (3) I, II

537. Empirical Study in Speech Communication (3) I, II

589. Ethics of Speech Communication (3)

592. Persuasion (3) I, II

Telecommunications and Film Courses

500. Broadcast Management (3) I, II

505. Regulation of Broadcasting (3) I, II

510. Script Writing for Broadcasting and Film (3) I, II

530. Radio Programming (3) II

540. Broadcast Advertising (3) I

541. Broadcast Commercial Practices (3) II

570. Educational Telecommunications (3) I, II

580. Advanced Programming and Development for Television (3) I, II

590. International Broadcasting (3)

GRADUATE COURSES**Journalism Courses****600. Seminar in Scope and Method of Mass Communications (3)**

Intensive preparation in methodology applicable to the various fields related to mass media study.

700. Seminar: Media Problems (3)

Prerequisite: Six units in courses applicable to the Master of Science degree in mass communications.

Reading, investigation, and research concerning current topics in problems of mass media.

702. Seminar: Mass Media and the Law (3)

Prerequisite: Journalism 502 or Telecommunications and Film 505.

Case studies of legal restrictions and guarantees affecting radio, television, motion pictures, advertising, and printed media.

703. Seminar: History of Journalism (3)

Prerequisite: Journalism 503.

Directed research on topics of history of American journalism.

705. Seminar in International Journalism (3)

Prerequisite: Journalism 505.

In-depth exploration of the foreign press and cross-cultural communication; the place of the press in national development and international stability; national images and world opinion; censorship, propaganda and other barriers to international understanding.

707. Seminar in Mass Communications and Public Opinion (3)

Prerequisite: Journalism 509.

Analysis of media and their opinion-shaping role; methods and effects of pressure groups; propaganda analysis; creation and perpetuation of images and stereotypes.

708. Seminar: Mass Communications and Society (3)

Prerequisite: Journalism 508.

Rights, responsibilities and characteristics of mass media and mass communications practitioners; characteristics and responsibilities of audiences and society.

740. Major Projects in Mass Communications (1-6)

Prerequisite: Journalism 500 or Telecommunications and Film 540.

Design and execution of an in-depth project in one of these areas; advertising campaign, series of detailed expository articles or news stories, or model public relations campaign. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

760. Seminar in Print Advertising Problems (3)

Prerequisite: Journalism 463 or 466.

Investigation of the practice, responsibility, and philosophy of advertising in print media with individual projects, cases, and current literature.

782. Seminar in Public Relations (3)

Prerequisite: Journalism 583 or 585.

Analysis and critique of contemporary public relations programs and theory. Development of a comprehensive public relations project involving original research.

798. Special Study (1-3) Cr/NC

Individual study. Maximum credit six units.

Prerequisite: Consent of staff; to be arranged with the department chair and instructor.

799A. Thesis (3) Cr/NC

Prerequisite: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the University; also student must be registered in the course when the completed thesis is granted final approval.

Psychology Courses

621. Seminar in Personnel Psychology (3)

622. Seminar in Organizational Psychology (3)

700. Seminar (3)

745. Seminar in Problems in Social Psychology (3)

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746. Seminar in Political Psychology (3)
 798. Special Study (1-3) Cr/NC
 799A. Thesis (3) Cr/NC
 799B. Thesis Extension (0) Cr/NC

Sociology Courses

710. Seminar in Social Disorganization (3)
 720. Seminar in Social Organization (3)
 740. Seminar in Social Psychology: Sociological Approaches (3)
 760. Seminar in Research Methods (3)
 797. Research (3) Cr/NC
 798. Special Study (1-3) Cr/NC
 799A. (299.) Thesis (3) Cr/NC
 799B. Thesis Extension (0) Cr/NC

Speech Communication Courses

700. Seminar in Research and Bibliography (3)
 730. Seminar in the Analysis of Language (3)
 735. Seminar in Communication Theory (3)
 790. Seminar in Experimental Procedures in Speech Communication (3)
 792. Seminar in Persuasion (3)
 798. Special Study (1-3) Cr/NC
 799A. Thesis or Project (3) Cr/NC
 799B. Thesis or Project Extension (0) Cr/NC

Telecommunications and Film Courses

600. Seminar in Research and Bibliography (3)
 602. Seminar in Mass Communication Theory (3)
 603. Seminar in Mass Communications Message Design (3)
 610. Seminar in Writing for Broadcast and Film (3)
 615. Seminar in Criticism of Broadcasting and Cinema (3)
 620. Seminar in History of Broadcasting (3)
 640. Seminar in Broadcast Advertising Problems (3)
 670. Seminar in Educational Telecommunications (3)
 680. Seminar in Programing and Production (3)
 700. Seminar in Broadcast Management (3)
 705. Seminar in Broadcast Law and Regulations (3)
 770. Seminar in Teaching Broadcasting and Film (3)
 798. Special Study (1-3) Cr/NC
 799A. Thesis or Project (3) Cr/NC
 799B. Thesis or Project Extension (0) Cr/NC

Mathematical Sciences

(Courses in Mathematics)

Faculty

Chair, Department of Mathematical Sciences: R. L. Van de Wetering
 Graduate Advisers: Master of Arts in Mathematics, E.J. Howard; Master of Arts (Teaching), D.B. McLeod; Master of Science in Mathematics, R.A. Hager; Master of Science in Statistics, C.J. Park, Master of Science in Computer Science, C.F. Eckberg
 Credential Adviser: N. Branca
 Professors: Becker, Branstetter, Bray, Burton, Davis, Deaton, Drobnies, Fountain, Garrison, Gindler, Harvey, Ho, Holmes, Howard, Lesley, Moser, Romano, Saltz, Shaw, Short, Smith, Van de Wetering, Villone, Warren
 Associate Professors: Branca, Burdick, Eckberg, Elwin, Flanigan, Hager, Herndon, Hintzman, Kopp, Lopez, Macky, Marcus, Marosz, McLeod, Nower, Park, Ross, Vinge, Whitman
 Assistant Professors: Baase, Salomon

Assistantships

Graduate teaching assistantships in mathematics are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the department.

General Information

The Department of Mathematical Sciences, in the College of Sciences, offers graduate study leading to the Master of Arts degree in Mathematics, to the Master of Arts degree for teaching service with a concentration in Mathematics, to the Master of Science degree in Mathematics, to the Master of Science degree in Statistics, and to the Master of Science degree in Computer Science.

The Master of Arts degree in Mathematics is considered to be the basic academic degree in Mathematics. A candidate of the Master of Science degree is expected to concentrate his efforts in a technical area of mathematics. Within these limitations either degree can be considered as a stepping stone to a more advanced degree, if the student so desires.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Three of this bulletin. In addition, the student must have passed a qualifying examination in his area.

Specific Requirements for the Master of Arts Degree in Mathematics

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program consisting of at least 24 units in mathematics from courses listed below as acceptable on master's degree programs. At least 15 units must be in 600- and 700-numbered courses in mathematics, exclusive of Mathematics 600, 601, 602, and 799A.

To satisfy the foreign language requirement, the student may present evidence that he/she has completed French 201, German 201, Russian 201, or Spanish 201, or their equivalent, with a grade of "C" or better, or the student may demonstrate a reading knowledge of French, German, Russian, or Spanish.

The student is required to pass the departmental comprehensive examinations in mathematics. With the approval of the department, a student may select Plan A. In other cases, Plan B will be followed, and the student must complete three units of Mathematics 797.

Specific Requirements for the Master of Arts Degree for Teaching Service

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes a concentration consisting of at least 21 units in mathematics selected from courses listed below as acceptable on master's degree programs in mathematics. The student's program must include at least 15 units in 600- and 700-numbered courses of which at least 12 units must be in 600- and 700-numbered courses in mathematics. The student is required to pass the departmental comprehensive examinations in mathematics. With the approval of the department, a student may select Plan A. In other cases, Plan B will be followed, and the student must complete three units of Mathematics 797.

Specific Requirements for the Master of Science Degree in Mathematics

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes at least 24 units in mathematics selected from courses listed below as acceptable on a master's degree program to include at least 15 units of 600- and 700-numbered courses exclusive of Mathematics 600, 601, 602, and 799A. The student is required to pass the departmental comprehensive examinations in mathematics. With the approval of the department, a student may select Plan A. In other cases, Plan B will be followed, and the student must complete three units of Mathematics 797.

Specific Requirements for the Master of Science Degree in Computer Science

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must meet the following departmental requirements:

1. Complete 15 units of 600- and 700-numbered courses, including twelve units from any two of the following year-course sequences:
Mathematics 690A and 690B
Mathematics 691A and 691B
Mathematics 692A and 692B
Mathematics 693A and 693B
2. Complete nine additional units of graduate level or approved upper division mathematics courses, not including Mathematics 799A.
3. Complete six units of approved electives.
4. Pass two written examinations as determined by the department.
5. Pass a final oral examination. With the approval of the department, a student may select Plan A. In other cases, Plan B will be followed, and the student must complete three units of Mathematics 797.

Specific Requirements for the Master of Science Degree in Statistics

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must meet the following departmental requirements:

1. Complete 18 units of 600- and 700-numbered mathematics courses including:
 - a. Mathematics 670A and 670B.
 - b. Six units selected from Mathematics 672, 673, 674, 675, and 677.
 - c. Six units of other 600- and 700-numbered mathematics courses, except that Mathematics 600, 602, and 799A may not be used to fulfill these units required.
2. Complete six additional units of graduate level or approved upper division mathematics courses, not including Mathematics 799A.

3. Complete six units of approved electives.
4. Pass the departmental comprehensive examinations in mathematical statistics. With the approval of the department, a student may select Plan A. In other cases, Plan B will be followed, and the student must complete three units of Mathematics 797.

Courses Acceptable on Master's Degree Programs in Computer Science, Mathematics and Statistics

UPPER DIVISION COURSES

510. Introduction to the Foundations of Geometry (3)

Prerequisite: Mathematics 122 or 151.

The foundations of Euclidean and hyperbolic geometries. Highly recommended for all prospective teachers of high school geometry.

511. Projective Geometry (3) I

Prerequisites: Mathematics 122 or 151 and consent of instructor.

Concurrence of lines, collinearity of points and other properties of figures not altered by projections; construction and study of ellipses, hyperbolas, and parabolas by means of projections.

512. Non-Euclidean Geometry (3)

Prerequisite: Mathematics 122 or 151.

History of attempts to prove the fifth postulate; emphasis on plane synthetic hyperbolic geometry; brief treatment of other types of non-Euclidean geometry.

520A. Linear Algebra (3) I, II

Prerequisite: Mathematics 123 or 152.

A study of linear equations, Euclidean spaces, linear transformations, matrices, determinants, and eigenvalues. (Formerly numbered Mathematics 520.)

520B. Applied Linear Algebra (3)

Prerequisite: Mathematics 520A.

Jordan forms, vector and matrix norms, condition numbers, generalized inverses, linear programming, analysis of a few standard algorithms in linear algebra.

521A-521B. Modern Algebra (3-3) I, II

Prerequisites: Mathematics 152. Mathematics 521A is prerequisite to 521B.

Selected topics from modern algebra to include an introduction to the theory of groups, theory of equations, and finite mathematics.

522. Number Theory (3)

Prerequisite: Mathematics 152.

Selected topics from the theory of numbers to include congruences, Diophantine equations, and a study of prime numbers.

523. Mathematical Logic (3)

Prerequisite: Mathematics 151 or Philosophy 120.

The logical rules of proof governing sentential connectives and the universal and existential quantifiers with applications. Not open to students with credit in Philosophy 521.

530. Differential Equations (3) I, II

Prerequisite: Mathematics 152.

Ordinary differential equations with applications to geometry, physics and chemistry. Not open to students with credit in Mathematics 340A.

531. Partial Differential Equations (3)

Prerequisite: Mathematics 530.

Study of boundary-initial value problems via separation of variables, eigenfunction expansions, Green's functions, and transform methods. Introductory material includes uniform convergence, divergence theorems and Fourier series. Not open to students with credit in Mathematics 340B.

532. Functions of a Complex Variable (3)

Prerequisite: Mathematics 152.

Analytic functions, Cauchy-Riemann equations, theorem of Cauchy, Laurent series, calculus of residues.

- 533. Vector Analysis and Differential Geometry (3)**
Prerequisite: Mathematics 152.
Vector algebra, differentiation and integration, classical theory of curves and surfaces, divergence theorem, Stokes' theorem and related integral theorems, curvilinear coordinates, elements of tensor analysis. Applications to geometry and physics.
- 534A. Advanced Calculus I (3)**
Prerequisite: Mathematics 152.
The real number system, limits and other topics, with emphasis on functions of one variable.
- 534B. Advanced Calculus II (3)**
Prerequisite: Mathematics 534A.
A continuation of Mathematics 534A with emphasis on functions of two or more variables.
- 535. Introduction to Topology (3)**
Prerequisite: Mathematics 534A.
Topological spaces. Functions, mappings, and homeomorphisms. Connectivity, compactness. Metric spaces.
- 536. Mathematical Models (3)**
Prerequisite: Mathematics 520A or consent of instructor.
Analysis of complex systems in biological and social sciences. Applications of graphical methods, systems of differential equations and Markov chains to stability of populations, prices, allocation of resources, etc.
- 541A. Numerical Analysis and Computation (3) I**
Prerequisites: Mathematics 107 and 152.
Iteration methods for solving nonlinear equations. Curve fitting. Interpolation: Lagrange's formula and Newton's formula. Numerical methods for integration. Runge-Kutta and predictor-corrector methods for solving systems of ordinary differential equations.
- 541B. Numerical Analysis and Computation (3) II**
Prerequisites: Mathematics 340A or 530, 520A and 541A.
Numerical linear algebra: direct and iterative methods for solving systems of equations, methods for finding eigenvalues and eigenvectors. Optimization. Numerical methods for solving partial differential equations.
- 550. Probability (3)**
Prerequisite: Credit or concurrent registration in Mathematics 152.
Definitions, computation of probability by enumeration of the cases, discrete and continuous random variables, density functions, moments, limit theorems, selected distributions.
- 551A. Mathematical Statistics (3) I, II**
Prerequisite: Mathematics 152.
Probability models in the theory of statistics, sampling distributions with applications in statistical inference.
- 551B. Mathematical Statistics (3) II**
Prerequisite: Mathematics 551A.
Point and interval estimation and hypothesis testing in statistical models with applications to problems in various fields.
- 553. Stochastic Processes (3)**
Prerequisite: Mathematics 550.
Introduction to stochastic processes with selected applications.
- 570. Data Structures (3)**
Prerequisite: Mathematics 137.
Basic concepts of data. Linear lists, strings, arrays, and orthogonal lists. Representation of trees and graphs. Multilinked structures.
- 572. Programming Languages (3)**
Prerequisite: Mathematics 137.
Formal definition of programming languages including specification of syntax and semantics. Structure of algorithmic languages. Special purpose languages.

- 573. Automata Theory (3) II**
Prerequisite: 371 or 521A.
Definition and algebraic description of finite automata. Reduced forms for sequential machines. Regular sets and expressions. Introduction to context-free languages.
- 574. Introduction to Computability (3)**
Prerequisite: Mathematics 155A or 371 or 523.
Definition of algorithm by abstract (Turing) machines and by recursion. Application of this definition to the limitations and capabilities of computing machines. Applications to logic, algebra, analysis.
- 575. Compiler Construction (3)**
Prerequisites: Mathematics 570 and 572.
Syntactical specification of languages. Scanners and parsers. Precedence grammars. Run-time storage organization. Code generation and optimization.
- 576. Artificial Intelligence (3) II**
Prerequisite: Mathematics 523.
Heuristic approaches to problem-solving. Systematic methods of search of the problem state space. Theorem proving by machine. Resolution principle and its applications.
- 577. Probability and Statistics (3) I**
Prerequisite: Mathematics 151.
Probability, measures of central tendency and dispersion, characteristics of frequency functions of discrete and continuous variates; applications. Highly recommended for all prospective secondary school teachers of mathematics.
- 578. Algorithms and Their Analysis (3)**
Prerequisite: Mathematics 570.
Algorithms for solving frequently occurring problems. Sorting, merging, fast matrix multiplication, graph problems (e.g., finding shortest paths), the assignment problem and others.
- 579. Combinatorics (3)**
Prerequisite: Mathematics 122 or 151.
Permutations, combinations, generating functions, recurrence relations, inclusion-exclusion counting. Polya's theory of counting, other topics and applications.
- 580. Systems Programming (3) I, II**
Prerequisite: Mathematics 137.
Review of batch process systems programs, their components, operating characteristics, user services and their limitations. Implementation techniques for parallel processing of input/output and interrupt handling. Details on addressing techniques, core management, system updating, documentation and operation. (Formerly numbered Mathematics 557.)
- 596. Advanced Topics in Mathematics (1-4) I, II**
Prerequisite: Consent of instructor.
Selected topics in classical and modern mathematics. May be repeated with the approval of the instructor. See class schedule for specific content. Maximum credit six units.

GRADUATE COURSES IN MATHEMATICS

- 600. Geometrical Systems (3)**
Prerequisites: Mathematics 521A and an upper division course in geometry.
Ordered and affine geometries, decompositions, dilations. Projectivities and projective space. Absolute geometry, isometrics, groups generated by inversions.
- 601. Topics in Algebra (3)**
Prerequisites: Mathematics 521A and 534A.
Unique factorization domains, rings and ideals, groups, algebraic field extensions. A course designed for secondary school teachers.
- 602. Topics in Analysis (3)**
Prerequisites: Mathematics 521A and 534A.
Topics in analysis, including the real number system, convergence, continuity, differentiation, the Riemann-Stieltjes integral, complex analysis, designed to give the secondary teacher a broad understanding of the fundamental concepts.

- 620. Rings and Ideals (3)**
Prerequisite: Mathematics 521B.
A development of the theory of rings.
- 621. Theory of Groups (3)**
Prerequisite: Mathematics 521B.
A development of the theory of groups.
- 622. Theory of Fields (3)**
Prerequisite: Mathematics 521B.
A study of both finite and infinite fields, and field extensions.
- 623. Linear Algebra and Matrix Theory (3)**
Prerequisite: Mathematics 520A.
A study of matrices, determinants, and vector spaces.
- 624. Advanced Mathematical Logic (3)**
Prerequisite: Mathematics 521A or 523.
First-order theories, completeness theorems, arithmetization, Godel's incompleteness theorem.
- 630A-630B. Functions of a Real Variable (3-3)**
Prerequisite: Mathematics 534B. Mathematics 630A is prerequisite to 630B.
Point sets, functions and limits, continuity, differentiations, Riemann and Lebesgue integration.
- 631A-631B. Functions of a Complex Variable (3-3)**
Prerequisites: Mathematics 532 and 534B. Mathematics 631A is prerequisite to 631B.
Analytic continuation, elliptic functions, conformal mapping, Riemann surfaces.
- 632. Functional Analysis (3)**
Prerequisites: Mathematics 520A and 535.
Banach spaces, Hilbert spaces, spectral theory and Banach algebras.
- 633. Topology (3)**
Prerequisite: Mathematics 535.
Metric spaces, separation axioms, product and identification spaces, homotopic maps and the fundamental group.
- 634. Advanced Ordinary Differential Equations (3)**
Prerequisites: Mathematics 530 and 534A.
Existence and uniqueness theorems. Wronskians, adjoint systems, Sturm-Liouville boundary value problems, equations of Fuchsian type.
- 670A-670B. Advanced Mathematics Statistics (3-3)**
Prerequisites: Mathematics 534A and 550 or 551A. Mathematics 670A is prerequisite to 670B.
Distribution of random variables, characteristic functions, limiting distributions, sampling distributions. Hypothesis testing and estimation: optimality considerations, applications of the linear hypothesis, invariance and unbiasedness to analysis of variance and regression problems; sequential techniques, decision theory.
- 672. Nonparametric Statistics (3)**
Prerequisite: Mathematics 551B.
Tolerance regions, randomness problems, most powerful rank tests, the invariance methods, consistency and efficiency of tests.
- 673. Sample Surveys (3)**
Prerequisite: Mathematics 551A.
The methods and applications of sample surveys, stratification and sampling, subsamples of clusters.
- 674. Multivariate Analysis (3)**
Prerequisites: Mathematics 520A and 551B.
Multivariate normal distributions, multivariate analysis of variance, factor analysis, canonical correlation.

- 675. Linear Statistical Hypothesis Testing (3)**
Prerequisites: Mathematics 520A and 551A.
The multivariate normal distribution; distribution of quadratic forms; linear and curvilinear models; general linear hypotheses of full rank, regression models.
- 677. Design of Experiments (3)**
Prerequisites: Mathematics 520A and 551A.
Experimental design models, a basic approach as well as a matrix algebra approach.
- 690A-690B. Theory of Computability (3-3)**
Prerequisites: Mathematics 371 or 523 and 574.
Turing machines and their variants. Godel numbering and unsolvability results. Models of computation.
- 691A-691B. Formal Languages and Syntactic Analysis (3-3)**
Prerequisites: Mathematics 570, 572 and 573 or 574.
Definition of formal grammars; arithmetic expressions and precedence grammars, context-free and finite-state grammars. Algorithms for syntactic analysis. Relationship between formal languages and automata.
- 692A-692B. Operating Systems and Computer Architecture (3-3)**
Prerequisites: Mathematics 570 and 572.
Topics to include computer architecture, operating systems, I/O hardware and software, translators. Selected applications such as simulation, computer graphics, CAI are additional optional topics.
- 693A. Advanced Numerical Analysis (3)**
Prerequisites: Mathematics 520A and 541B.
Numerical methods in linear algebra (solving linear systems, inverting matrices, eigenvalue problems), Elimination and iteration methods. Ill-conditioned systems. Detailed error analysis.
- 693B. Advanced Numerical Analysis (3)**
Prerequisite: Mathematics 693A.
Polynomial approximation (least squares approximation, orthogonal polynomials, Chebyshev polynomials, trigonometric approximation), numerical solution of partial differential equations.
- 700. Applications of Computer Science (3)**
Prerequisite: Classified graduate standing in mathematics of computer science.
Topic to be chosen from such applications as theorem proving simulation, learning theory, graphics, definition languages. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.
- 720. Seminar (1-3)**
Prerequisite: Consent of instructor.
An intensive study in advanced mathematics. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.
- 797. Research (1-3) Cr/NC**
Prerequisite: Six units of graduate level mathematics.
Research in one of the fields of mathematics. Maximum credit six units applicable on a master's degree.
- 798. Special Study (1-3) Cr/NC**
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units.
- 799A. Thesis or Project (3) Cr/NC**
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree.
- 799B. Thesis or Project Extension (0) Cr/NC**
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.

Microbiology

Faculty

Chair, Department of Microbiology: B. L. Kelly
 Graduate Adviser: E. Anderes
 Professors: Baxter, Kelly, Moore, Walch
 Associate Professors: Anderes, Phelps, Steenbergen
 Assistant Professors: Hemmingsen, Kall

Assistantships

Graduate teaching assistantships in microbiology are available to a limited number of classified graduate students. Application blanks and additional information may be secured from the Chair of the Department of Microbiology.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. To qualify for admission to classified graduate standing in the Department of Microbiology the student must also:

1. have completed the minimum requirements equivalent to the baccalaureate degree in microbiology at San Diego State University.
2. have an undergraduate grade point average of 2.75 or demonstrate the ability to do superior graduate work.
3. have a grade point average of 3.0 or better in upper division courses (at least 24 units) acceptable for the major.
4. have a score of 1100 or better for the combined verbal and quantitative portions of the Graduate Record Examination Aptitude Test.
5. pass a comprehensive departmental written and oral examination after all other requirements for classification have been completed.
6. submit two references from science faculty members attesting to capability to do graduate work in microbiology.
7. have been accepted by a research adviser in the Department of Microbiology who can supply the necessary space and guidance.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Three of this bulletin.

Specific Requirements for the Master of Science Degrees

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least thirty units of upper division and graduate courses selected, with the approval of the graduate adviser, from the biological sciences as listed below or from closely related fields. Not less than 18 units must be selected from courses offered in the Department of Microbiology to include not less than 15 units of 600- and 700-numbered courses. Among the 600- and 700-numbered courses selected, the student's program must include courses Microbiology 790, Bibliography; 791, Research Techniques; 799A, Thesis; and at least four units of seminar. A maximum of six units of the required 30 units may be selected from acceptable courses offered in other related areas including the School of Education. A final oral examination on the field of the thesis and its implication in the broad fields of microbiology is required.

Courses Acceptable on Master's Degree Programs in Microbiology

UPPER DIVISION COURSES

- 510. Advanced General Microbiology (4) II**
 Two lectures and six hours of laboratory.
 Prerequisite: Microbiology 310.
 Taxonomy, comparative physiology and ecology of representative microorganisms found in various natural environments.
- 515. Bacterial and Viral Genetics (2) I, II**
 Prerequisite: Microbiology 310.
 The genetics of bacteriophages; selected animal viruses and bacteria.
- 520. Pathogenic Bacteriology (4) I, II**
 Two lectures and six hours of laboratory.
 Prerequisites: Microbiology 310 with a minimum grade of C; Chemistry 250 or 251.
 Recommended: Chemistry 361A.
 Bacterial agents of disease in man and other animals. Consideration of host-parasite relationships, the biology of the inciting agents and mechanisms of host resistance. Laboratory experience in isolation and identification of bacterial pathogens.
- 525. Medical Mycology (4) I, II**
 Two lectures and six hours of laboratory.
 Prerequisite: Microbiology 310.
 Mycotic agents of disease in human and other animals. Consideration of the biology of fungi; concepts of host-parasite relationships, including factors affecting virulence and immunity. Experience in systematic identification.
- 530. Hematology (4) I, II**
 Two lectures and six hours of laboratory.
 Prerequisite: Microbiology 310.
 The study of normal and pathological blood with chemical, physical and microscopic methods.
- 535. General Virology (2) I, II**
 Prerequisite: Microbiology 310. Recommended: Microbiology 330 and 520.
 Viruses, their structure, function, culture, and methods of study.
- 535L. General Virology Laboratory (2) II**
 Six hours of laboratory.
 Prerequisite: Credit or concurrent registration in Microbiology 535.
 The culture, isolation, and characterization of viruses.
- 560. Marine Microbiology (2) I**
 Prerequisites: Microbiology 310 or an introductory microbiology course and consent of the instructor.
 Microbiological population of estuary and ocean waters; interrelationships with other organisms and the physical and chemical environment.
- 560L. Marine Microbiology Laboratory (2) I**
 Six hours of laboratory.
 Prerequisite: Credit or concurrent registration in Microbiology 560.
- 580. Animal Viruses (4) I**
 Two lectures and six hours of laboratory.
 Prerequisites: Microbiology 520 and 535. Recommended: Microbiology 330 and 535L.
 Animal virus identification and investigation, emphasizing cell culture, cytopathic effects and serology.
- 590. Electron Microscopy (4) II**
 Two lectures and six hours of laboratory.
 Prerequisites: Physics 125A-125B and 194A and 194B, and Microbiology 310.
 Recommended: Microbiology 535, and Zoology 508.
 Principles and techniques in the biological application of the electron microscope.

Biology Courses

501. Population Biology (4)
 502. Cellular Physiology (4)
 503. Genetics (4)
 519. Statistical Methods in Biology (3)
 530. Limnology (4)
 531. Biological Oceanography (4)
 535. Systems Ecology (4)
 545. Cytogenetics (4)
 546. Mutagenesis (3)
 547. Microbial Genetics (3)
 561. Advanced Topics in Cellular Physiology (3)
 566. Photobiology (3)
 568. Immunochemistry (3)
 570. Radiation Biology (3)
 570L. Radiation Biology Laboratory (2)
 571. Radioisotope Techniques in Biology (3)

Botany Courses

501. Phycology (4)
 502. Mycology (4)

Chemistry Courses

501. Chemical Oceanography (3)
 550. Advanced Instrumental Methods (2)
 577. Radiochemical Analysis (4)

Zoology Courses

508. Histology (4)
 521. General Entomology (4)
 522. Special Topics in Entomology (3-4)
 526. Medical Entomology (4)
 535. Parasitology (4)

GRADUATE COURSES IN MICROBIOLOGY

600. Seminar (2-3)

Prerequisite: Consent of instructor.
 An intensive study in advanced microbiology; topic to be announced in the class schedule. May be repeated with new content. Maximum credit six units applicable on a master's degree.

610. Seminar in General Microbiology (2)

Prerequisite: Microbiology 320.
 May be repeated with new content. Maximum credit four units applicable on a master's degree.

620. Seminar in Microbial Physiology (2)

Prerequisite: Microbiology 320.
 May be repeated with new content. Maximum credit four units applicable on a master's degree.

630. Seminar in Immunology and Serology (2)

Prerequisite: Microbiology 330.
 May be repeated with new content. Maximum credit four units applicable on a master's degree.

640. Seminar in Bacterial and Viral Genetics (2)

Prerequisite: Microbiology 515.
 May be repeated with new content. Maximum credit four units applicable on a master's degree.

650. Seminar in Pathogenic Bacteriology (2)

Prerequisite: Microbiology 520.
 May be repeated with new content. Maximum credit four units applicable on a master's degree.

660. Seminar in Medical Mycology (2)

Prerequisite: Microbiology 525.
 May be repeated with new content. Maximum credit four units applicable on a master's degree.

670. Seminar in Virology (2)

Prerequisite: Microbiology 535.
 May be repeated with new content. Maximum credit four units applicable on a master's degree.

680. Seminar in Aquatic Microbiology (2)

Prerequisite: Microbiology 320 or 560 or Biology 531.
 May be repeated with new content. Maximum credit four units applicable on a master's degree.

720. Advanced Pathogenic Bacteriology (3)

Prerequisites: Microbiology 520 and consent of instructor.
 Biological and chemical nature of disease-producing bacteria. Application of experimental information to diagnostic laboratory procedures.

725. Biology of Animal Pathogenic Fungi (3)

Prerequisite: Microbiology 525.
 Distribution and pathogenesis of fungi-causing disease in man and other animals.

790. Bibliography (1)

Use of basic reference books, journals, pertinent bibliographies preparatory to the writing of a master's thesis.

791. Research Techniques (3)

Prerequisites: Major in a biological science and two upper division courses in the area of microbiology or consent of instructor.
 Analysis of research procedures in microbiology.

797. Research (1-3) Cr/NC

Research in one of the fields of microbiology.
 Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with department chair and instructor.
 Individual study. Maximum credit six units.

799A. Thesis or Project (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy.
 Preparation of a project or thesis for the master's degree.

799B. Thesis or Project Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
 Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.

Biology Courses

640. Seminar in Genetics (2)
 670. Cytoplasmic Inheritance (3)
 672. Molecular Biophysics (3)

Botany Courses

601. Seminar in Phycology (2)
 602. Seminar in Mycology (2)

Music

Faculty

Chair, Department of Music: Robert E. Brown
 Graduate Adviser: Robert E. Brown
 Credential Adviser: R. B. Forman
 Professors: Almond, Anderson, Blyth, Brown, Bruderer, Brunson, Estes, Forman, Genzlinger, Hogg, Lambert, Mracek, Sheldon, Snider, Ward-Steinman
 Associate Professors: Hill, Logan, Loomis, Meadows, Mitchell, Moe, Yates
 Assistant Professors: Flye, George, Kolar, O'Donnell

Scholarships

Information on music scholarships may be obtained by writing to the Chair, Music Scholarship Committee, Music Department, San Diego State University.

General Information

The Department of Music, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Music. The department is a member of the National Association of Schools of Music.

With the approval of the department, students may select courses emphasizing one of the following areas: composition, musicology, music history and literature, music education, performance, and theory.

Admission to Graduate Study

Application Procedure:

1. As a part of the application for admission to the University, applicants will submit a one-page statement to set forth aims and goals in their graduate studies.
2. Applicants who plan to emphasize music education will be required to provide evidence of successful teaching experience or submit letters from two master teachers or supervisors of practice teaching.
3. Applicants admitted to the department will be accepted with conditional graduate standing. Placement examinations will be administered in music history, music theory, and performance studies. Normally two semesters will be allowed to remove deficiencies indicated by the examinations through no-credit remedial work in the form of undergraduate courses or other projects and instruction.

In addition to the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin, a student must satisfy the following requirements before he or she will be recommended for classified graduate standing:

1. Complete a bachelor's degree with a major in music including full preparation in theory, literature and performance.
2. Satisfactorily complete placement examinations in theory, music history and literature, and performance. Details may be obtained from the Department of Music.
3. Be accepted in the emphasis of his or her choice by the departmental graduate committee.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Three of this bulletin, and must have removed any deficiencies assigned on the basis of the placement examinations.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes a major consisting of at least 24 units

from courses listed below as acceptable on master's degree programs in music, of which at least 16 must be in 600- and 700-numbered courses.

Plan A is required of those students whose emphasis is in musicology, music history and literature, theory, and music education, in which case the student is required to enroll in Music 690 and 799A, Thesis, and to pass a final oral examination on the thesis. Students electing the composition emphasis will be required to enroll in Music 799A and to submit an original composition in the form of a project.

Students whose emphasis is in performance may elect Plan B, and in lieu of the comprehensive examination, choose to give a full recital, or a lecture-recital with a supporting document in thesis form, which is presented to the Department of Music. Students should check the department's guidelines, rules and procedures.

Courses Acceptable on Master's Degree Programs in Music

UPPER DIVISION COURSES

507. Composition Laboratory (1) II

Three hours of laboratory.

Prerequisites: Music 207 and consent of instructor.

Continuation of Music 207. Maximum credit two units.

541. Performance Studies Pedagogy (3) I, II

Two lectures and three hours of laboratory.

Prerequisite: Consent of instructor.

Teaching beginning and intermediate applied music. Survey and evaluation of teaching materials. Observation of individual or group lessons.

- A. Piano
- B. Strings
- C. Voice

542. Performance Studies Laboratory (2) I, II

One lecture and three hours of laboratory.

Prerequisite: Music 541A is prerequisite to 542A and 541B is prerequisite to 542B.

Practical experience in the teaching of individual or group lessons.

- A. Piano
- B. Strings
- C. Voice

552A-552B. History of Music (3-3) I, II

Prerequisite: Music 258B. Music 552A is prerequisite to 552B.

The chronological development of musical art and forms from the Middle Ages to the present. Analytical score study and assigned recordings. Familiarity with musicological resources through individual assignments.

554. Music Literature (2) I, II

Prerequisite: Music 258B.

A concentrated study of the literature in the several areas listed. Analysis by use of scores and of recordings, when available.

- A. Chamber Music Literature — Strings
- B. Symphonic Literature
- C. Keyboard Literature
- D. Song Literature

596. Special Topics in Music (1-3)

A specialized study of selected topics from the several areas of music. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

GRADUATE COURSES

- 600. Seminar in Music Education (3)**
Prerequisite: Consent of instructor.
Seminars in music education are offered to provide an opportunity for concentrated study in the several areas listed.
A. Development and Teaching of Strings
B. Choral and Vocal Techniques
C. General Music
- 601. Seminar in Foundations of Music Education (3)**
History and philosophy of music education in relation to current trends in the teaching of music.
- 602. Seminar in Administration and Supervision of Music Education (3)**
Curriculum, scheduling, finance, human relations, organizational aspects, and the role of the supervisor-consultant.
- 604. Seminar in Comparative Music Education (3)**
Various international philosophical and technical approaches to teaching music to include the Orff, Kodaly, Suzuki and other systems.
- 607. Seminar in Composition (2-3)**
Three hours of laboratory and public performance of an extended original work as a project.
Prerequisite: Music 507.
Advanced composition for various media, development of original idiom, intensive study of modern music.
- 608. Seminar in History and Development of Music Theory (3)**
Prerequisite: Music 552B.
Survey of important theoretical approaches to music, from pre-Socratic writers to the present.
- 611. Seminar in Analytical Studies of Music (3)**
Melodic, formal, contrapuntal and harmonic analysis of music.
- 613. Seminar: Music Theory (3)**
Principles of traditional harmony and ear training.
- 614. Seminar in Electronic Music (3)**
Prerequisite: Undergraduate concentration in composition.
Theory, techniques and composition of various kinds of electronic music.
- 648A. Seminar in Advanced Choral Conducting (2)**
Prerequisite: Music 448A.
Course designed to develop skills at professional level; study of different styles of choral literature and their relationship to conductor's art; score analysis and experience in conducting.
- 648B. Seminar in Advanced Instrumental Conducting (2)**
Prerequisite: Music 449A.
Course designed to develop skills at professional level; study of conducting style as related to band and orchestra literature score analysis and experience in conducting.
- 650. Advanced Performance Studies (2)**
Fifteen one-hour private lessons.
Prerequisite: Audition before music faculty.
Advanced studies in technical, stylistic and aesthetic elements of artistic performance culminating in a graduate recital. Maximum credit four units applicable on a master's degree.
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|-----------------------|-------------------------|---|
| A. Piano | K. French Horn | T. Contrabass |
| B. Harpsichord | L. Trumpet | U. Harp |
| C. Organ | M. Trombone | V. Classical Guitar |
| D. Voice | N. Baritone Horn | W. Medieval or
Renaissance
Instruments |
| E. Flute | O. Tuba | X. Classical Accordion |
| F. Oboe | P. Percussion | Y. Composition |
| G. Clarinet | Q. Violin | Z. Non-Western Instruments |
| H. Saxophone | R. Viola | |
| J. Bassoon | S. Cello | |

- 652. Seminar in Music History (3)**
Prerequisites: Music 552B and consent of instructor.
Seminars in music history are offered for intensive study in each of the historical eras as listed below.
A. Music of the Middle Ages and Renaissance
B. Music of the Baroque Era
C. Music of the 18th and 19th Centuries
D. Twentieth Century Music
E. American Music
- 655. Seminar in Musicology (3)**
Prerequisite: Music 552B.
Problems and research in musicology. Projects in bibliography, source materials, music history, criticism, aesthetics and related fields. Writing and presentation of a scholarly paper.
- 660. Seminar: A Major Composer (3)**
Prerequisite: Music 552B. Completion of a seminar in Music 652A is recommended.
The life, milieu and works of a major composer, such as Bach, Mozart or Schubert will be studied. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.
- 665. Seminar: Notation of Polyphonic Music (3)**
Prerequisite: Music 552B. Completion of Music 652A is recommended.
Selected problems related to the notation of Medieval, Renaissance, and Baroque music: Scores and Tablatures; White Mensural Notation; Black Notation to the End of Franconian Notation; French, Italian, Mixed and Mannered Notation. Examples will be transcribed into modern notation. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.
- 670. Seminar: Interpretation of Early Music (3)**
Prerequisites: Completion of Music 652A and 652B is recommended.
Performance practice in Medieval, Renaissance and Baroque music; projects in music editing; reports; performance on historical instruments. Participation in the Collegium Musicum required.
- 690. Seminar in Research Procedures in Music (3)**
Reference materials, bibliography, investigation of current research in music, processes of thesis topic selection and techniques of scholarly writing.
- 798. Special Study (1-3) Cr/NC**
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units.
- 799A. Thesis or Project (3) Cr/NC**
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for a master's degree.
- 799B. Thesis or Project (0) Cr/NC**
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.

Natural Science

Faculty

Chair, Department of Natural Science: J. H. Mathewson
 Graduate Adviser: N. F. Dessel
 Coordinator of Science Education: N. F. Dessel
 Professors: Dessel, Ingmanson, Shull
 Associate Professor: Feher
 Faculty members in the Departments of Astronomy, Chemistry, Geological Sciences, and Physics are listed in the appropriate sections of this bulletin.

Assistantships

Graduate teaching assistantships in natural science are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the department.

General Information

The Department of Natural Science, in the College of Sciences, offers advanced course work in natural science. Graduate courses in natural science may be used to fulfill requirements for advanced degrees in other departments with the approval of the student's graduate adviser.

UPPER DIVISION COURSE (Also Acceptable for Advanced Degrees)

522A-522B. Curricula in Physical Science (3-3) I, II

Two lectures and three hours of laboratory.
 Prerequisite: Introductory course work in natural science, physics or chemistry.
 Principles of physical science as presented in national curriculum study courses such as Project Physics, PSSC, IPS, and PSNS.

May be taken for graduate credit only by candidates for a Master of Arts degree in Education in secondary curriculum and instruction. (Formerly numbered Physical Science 422A-422B.)

GRADUATE COURSES

700. Seminar (2 or 3)

An intensive study in advanced natural science. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Individual study. Maximum credit six units.
 Prerequisite: Consent of staff; to be arranged with department chair and instructor.

799A. Thesis or Project (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy.
 Preparation of a thesis or project in one of the physical sciences for the master's degree.

799B. Thesis or Project Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
 Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.

Philosophy

Faculty

Chair, Department of Philosophy: R. Z. Lauer
 Graduate Adviser: P. O'Reilly
 Professors: Carella, Crawford, Howard, Koppelman, Lauer, McClurg, Nelson, O'Reilly, Rosenstein, Ruja, Snyder, Warren, Weissman
 Associate Professors: Feenberg, Troxell, Weston

General Information

The Department of Philosophy, in the College of Arts and Letters, offers a program of graduate studies leading to the Master of Arts degree in Philosophy. This curriculum is designed to provide advanced study in the field of philosophy as a basis for further graduate work and to meet the needs of students who plan to teach in colleges or hold other positions of leadership.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Three of this bulletin. Students may be admitted to the graduate program in philosophy in one of two ways.

1. Admission with classified graduate standing requires:
 - a. An undergraduate major in philosophy or a minimum of 24 units of upper division work in philosophy;
 - b. A minimum GPA of 3.0 in upper division work in philosophy.
2. Admission with conditional classified graduate standing requires:
 - a. Twelve units of upper division work in philosophy;
 - b. A minimum GPA of 3.0 in upper division work in philosophy.

Students admitted under 2 acquire classified graduate standing by completing sufficient units of upper division work in philosophy to yield a total, with previous work, of at least 24 such units. Units earned to complete this undergraduate requirement do not fulfill unit requirements for the master's degree. A minimum GPA of 3.0 is required for all units attempted after admission.

Units earned to satisfy requirements for a major do not fulfill unit requirements for the master's degree. Other units *may* fulfill such requirements if earned in courses acceptable on master's degree programs in philosophy.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as stated in Part Three of this bulletin.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a program of at least 30 units of upper division and graduate courses selected with the approval of the graduate adviser.

Students must complete a minimum of 24 units from courses in philosophy listed below as acceptable on master's degree programs. At least 15 of these units must be in 600- and 700-numbered courses. Philosophy 798 may not be used to fulfill this 15-unit requirement. The remaining electives (six units) must be selected with the approval of the adviser from courses in philosophy, in related disciplines.

Students in the program may elect one of two plans, A or B, to complete the requirements for the degree. Plan A requires the writing of a thesis under Philosophy 799A as part of the outlined course program. If Plan B is elected, the student must pass a comprehensive examination, consisting of two written and one oral, and complete three units in Philosophy 796.

The master's examination shall be conducted by a committee of at least three members selected by the graduate adviser after consultation with the student. Each of the written parts of the examination will be based on a bibliography drawn up by the committee administering the examination after consultation with the student. The oral part of the examination will be in a specific problem area or on a major philosopher. Prior to the beginning of the semester of the oral examination, the committee shall determine the subject matter for the examination after consultation with the student. The Master's examination may be repeated only once.

Courses Acceptable on Master's Degree Programs in Philosophy

UPPER DIVISION COURSES

- 502. History of Philosophy II (3)**
Prerequisite: Philosophy 301.
Plotinus through William of Occam.
- 504. History of Philosophy IV (3)**
Prerequisite: Philosophy 303.
Fichte through Royce.
- 505A-505B. Twentieth Century Philosophy (3-3)**
Prerequisite: Six units of philosophy.
Historical treatment of major philosophical issues, movements and figures in American and European philosophy. Semester I: Emphasis on Great Britain and the United States. Semester II: Emphasis on continental Europe.
- 508. Existentialism (3)**
Prerequisite: Six units of philosophy.
The philosophical aspects of Existentialism. Major emphasis is on the diversity of thought within a common approach as this is shown in individual thinkers.
- 509. Ordinary Language Analysis (3)**
Prerequisite: Six units of philosophy.
Foundations of linguistic philosophy with emphasis on achieving an awareness of the relationship between thinking and language.
- 510. Philosophy of Law (3)**
Prerequisites: Three units of philosophy and three units of political science.
The nature of law and the logic of legal reasoning. An exploration of certain key legal concepts such as causation, responsibility, personality and property.
- 512. Political Philosophy (3)**
Prerequisite: Philosophy 101, 102 or 103.
Selected aspects of the political structures within which we live, such as law, power, sovereignty, justice, liberty, welfare.
- 521. Deductive Logic (3)**
Prerequisite: Philosophy 120.
Principles of inference for symbolic deductive systems; connectives, quantifiers, relations and sets. Interpretations of deductive systems in mathematics, science and ordinary language. Not open to students with credit in Mathematics 523.
- 522. Inductive Logic (3)**
Prerequisite: Philosophy 120.
Definition, classification and division. The logic of experimentation and statistics. Formation and validation of hypotheses. Probability theories.
- 523. Theory of Knowledge (3)**
Prerequisite: Six units of philosophy.
The major theories of human knowledge: mysticism, rationalism, empiricism, pragmatism.
- 525. Metaphysics (3)**
Prerequisite: Six units of philosophy.
Prominent theories of reality, e.g., realism and nominalism, materialism and idealism, teleology and determinism.

- 527. Values and Social Science (3)**
Prerequisite: Six units of philosophy.
Analysis and discussion of the nature of values and value-judgment with particular reference to the social sciences. Among relevant issues: the naturalistic fallacy, facts and values; authoritarianism, emotivism, objective relativism; the individual and the community.
- 528. Theory of Ethics (3)**
Prerequisite: Six units of philosophy.
Significant and typical value theories and systems and the concrete problems such theories seek to explain. Emphasis will be on moral values.
- 531. Philosophy of Language (3)**
Prerequisite: Six units of philosophy.
An introduction to theories of meaning for natural languages and formal systems; concepts of truth, synonymy and analyticity; related epistemological and ontological problems.
- 532. Philosophy of History (3)**
Prerequisite: Six units of philosophy.
The nature of history and historical inquiry. As metaphysics: A study of theories of historical development. As methodology: History as science, truth and fact in history, historical objectivity, the purpose of history.
- 533. Philosophy of Education (3)**
Prerequisite: Philosophy 101, 102 or 103.
Various philosophical viewpoints concerning education. The functions of education as conceived by major figures in the western philosophical tradition.
- 535. Philosophy of Religion (3)**
Prerequisite: Six units of philosophy.
Philosophical examination of issues raised by the religious impulse in man.
- 537. Philosophy of Science (3)**
Prerequisite: Six units of philosophy.
The basic concepts and methods underlying contemporary scientific thought. Contributions of the special sciences to a view of the universe as a whole.
- 541. History of Aesthetics (3)**
Prerequisite: Philosophy 101, 102 or 103.
Major documents in the history of aesthetics.
- 542. Philosophy of Art (3)**
Prerequisite: Six units of philosophy.
The nature of aesthetic experience. Principal contemporary theories of art in relation to actual artistic production and to the function of art in society.
- 564. American Philosophy (3)**
Prerequisite: Six units of philosophy.
A systematic and critical study of the work of American philosophers from the Puritans through the Pragmatists. Major emphasis is placed on Peirce, James, Royce, Santayana, Dewey and Whitehead.
- 575. A Major Philosopher (3)**
Prerequisite: Philosophy 301.
The writings of one major philosopher. May be repeated with new content. Maximum credit six units applicable to the major. See class schedule for specific content. Maximum credit six units applicable on a master's degree.
- 595. Selected Topics (3)**
Prerequisite: Six units of philosophy.
A critical analysis of a major problem or movement in philosophy. May be repeated with new content. Maximum credit six units applicable toward the major in philosophy. See class schedule for specific content. Maximum credit six units for both 595 and 795 applicable on a master's degree.

596. Topics in Asian Thought (3)

Prerequisite: Six units of philosophy.

Selected philosophical themes, traditions or figures, e.g., substantialism and nonsubstantialism in Indian Thought, Chinese Buddhist Schools, Gandhi. See class schedule for specific content. Maximum credit six units with three units applicable on a master's degree.

GRADUATE COURSES**601. Seminar in Ancient Philosophy (3)**

Prerequisite: Twelve upper division units in philosophy including Philosophy 301.

Directed research in a major author (e.g., Plato or Aristotle), or a school (e.g., the Pythagoreans or the Stoics), or a problem (e.g., causation or the state). Maximum credit six units applicable on a master's degree.

602. Seminar in Medieval Philosophy (3)

Prerequisite: Twelve upper division units in philosophy including Philosophy 502.

Directed research in a major author (e.g., Augustine or Aquinas), or a school (e.g., neo-Aristotelianism), or a problem (e.g., political philosophy or reason and authority). Maximum credit six units applicable on a master's degree.

603. Seminar in Modern Philosophy (3)

Prerequisite: Twelve upper division units in philosophy including Philosophy 303.

Directed research in a major author (e.g., Hume or Kant), or a school (e.g., the continental rationalists or the British empiricists), or a problem (e.g., the nature of substance). Maximum credit six units applicable on a master's degree.

605. Seminar in Contemporary Philosophy (3)

Prerequisite: Twelve upper division units in philosophy including Philosophy 505A or 505B.

Directed research in a major author (e.g., Dewey or Wittgenstein), or a school (e.g., the pragmatists or the language analysts), or a problem (e.g., perception or personhood). Maximum credit six units applicable on a master's degree.

611. Seminar in Legal Philosophy (3)

Prerequisite: Twelve upper division units in philosophy.

Directed research in recurrent themes of philosophical significance in jurisprudential literature.

612. Seminar in Political Philosophy (3)

Prerequisite: Twelve upper division units in philosophy.

Directed research in a major problem in political philosophy or the work of a major political philosopher.

621. Seminar in Deductive Logic (3)

Prerequisite: Twelve upper division units in philosophy including Philosophy 521.

A comparison of deductive systems in logic. Problems of definability, consistency and completeness. The role of logic in the foundations of mathematics.

623. Seminar in Epistemology (3)

Prerequisite: Twelve upper division units in philosophy.

Basic problems concerning meaning, perception and knowledge.

625. Seminar in Metaphysics (3)

Prerequisite: Twelve upper division units in philosophy.

An inquiry into the search for significant qualities of reality.

628. Seminar in Ethics (3)

Prerequisite: Twelve upper division units in philosophy.

Contemporary ethical issues. Critical analysis of the works of some leading theorists, such as Moore, Dewey, Stevenson and Toulmin.

631. Seminar in Semantics and Logical Theory (3)

Prerequisite: Twelve upper division units in philosophy including Philosophy 521 and 531.

Contemporary issues in the foundations of logic and theories of language.

635. Seminar in Philosophy of Religion (3)

Prerequisite: Twelve upper division units in philosophy including Philosophy 535.

A philosophical investigation of the nature of religious thought: its structure, growth and significance.

636. Seminar in Philosophy of Art (3)

Prerequisite: Twelve upper division units in philosophy.

An analysis, criticism and comparative study of selected philosophies of art.

637. Seminar in Philosophy of Science (3)

Prerequisite: Twelve upper division units in philosophy including Philosophy 522 and 537.

The methodology of the empirical sciences. The logical structure of science.

795. Seminar in Selected Topics (3)

Prerequisite: Twelve upper division units in philosophy.

Directed research in a major problem or movement in philosophy. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

796. Studies in Philosophy (1-3) Cr/NC

Prerequisites: An officially appointed examining committee and advancement to candidacy.

Preparation for the comprehensive examination for students taking the M.A. under Plan B. See class schedule for specific content. Maximum credit three units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Individual study. Maximum credit six units.

Prerequisites: Twelve upper division units in philosophy and consent of staff; to be arranged with department chair and instructor.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.



Physical Education

Faculty

Chair, Department of Physical Education: B. R. Carlson
 Graduate Adviser: R. Andrus
 Professors: Andrus, Benton, Carlson, Carter, Cullen, Fox, Howell, M., Kasch, Moore, Murphy, Olsen, A., Olsen, L., Phillips, Sucec, Ziegenfuss
 Associate Professors: Howell, R., Selder, Wells,
 Assistant Professors: Aufsesser, Quinn, Simmons

Assistantships

Graduate teaching assistantships in physical education are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the department.

General Information

The Department of Physical Education, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Physical Education.

Admission to Graduate Study

Students will be admitted to the graduate program in physical education only after careful consideration of their qualifications by the Physical Education Graduate Committee. Complete applications must be received by the Office of Admissions prior to March 1 for the fall semester and November 1 for the spring semester.

All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Three of this bulletin. In addition, a student applying for admission to the graduate program in physical education must meet the following requirements:

1. A bachelor's degree in physical education. Applicants who do not have an undergraduate major in physical education may be admitted to conditionally classified graduate standing on the recommendation of the departmental graduate adviser. They will be required to complete the minimum requirements for an undergraduate major in physical education in addition to the minimum of 30 units required for the master's degree.
2. A grade point average of not less than 2.75 in the last 60 units attempted.
3. A total score on the GRE Aptitude Test (verbal and quantitative) of at least 950.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Three of this bulletin.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing the student must satisfy the basic requirements for the master's degree, described in Part Three of this bulletin. The 30-unit program includes a minimum of 21 units in physical education selected from courses listed in this bulletin as acceptable on master's degree programs, of which at least 18 units must be in 600- and 700-numbered courses. Physical Education 791, Seminar in Research Techniques, and Physical Education 799A, Thesis are required. Each candidate will be required to complete an area of specialization after consulting the graduate adviser. The student is required to pass a final oral examination on the thesis.

Courses Acceptable on Master's Degree Programs in Physical Education

UPPER DIVISION COURSES

550. Choreography: Basic Elements (2)

Four hours of activity.
 Prerequisite: Completion of preparation for the major in physical education with emphasis in dance.

Using concepts of space, time, and energy to investigate and explore basic elements of choreography. Studies and compositions emphasizing solo and small group works.

551. Choreography: Large Groups (2)

Four hours of activity.
 Prerequisite: Physical Education 550.
 Introducing large group works, solo and small group work in organizing more complex arrangements of the basic elements of dance composition. Utilizing music and sound as aural contributions to choreography.

552. Choreography: Form and Content (2)

Four hours of activity.
 Prerequisite: Physical Education 551.
 Approaching dance as a fundamental means of communication. Recognizing the relationship between form and content.

553. Choreography: Recital (2)

Four hours of activity.
 Prerequisite: Physical Education 552.
 Choreography of solo and group works utilizing symbiotic relationship of movement, sound, lighting, costuming, and other interdisciplinary media. Presentation of a recital.

556. History and Philosophy of Dance (2)

The cultural background of all forms of dance in various civilizations with emphasis on the relationship of the social structure to the existing dance forms.

557. Dance Criticism (2)

Prerequisite: Physical Education 556.
 Artistic aspects of dance in general and specifically modern dance. Professional preparation and function of the dance critic.

560. Applied Anatomy and Kinesiology (3)

Prerequisites: Biology 362 and Zoology 108.
 Arthrology, syndesmology and myology, with emphasis on movement analysis. Muscle groups and their functional relationships. Application of simple mechanical principles to movement analysis.

561. Physiology of Exercise (3)

Prerequisites: Biology 362 and Zoology 108.
 Effects of physical activities on the physiological functions of the body.

562. Cardio-Pulmonary Laboratory (2)

One lecture and three hours of laboratory.
 Prerequisites: Physical Education 362 and 561.
 Cardio-pulmonary evaluation of human subjects for rehabilitative and preventive cardiology including electrocardiography, blood chemistry, ergometry, central and peripheral vascular assessment, body composition, and life-style change.

563. Biomechanics of Human Movement (2)

Prerequisite: Zoology 108.
 Mechanical principles as applied to movement; analysis and application to selected motor skills.

565. Prevention and Rehabilitation of Injuries to Athletes (2)

One lecture and three hours of laboratory.
 Prerequisites: Physical Education 560 and 561.
 Prevention and care of athletic injuries. Sports safety and effects of environment on health and welfare of the athlete. First aid, use of prescribed modalities.

- 567. Corrective and Orthopedic Physical Education (2)**
Prerequisites: Physical Education 560 and 561.
Etiology, characteristics, and programs for children with corrective and/or physically handicapping conditions will be discussed. This will include evaluating and implementing prescribed activities for individuals with these types of conditions.
- 568. Special Physical Education (2)**
Prerequisite: Physical Education 371 or Special Education 500.
Etiologies, characteristics, and education programs for mentally retarded, emotionally disturbed, learning disabled, blind and hearing impaired individuals. Specific programs and activities are discussed relevant to each of disabled groups mentioned.
- 570. Psychological Bases of Physical Education (3)**
Prerequisite: Psychology 101.
Psychological parameters related to physical performance and the acquisition of motor skills.
- 585. Measurement and Evaluation in Physical Education (3)**
Two lectures and two hours of activity.
Elements of statistical techniques appropriate to physical education criteria for test selection; construction and evaluation of tests; and the administration of a testing program in physical education.
- 596. Selected Topics in Physical Education (1-3)**
Selected topics in physical education. May be repeated with new content and approval of instructor. See class schedule for specific content. Maximum credit six units applicable on a bachelor's or master's degree.

GRADUATE COURSES

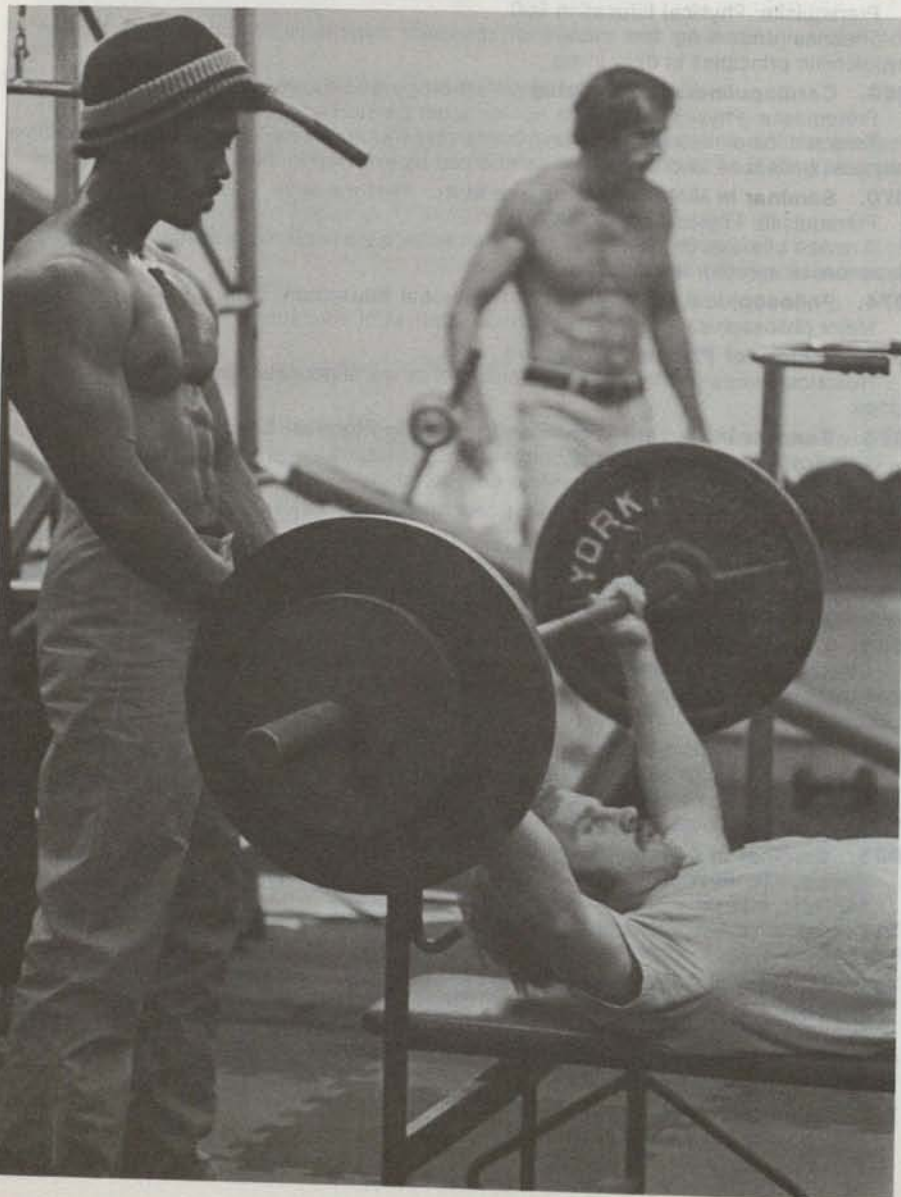
- 600. Seminar (3)**
An intensive study in advanced physical education. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.
- 631. Seminar in Competitive Athletics (3)**
Prerequisite: Major or minor in physical education or recreation.
Knowledge and appreciation of the skills, techniques and teaching methods involved in the coaching of athletics; the study of possible solutions to problems associated with the program of competitive school athletics.
- 660. Seminar in Advanced Kinesiology and Biomechanics (3)**
Prerequisites: Physical Education 560, 563. Recommended: Physical Education 364.
Principles of mechanics applied to the analysis of human motion. Electromyography and cinematography as aids in analysis. Kinetic analysis of movement.
- 661. Seminar in Advanced Physiology of Exercise (3)**
Prerequisites: Physical Education 560 and 561.
Advanced aspects of the physiology of exercise. Effects of exercise on human beings in relation to health, longevity, morphology and performance.
- 662. Advanced Exercise Physiology Laboratory (3)**
Nine hours of laboratory.
Prerequisites: Physical Education 362 and 561.
A laboratory course designed to develop competency in respiratory metabolism pulmonary function, gas analysis, blood chemistry and ergometry. Experience in the application of exercise procedures with human subjects and analysis and interpretation of results.
- 663. Seminar in Exercise Electrocardiography (3)**
Principles of resting and exercise electrocardiography with emphasis on ergometric methods and application to exercise physiology.
- 664. Seminar in Anthropometry and Motor Performance (3)**
Prerequisites: Physical Education 371 and 560.
Relationships between body structure and motor performance as compared through the techniques of anthropometry, somatotyping and body composition.
- 666. Fitness of Adults (3)**
One lecture and six hours of laboratory.
Prerequisites: Physical Education 362 and 561.
Evaluation, exercise prescription and training of adults. An understanding of the underlying hypokinetic diseases of adults and the procedures used in coping with the associated health problems of an automated environment.
- 667. Seminar in Adapted Physical Education (3)**
Prerequisites: Physical Education 567 and 568.
Trends, programs and crucial problem areas in Adapted Physical Education as they relate to the organization, planning and implementation of these programs.
- 668. Seminar in Principles of Neuromuscular Tension (3)**
Prerequisite: Physical Education 560.
Theories underlying the causes of muscular hypertension and the application of hypokinetic principles in daily living.
- 669. Cardiopulmonary Physiology, Pathology and Exercise (3)**
Prerequisite: Physical Education 561 or upper division course in human physiology.
Selected cardiovascular and pulmonary disease problems, their etiology, symptoms, physical limitations, and physiology as affected by exercise in therapy and rehabilitation.
- 670. Seminar in Motor Learning and Motor Performance (3)**
Prerequisite: Physical Education 570.
A review of research in physical education and related fields plus experimental laboratory experiences in motor learning.
- 674. Philosophical Foundations for Physical Education (3)**
Major philosophies and their application in physical education.
- 675. History of Physical Education (3)**
Historical forces guiding the development of physical education from ancient to modern times.
- 676. Seminar in Current Trends and Issues in Physical Education (3)**
A critical appraisal of contemporary trends and issues.
Investigation and analysis of professional literature.
- 678. Comparative Physical Education and Sport (3)**
Prerequisite: Physical Education 376.
Comparative analysis of developments and emergent characteristics of systems of physical education and sport in representative countries analyzed cross-nationally and the investigation of the comparative method including its history and research techniques.
- 680. Curriculum in Physical Education (3)**
Prerequisite: Major or minor in physical education.
Curricula in physical education. Special emphasis on curriculum construction and evaluation.
- 682. Administration of Physical Education in the Secondary Schools (3)**
Prerequisite: Major or minor in physical education.
Topics include personnel problems, selection and maintenance of equipment and facilities, program organization and evaluation, budget and related items.
- 685. Seminar in Advanced Evaluation in Physical Education (3)**
Prerequisite: Physical Education 585.
Methods, statistical techniques and apparatus used in testing physical performance. Sources of error, limitations on application and interpretation. Practice in construction and use of tests.
- 791. Seminar in Research Techniques (3)**
Prerequisites: Major in physical education and Physical Education 585.
Principles and methods of planning and carrying out the investigation of problems related to physical education. The development of research designs and practice in formulating and testing hypotheses as well as the interpretation of results. (Prerequisite to thesis.)
- 798. Special Study (1-3) Cr/NC**
Prerequisite: Consent of department chair.
Individual study. Maximum credit six units.

799A. Thesis or Project (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP. Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.



Physics

Faculty

Chair, Department of Physics: Lowell J. Burnett
 Graduate Adviser: J. G. Teasdale
 Professors: Burnett, Garrison, Lilly, Morris, Nichols, Piserchio, Rehffuss, Roeder, Skolil, Teasdale, Templin
 Associate Professors: Cottrell, Davis, Shore, Solomon

Assistantships

Graduate teaching assistantships in physics are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the department.

General Information

The Department of Physics, in the College of Sciences, offers graduate study leading to the Master of Arts degree in Physics, the Master of Science degree in Physics, and the Master of Science degree in Radiological Physics. The Master of Arts degree in Physics is designed primarily for those students who anticipate additional work leading to the doctorate degree in physics. The Master of Science degree is designed to augment the student's undergraduate training by more advanced studies and is best suited for those students who plan to terminate their graduate work at the master's level. Experimental facilities are available for studies in such fields as acoustics, nuclear physics, quantum optics, minicomputers and microprocessors, solid state physics, atomic physics, low temperature physics, and high energy physics. The Master of Science degree in Radiological Physics is designed to train radiological (health) physicists in the use of radioactive materials and other radiation-producing devices as required in hospitals and related medical facilities, colleges and universities, industry, public health services, nuclear power installations, the military, the Department of Energy and the Nuclear Regulatory Commission.

Master of Arts and Master of Science Degrees in Physics

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, the undergraduate preparation in physics must have substantially satisfied the undergraduate requirements for the bachelor's degree in physics. (Refer to the general catalog for a description of these majors.) If the student's undergraduate preparation is deficient, he will be required to take courses for the removal of the deficiency. These courses, taken by the student as an unclassified graduate, are in addition to the minimum of 30 units for the master's degree. The results of the advanced test in physics are used as part of the evaluation of deficiencies.

Attention is called to the status of an unclassified student as described in Part Three of this bulletin under Unclassified Student Enrollment.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement, as stated in Part Three of this bulletin.

Specific Requirements for the Master of Arts Degree in Physics

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes the following courses in physics: Physics

602A, 604A, 606, 608, 610, 797 (3 units), and 799A. The remaining nine units must be approved by the student's departmental graduate committee. Students must demonstrate a reading knowledge of scientific French, German or Russian. The student is required to pass a final oral examination on his thesis.

Specific Requirements for the Master of Science Degree in Physics

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes the following courses in physics: Physics 602A, 604A, 797 (3 units), 799A, and three additional units chosen from Physics 606, 608 and 610. The remaining 15 units must be approved by the student's departmental graduate committee. The student is required to pass a final oral examination on his thesis.

Master of Science Degree in Radiological Physics

Admission to Graduate Study

All students must satisfy the general requirements for admission to the Graduate Division with classified graduate standing, as described in Part Three of this bulletin under Admission to the Graduate Division. In addition, the undergraduate preparation in biology, chemistry, mathematics, and physics must have substantially satisfied the undergraduate requirements for a baccalaureate degree in the life sciences or the physical sciences so that satisfactory progress can be made toward the master's degree. If the student's undergraduate preparation is deficient, he will be required to take courses for the removal of the deficiency. These courses, taken by the student as an unclassified graduate, are in addition to the minimum of 30 units for the master's degree.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Three of this bulletin.

Specific Requirements for the Master of Science Degree in Radiological Physics

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units which includes the following courses:

	Units
Biology 362, Principles of Human Physiology	3
Biology 570, Radiation Biology	3
Biology 570L, Radiation Biology Laboratory	2
Physics 655, Radiation Physics	3
Physics 657, Physics of Radiation Therapy	1
Physics 659, Health Physics	3
Physics 797, Research	3
Physics 799A, Thesis	3
Approved 600- and 700-numbered courses	3
Total units	24

The remaining six units of the minimum 30 units required for the degree must be selected from upper division or 600- or 700-numbered courses approved by the departmental graduate committee. Of the 30 units, nine units must be selected from outside the Department of Physics. The student is required to pass a final oral examination on the thesis.

Courses Acceptable on Master's Degree Programs in Physics

UPPER DIVISION COURSES

510. Quantum Mechanics (3)

Prerequisites: Physics 350A, 354B; Mathematics 340B or 531.

The mathematical and physical foundations of the quantum theory in terms of Schrodinger's wave mechanics. Applications to the properties of atoms, quantum chemistry, and nuclei.

515. Electronics of Nuclear Instrumentation (1)

Prerequisites: An electronics course and credit or concurrent registration in Physics 561. Operation and utilization of modern solid-state devices as used in nuclear instrumentation.

516A-516B. Theory of Scientific Instrumentation (2-2)

Prerequisites: Physics 313; Mathematics 340B or 531. Physics 516A is prerequisite to 516B.

Linear system analysis using Fourier techniques. Introduction to the stochastic treatment of signals and noise, using concepts from probability and statistics. Optimization of detection systems with respect to signal-to-noise ratio. Applications to spectroscopy. (Formerly numbered Physics 416.)

518. Minicomputer Interfacing (3)

Two lectures and three hours of laboratory.

Prerequisite: Credit or concurrent registration in Physics 413.

Theory and practice of minicomputer interfacing and control techniques, including minicomputer architecture on a block-diagram level, bus structure, and I/O signals. Assembly language programming and applications to I/O involving instrumentation peripherals. (Formerly numbered Physics 418.)

520. Microprocessor Instrumentation (2)

One lecture and three hours of laboratory.

Prerequisite: Credit or concurrent registration in Physics 413.

The electronics of microprocessor based computer and control systems. Assembly language programming. Interfacing of analog inputs and outputs. The microcomputer as a multipurpose signal processing instrument.

532. Solid State Physics (3) II

Prerequisites: Physics 350A, 354B; Mathematics 340B or 531.

Elastic, thermal, electric, magnetic and optical properties of solids. Introduction to the energy band theory of solids, with applications to semiconductors and metals.

542. Acoustics (3)

Prerequisites: Physics 400A or Electrical Engineering 340 and Engineering 310.

Wave motion, production, reception, transmission and analysis of sound. Special applications such as environmental noise, underwater and seismic waves.

552. Modern Optics and Lasers (3)

Prerequisites: Physics 306, credit or concurrent registration in Physics 354A and either Physics 400A or Electrical Engineering 340.

Electromagnetic theory, matrix methods of optics, propagation of Gaussian beams, optical resonators, interaction of radiation and atomic systems, theory of laser oscillation, nonlinear optics, specific laser systems, optical detectors, applications of lasers in physics.

553. Modern Optics Laboratory (2)

Six hours of laboratory.

Prerequisite: Physics 306. Recommended: Credit or concurrent registration in Physics

552. Experiments in various fields of modern optics such as holography, physics of lasers, Fourier transform spectroscopy, Raman spectroscopy, light modulation techniques, fiber optics, spatial filtering, diffraction grating spectroscopy, radiometry, and nonlinear optics. May be repeated with new content with the approval of the instructor for a maximum of four units.

- 560. Physics of Nuclear Medicine (1) II**
Three hours of laboratory.
Prerequisite: Physics 561.
Topics and experimental problems in the diagnostic use of radioactive isotopes in nuclear medicine. (Formerly numbered Physics 660.)
- 561. Nuclear Physics Laboratory (3) II**
One lecture and six hours of laboratory.
Prerequisites: Physics 303 or 357, Mathematics 123 or 152.
Techniques and instrumentation for the detection, identification and measurement of the properties of nuclear radiations and particles, and their use in the study of nuclear reactions.
- 563. Physics of Nonionizing Radiation (1)**
Three hours of laboratory.
Prerequisite: Physics 303 or 357.
Topics and experimental problems in radiation protection in nonionizing radiation.
- 564. Nuclear and Elementary Particle Physics (3)**
Prerequisite: Physics 354B.
Nuclear and elementary particle phenomena including nuclear structure of reactions, nuclear devices, elementary particle symmetry and structure, and experimental methods.
- 565. Physics of Diagnostic X-Rays (1) I**
Three hours of laboratory.
Prerequisite: Physics 561.
Topics and experimental problems in the use of diagnostic x-rays. (Formerly numbered Physics 665.)
- 570. Relativity (3)**
Prerequisites: Physics 354A, 400A; Mathematics 149 or 520A, 340B or 531.
Relative coordinates, Lorentz transformation, covariant formation of the laws of physics, applications of special relativity, introduction to curved space time, cosmology.
- 596. Special Topics in Physics (1-4) I, II**
Prerequisite: Consent of instructor.
Selected topics in classical and modern physics. May be repeated with the consent of the instructor. See Class Schedule for specific content. Maximum credit six units.

GRADUATE COURSES

- 600. Seminar (1-3)**
Prerequisite: Consent of instructor.
An intensive study in advanced physics. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.
- 602A-602B. Mathematics of Physics (3-3)**
Prerequisite: Mathematics 340B. Physics 602A is prerequisite to 602B.
Topics from matrix theory, vector and tensor analysis, orthogonal function theory, calculus of variations and probability theory with particular emphasis on applications to physical theory.
- 604A-604B. Electromagnetic Theory (3-3)**
Prerequisites: Physics 400A-400B. Physics 604A is prerequisite to 604B.
Boundary value problems; time varying electric and magnetic fields; propagation of radiation; antennas, wave guides.
- 606. Statistical Mechanics (3)**
Prerequisites: Physics 350B and 510.
Classical and quantum statistics, kinetic theory, low-pressure phenomena, Boltzmann transport equation, irreversible processes.
- 608. Theoretical Mechanics (3)**
Prerequisite: Physics 350B.
Mechanics utilizing vector and tensor methods. Study of the motion of rigid bodies, vibration, coupled circuits. Lagrange's and Hamilton's equations. Principle of least action.
- 610. Quantum Mechanics (3)**
Prerequisites: Physics 350B and 564.
Quantum theory of radiation, molecular and nuclear systems. Approximation methods.
- 632. Theory of the Solid State (3)**
Prerequisites: Physics 350B, 510 and 532.
The band theory of solids, with applications to the electrical and optical properties of dielectrics, semiconductors and metals.
- 648. History of Physics (2)**
Prerequisite: Bachelor's degree in physics or chemistry.
Lectures and readings in the history of physics with emphasis on the history of classical physics and the subsequent development of the quantum theory.
- 652. Advanced Optics (3)**
Prerequisite: Physics 552.
Selected topics in advanced optics such as rigorous diffraction theory, optical spectra, lasers, nonlinear optics and applications of Fourier analysis to optical systems and information processing.
- 653. Advanced Optics Laboratory (2) I, II**
Six hours of laboratory.
Prerequisite: Registration requires prior approval of instructor.
Experimental projects involving lasers, nonlinear, optical phenomena, Fourier optics, spectroscopy, optical scattering and other areas of current optical interest.
- 654. Gravitation (3)**
Prerequisite: Mathematics 149 or 520A, 531 or 340B and Physics 570.
Differential geometry, metric geodesics, Equivalence Principle, collapsed objects, black holes, gravitational waves, evolution of the universe.
- 655. Radiation Physics (3) I**
Two lectures and three hours of laboratory.
Prerequisite: Physics 561.
Topics and problems including sources of nuclear, X-ray and accelerator radiation; its interaction with matter; shielding and detection.
- 657. Physics of Radiation Therapy (1) II**
Three hours of laboratory.
Prerequisite: Physics 655.
Topics and experimental problems in the use of ionizing radiation in therapy.
- 659. Health Physics (3) II**
One lecture and six hours of laboratory.
Prerequisite: Physics 561.
Principles of radiation protection, radiation safety criteria and the assumptions inherent in radiation protection guides.
- 661. Advanced Nuclear Physics Laboratory (3)**
One lecture and six hours of laboratory.
Prerequisite: Physics 561.
Experimental work involving subcritical reactor assembly, neutron generator, whole-body counter, etc.
- 662. Seminar in Radiological Sciences (1)**
Seminar in selected topics in Radiological Biology, Chemistry and Physics.
May be repeated with new content. Maximum credit three units applicable on a master's degree.
- 667. Reactor Health Physics (1) II**
Three hours of laboratory.
Prerequisites: Physics 655 and 659.
Topics and experimental problems in Health Physics in nuclear reactor facilities.
- 669. Accelerator Health Physics (1) I**
Three hours of laboratory.
Prerequisites: Physics 655 and 659.
Topics and experimental problems in Health Physics in accelerator facilities.
- 797. Research (1-3) Cr/NC**
Prerequisite: Consent of department chair.
Research in one of the fields of physics. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Individual study. Maximum credit six units.

Prerequisite: Consent of staff; to be arranged with department chair and instructor.

799A. Thesis (3) Cr/NC

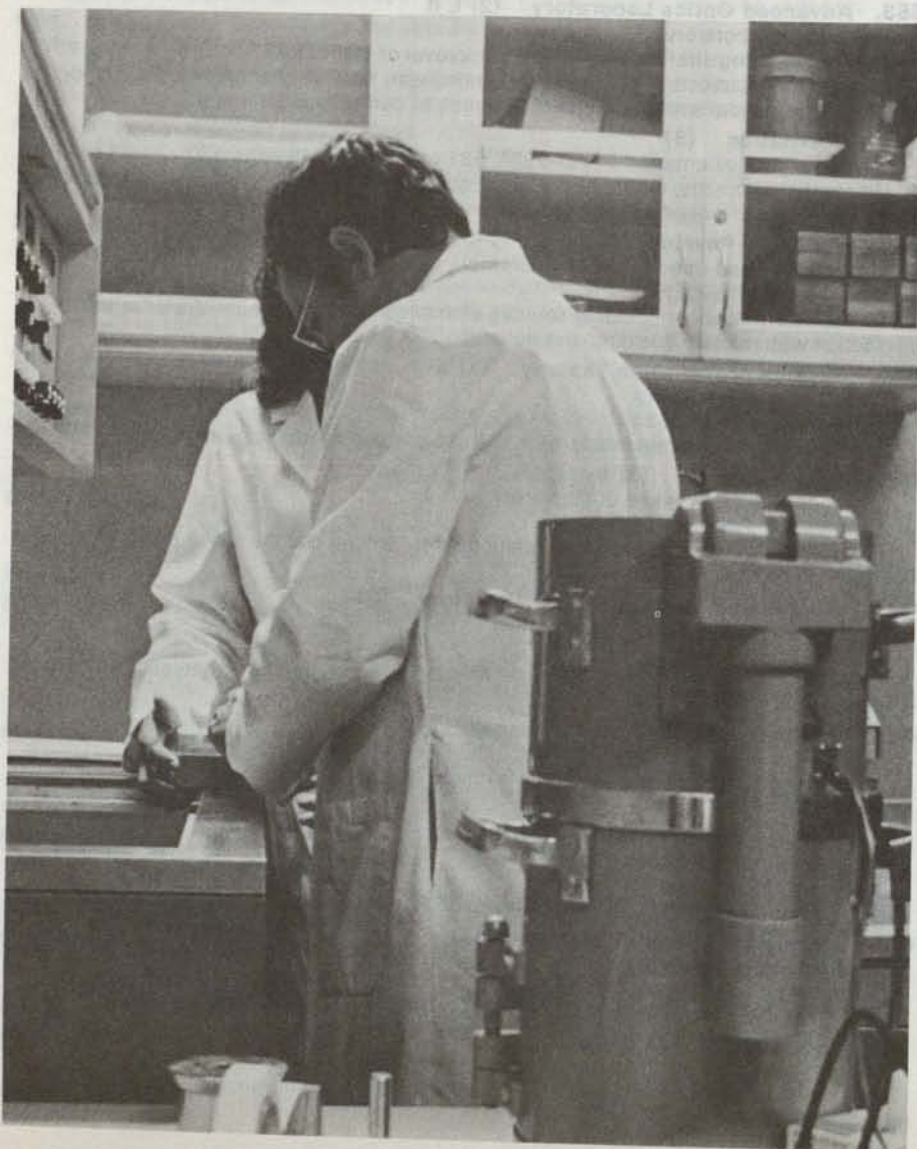
Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a thesis in physics for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.



Political Science

Faculty

Chair, Department of Political Science: B. A. Nesvold

Graduate Adviser: J. J. Conniff

Professors: Andrain, Conniff, Crain, Feierabend, Funston, Gripp, Hofstetter, Janssen, Johns, Kahng, Miles, Nesvold, Padgett, Schultze

Associate Professors: Anderson, Cutter, Fairlie, Hobbs, Lewin, Little, Loveman, Soule, Terrell

Assistant Professors: Jones, Keiser, Strand

General Information

The Department of Political Science, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Political Science. For graduate study in connection with the Master of Arts degree in Social Science, refer to this bulletin under Social Science. Research facilities provided by the Department of Political Science include the Political Science Research Center and the Social Science Research Laboratory. The Department of Political Science is an associate member of the Inter-University Consortium for Political Research.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, students seeking the Master of Arts degree in Political Science must have completed 30 units of social science, including at least 12 upper division units in political science, as approved by the department and must have earned a grade point average of 2.75 for the last 60 units of undergraduate work, and a 3.00 grade point average for upper division courses in political science as well as a 3.00 grade point average for all work taken in political science.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as stated in Part Three of this bulletin. In addition, students must have received credit for a three-unit course in statistics.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units of upper division and graduate courses approved by the graduate adviser.

Students must complete a minimum of 24 units in political science from courses listed below as acceptable on master's degree programs. At least 21 units must be in 600- and 700-numbered courses including Political Science 601 (Seminar in the Scope and Method of Political Science) and five other graduate seminars in political science.

To fulfill the requirements for the M.A. degree in political science, students may select either Plan A or Plan B. Plan A requires the writing of a thesis under Political Science 799A and the taking of a final oral examination on the general field of the thesis. Plan B requires (1) a written comprehensive examination, (2) a substantial research paper, and (3) Political Science 797. The comprehensive examination shall be constructed and evaluated by a committee of three faculty members chosen by the graduate adviser after consultation with the student. The examination will be based on a bibliography prepared by the faculty committee which will also evaluate the research paper.

Courses Acceptable on Master's Degree Programs in Political Science

UPPER DIVISION COURSES

514. Problems in Political Theory (3)

Prerequisite: Six upper division units in political theory.
Research methods in political theory; intensive development of selected issues.

515A-515B. Research Methods in Political Science (3-3)

Prerequisite: Political Science 201. Political Science 515A is prerequisite to 515B.
The research process, from research design through data processing, analysis and interpretation. Problems of application to election statistics, census data, roll-call records, sample survey data and biographical information.

522. Urban Politics (3)

Prerequisite: Political Science 101 or 102.
The processes by which social conflicts in American urban areas are represented and regulated. Urban political culture; ecology; group development and activity; power structures; and reform movements are surveyed. The character of the urban political "problem" and proposed solutions are evaluated.

523. Community Political Behavior (3)

Prerequisite: Political Science 101 or 102.
The studies of structure of community power are summarized and critically evaluated. The issues of community conflict are treated both by case study and comparative methods. Examples are drawn primarily from American-urban experience.

530. Political Parties (3)

Prerequisite: Political Science 102 or 320.
A critical analysis of the political party as a part of the process of government; party organization and activities; nominating and campaign methods; theories and functions of the party system; party responsibility. The function of the two-party system in American government.

531. Political Groups and Movements (3)

Prerequisite: Political Science 101 or 102.
Pressure group activity, lobbies, mass movements; factors which explain origins and motivations of group behavior; votes, money, information, protest as political resources; theories of pluralism, power elite and mass society; class and ethnic politics.

536. The American Presidency (3)

Prerequisites: Political Science 101 and 102.
Analysis of principal institutions, functions and problems of the presidency and federal executive branch. Attention given to presidential leadership, staffing, executive-legislative relations and policy formation.

537. The Politics of Bureaucracy (3)

Prerequisites: Political Science 101 and 102.
An analysis of the bureaucracy as an actor in the political system.

546. Law and the Political System (3)

Forces influencing the making of law; relationship between social and legal change; nature and limits of the judicial function.

547A-547B. American Constitutional Law (3-3)

Prerequisite: Political Science 547A is prerequisite to 547B.
Principles of American Constitutional law. Includes judicial review, the federal system, the separation of powers, the nature of selected Congressional powers, and the liberties protected by the constitution against national and state action. Meets the graduation requirement in the United States Constitution.

550. Jurisprudence (3)

Prerequisite: Political Science 101 or 102 or three upper division units within Group IV.
Theoretical foundations of law; relationship between legal and political philosophy; development of law and legal systems.

555. Comparative Political Systems (3)

Prerequisite: Political Science 103.
An examination of selected political and governmental systems for purposes of comparative study and analysis to determine similarities, differences and general patterns and universals among political systems.

558. Comparative Communist Governments (3)

The interrelations between the theory and practice of modern communism as found in representative communist systems.

561. Governments and Politics of the Developing Areas (3)

Prerequisite: Political Science 101 or 103.
Internal political systems, governmental structures and the foreign policies of developing nations.

562. Governments and Politics of the Far East (3)

The internal political structure and foreign policies of China, Japan and Korea.

563. Government and Politics of the Middle East (3)

The governmental and political structures of representative states in the Middle East including Turkey, Israel and the Arab states.

566. Political Change in Latin America (3)

Prerequisite: Political Science 101 or 103.
General pattern of politics and political development in Latin America with an emphasis on those features which condition domestic and foreign policy making.

567. Political Systems of Latin America (3)

Prerequisite: Political Science 566.
Domestic and international politics of selected Latin American states.

568. The Mexican Political System (3)

Prerequisite: Political Science 101 or 103.
Principal factors in Mexican governmental decision making. Ideology, political groups, tactics of leaders and governmental structure.

571. Seminar in Cross-national Studies (3)

Prerequisite: Any upper division course in comparative politics.
Cross-national analysis of institutional norms, attitudes and behavior in relation to government; factors which determine patterns and styles of political participation in contemporary societies.

577. Principles of International Law (3)

The function of law in the international community. The historical development of the ideas and rules of international law and their place in the modern diplomatic and legal structure.

579. National Security Policy (3)

Objectives, instruments and consequences of national security policy.

GRADUATE COURSES

601. Seminar in the Scope and Method of Political Science (3)

The discipline of political science and systematic training in its methodology. Required of all applicants for advanced degrees in political science.

602. Seminar in Empirical Theory and Politics of Public Policy (3)

Prerequisite: Political Science 601.
Application of theoretical principles to public policies. Use of quantitative data and models to test theories. Stress on appropriate analytical methods for explaining government decisions and evaluating policy performance.

605. Seminar in Political Theory (3)

Maximum credit six units applicable on a master's degree.

620. Seminar in American National Government (3)

Maximum credit six units applicable on a master's degree.

622. Seminar in Metropolitan Government and Politics (3)

Prerequisite: Political Science 321 or 522 or 523.
Government and politics in the world's major metropolitan areas. Maximum credit six units applicable on a master's degree.

625. Seminar in Political Participation (3)

Prerequisite: Six upper division units in political science, three units of which must be from Political Science courses 320 through 344, 522 through 537.

American political culture and subculture groupings as related to various dimensions of political behavior.

630. Seminar in Politics (3)

Prerequisite: Six upper division units in political science, three units of which must come from Political Science courses 320 through 344, 522 through 537.

Process by which individuals and groups make demands upon political decision makers; emphasis on the styles, structures, channels and consequences of interest articulation. Maximum credit six units applicable on a master's degree.

635. Seminar in Politics of Public Policy (3)

Prerequisite: Political Science 601.

Examination of public policies, e.g., energy, environment, protection, taxation, income maintenance, population, health care, education, housing. Use of research findings to analyze policy process, to estimate probable consequences of alternative decisions, and to appraise governmental programs.

639. Seminar in Political Psychology (3)

Prerequisites: Six units selected from Psychology 340, 410, 412; Political Science 325, 326, 515A-515B, 555.

Psychological factors of the individual's political behavior; psychological theory as it applies to political variables such as: ideology, conflict, consensus and participation.

646. Seminar in Public Law (3)

Maximum credit six units applicable on a master's degree.

655. Seminar in General Comparative Political Systems (3)

Prerequisites: Political Science 555 or 561, and three additional upper division units in political science.

The field of comparative politics, including historical developments, major theoretical approaches, substantive concerns, uses and limitations of the comparative method, methodological innovations in study of foreign political systems.

656. Seminar in Western Political Systems (3)

Prerequisite: Six upper division units in political science.

Comparative study of European and other modern political systems. Conditions responsible for the attainment and maintenance of democratic government. The relationship between social modernity and the functioning of Western democratic political institutions.

658. Seminar in Communist Political Systems (3)

Prerequisite: Six upper division units in political science.

The differences and similarities among Communist nations in Europe and Asia, with particular reference to instruments of power and ideology. A comparison of Communist ruling techniques and processes.

661. Seminar in the Political Systems of the Developing Nations (3)

Prerequisite: Six upper division units in political science.

Theoretical analysis of political development, modernization and industrialization in the emerging nations. Search for valid generalizations about the non-Western political process. Political trends and developments in the developing nations.

667. Seminar in Latin American Political Systems (3)

Prerequisite: Political Science 555 or 561 or 566.

Political developments in selected Latin American nations. May be repeated with new content. Maximum credit six units.

675. Seminar in International Relations (3)

Maximum credit six units applicable on a master's degree.

685. Seminar in Theories of International Relations (3)

Prerequisite: Political Science 375.

Theoretical concepts used in the study of international political systems. Maximum credit six units applicable on a master's degree.

795. Problem Analysis (3)

Analytical treatment of selected problems in political science. Review of methods for investigation and reporting of data. Consideration of problems in preparation of project or thesis.

797. Research in Political Science (3) Cr/NC

Prerequisite: Consent of the department chair.

Research in political theory, political parties, comparative government, international relations, public law or American government.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with department chair and instructor.

Individual study. Maximum credit six units.

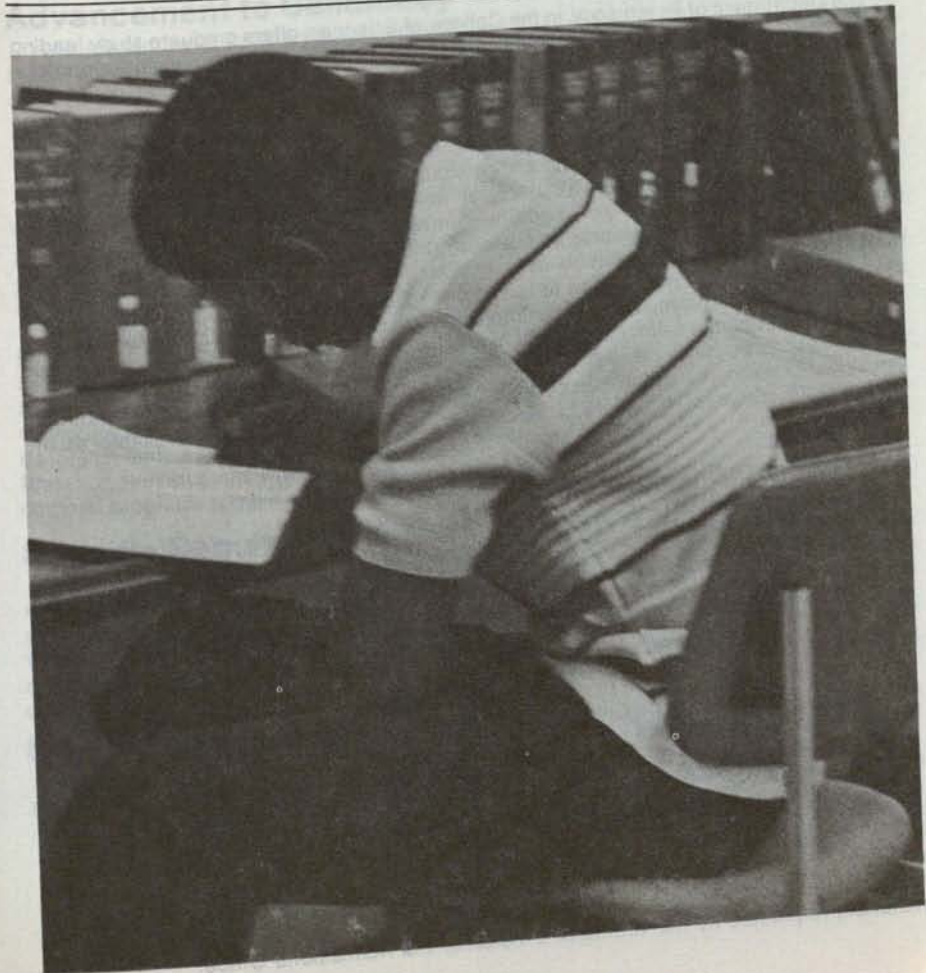
799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.



Psychology

Faculty

Chair, Department of Psychology: John M. Grossberg

Graduate Adviser: W. A. Hunrichs

Professors: Alf, Bryson, J., Dicken, Feierabend, Franzini, Gallo, Graf, Graham, Grossberg, Harari, Harrison, Hillix, Hunrichs, Kaplan, O., Karen, Kass, Kinnon, Koppman, Leckart, Leukel, Levine, Litrownik, McDonald, Mollenauer, O'Day, Penn, Plotnik, Radlow, Rodin, Sattler, Schulte, Segal, Sheposh, Stevens, Yaremko

Associate Professors: Borges, Bryson, R., DeFran, Hornbeck, Kaplan, R., Lynn, Price, Psomas, Saccuzzo, Sand, Smith, Spinetta

Assistant Professors: Brown, Fenson, Lee, McCordick, Scollay

Assistantships

Graduate teaching assistantships and graduate nonteaching assistantships in psychology are available to a limited number of qualified students. Application forms and further information may be obtained from the Chair, Graduate Assistantships Committee, Department of Psychology.

General Information

The Department of Psychology, in the College of Sciences, offers graduate study leading to the Master of Arts degree in Psychology and the Master of Science degree in Psychology. The Master of Arts program is a general psychology program emphasizing predoctoral preparation in one or more areas of psychology. The master of science degree programs offer a choice of study in two concentrations: clinical psychology, and industrial and organizational psychology. The master of science programs are intended to serve a dual purpose of preparation of the student for employment upon completion of the master's degree, as well as preparation for doctoral work in specified areas. The doctorate in psychology is not offered at San Diego State University.

Modern resources are available on campus, at the San Diego Zoo and other community facilities for graduate education and research in comparative, experimental and physiological psychology. Facilities for clinical practicum and community psychology field work are available on campus in our psychological clinic and in selected local mental health agencies. Opportunities for experience in industrial and organizational psychology are available at nearby military research and personnel-processing units as well as in other local industries. Experimental cubicles, equipment and supplies are available in the department for graduate research. Adequate computer facilities and services are available at the Computer Center.

Admission to Graduate Study

In seeking admission to the graduate program in psychology, the student should write directly to the Graduate Studies Adviser, Department of Psychology, requesting application materials. Detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms.

STUDENTS WILL BE ADMITTED TO GRADUATE PROGRAMS IN PSYCHOLOGY ONLY IN THE FALL SEMESTER AND APPLICATIONS MUST BE RECEIVED BY THE DEPARTMENT OF PSYCHOLOGY NOT LATER THAN FEBRUARY 1.

Concurrent with application to the department, the student must file an application for admission to San Diego State University with the Office of Admissions. Acceptance by the University does not guarantee acceptance to the psychology program.

To be considered for admission to the graduate programs in psychology, all students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Three of this bulletin. In addition, applicants must submit a copy of all transcripts of previous college work, three letters of recommendation from persons familiar with his/her academic performance, and score reports for the GRE Aptitude Test and the GRE Advanced Test in Psychology. **These materials must be submitted to the Department of Psychology by March 1 and are in addition to any materials requested by the Graduate Division or the Admissions Office.**

Students are advised to take the necessary examinations by December of the year prior to the year in which they are seeking enrollment.

To qualify for admission to the graduate program in psychology, the student must have:

1. An undergraduate major in psychology consisting of at least 24 upper division units with a grade point average of at least 3.0. The major must include work in general psychology, physiological psychology, statistical methods, psychological testing, abnormal psychology, and at least two laboratory courses in psychology. At San Diego State University these specific course requirements are met by Psychology 101, 210, 260, 270, 350, 405, 410 and one course from 411, 412, 413, 414, 415, 416, 417, 418 or 419.
2. A grade point average of not less than 3.0 in the last 60 semester units of the undergraduate program.
3. A total scale score of 950 or above on the GRE Aptitude Test.
4. A score above the 50th percentile rank on the GRE Advanced Test in Psychology. The student should take this test as well as the GRE Aptitude Test in sufficient time so that the results will be available by a March 1 deadline. It should be requested by the student that the score reports for these tests be forwarded directly to the Admissions office and the Department of Psychology.

Meeting all of the indicated criteria does not guarantee admission to the program, since admission is also dependent on the facilities and resources available in the department.

Advancement to Candidacy

The student must satisfy the general requirements for advancement to candidacy as stated in Part Three of this bulletin. Having obtained three grades of C or lower in graduate courses automatically precludes advancement to candidacy.

In addition, students must have an approved thesis proposal prior to advancement to candidacy.

General Requirements for All Master's Degree Programs

In addition to meeting the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units (36 units for the clinical concentration) approved by the departmental graduate coordinator. Students who are not accepted into the graduate program are not permitted to enroll in any 600-numbered (or higher) courses in psychology.

Psychology 570 or 670 is required for all master's degree programs in the Department of Psychology, unless similar content has been completed at the undergraduate level. Psychology 798 (Colloquium) and 799A (Thesis), and an oral examination on the thesis, are also required in all master's degree programs in the Department of Psychology. A maximum of two units credit in 798 (Colloquium) can apply toward completion of the program. There is no foreign language requirement for any advanced degree in psychology at San Diego State University, but students who aspire to a doctorate in this field should be advised that some doctoral programs require a reading knowledge in one or two languages.

Specific Requirements for the Master of Arts Degree

Within the 30-unit general requirement set forth above, the master of arts program requires completion of at least 30 units of courses in psychology, no more than seven units of which may be at the 500 level, including Psychology 605, 798 (Colloquium), and 799A (Thesis). Psychology 570 or 670 is required for this program if similar content has not been completed as an undergraduate. Psychology 580 is also required for this program if similar content has not been completed as an undergraduate.

Specific Requirements for the Master of Science Degree

Within the 30-unit (36 units for clinical psychology) general requirement set forth above, the master of science degree may be obtained with the following concentrations:

1. **Clinical Psychology:** At least 36 units of courses in psychology, no more than seven units of which may be at the 500 level, including Psychology 650, 651 or 652, 654, 655 or 656, 796 (Practicum), 798 (Colloquium), and 799A (Thesis) Psychology 570 or 670 is required for this program if similar content has not been completed as an undergraduate. Psychology 551 is also required for this program if similar content has not been completed as an undergraduate. Registration for six units of Psychology 796

(Clinical practicum) is contingent upon prior cooperative arrangement by the student and the Department of Psychology Practicum Committee, and is exempt from the University's requirement that courses graded Cr/NC be limited to 30% of units for the master's degree.

2. **Industrial and Organizational Psychology:** At least 30 units, 24 units of which must be in psychology, including Psychology 621, 622, 675, 797, 798 (Colloquium) and 799A (Thesis). Six units of graduate electives may be selected from other departments with prior approval of the Graduate Adviser. Psychology 570 or 670 is required for this program if similar content has not been completed as an undergraduate. No more than seven units may be taken from 500-level courses.

Area Requirement Courses

The courses listed below constitute core courses required for the various graduate programs as listed in the Specific Requirements.

- 551. Clinical Psychology: Theory and Practice (4)
- 570. Advanced Statistics (3)
- 580. History of Psychology (3)
- 605. Seminar in Theoretical Psychology (3)
- 621. Seminar in Personnel Psychology (3)
- 622. Seminar in Organizational Psychology (3)
- 650. Seminar in Counseling and Psychotherapy and Laboratory (4)
- 651. Seminar in Behavior Disorders of Childhood and Adolescence (3)
- 652. Seminar in Behavior Disorders of Adults (3)
- 654. Seminar in Psychological Assessment I (4)
- 655. Seminar in Psychological Assessment II (4)
- 656. Seminar in Behavior Therapy and Laboratory (4)
- 670. Experimental Design (3)
- 675. Seminar in Principles of Test Construction (3)
- 796. Clinical Practicum (3 or 6) Cr/NC
- 797. Research (1-3) Cr/NC
- 798. Special Study (1-3) Cr/NC
- 799A. Thesis (3) Cr/NC

Additional Courses

The following courses are not part of area requirements and are offered as electives to complete the master of arts and master of science programs. The student is advised to consult the current class schedule since some of the courses may not be offered every semester.

- 517. Psychology of Verbal Behavior and Learning (3)
- 571. Correlational Analysis (3)
- 587. Advanced Principles of Learning (3)
- 596. Selected Topics in Psychology (3)
- 700. Seminar (3)
- 718. Seminar in Research in Operant Behavior (3)
- 745. Seminar in Problems in Social Psychology (3)
- 746. Seminar in Political Psychology (3)
- 757. Seminar in Selected Topics in Clinical Psychology (3)
- 760. Seminar in Physiological Correlates of Behavior (3)
- 761. Seminar in Ethology and Comparative Psychology (3)
- 764. Seminar in Psychopharmacology and Behavioral Disorders (3)

Courses Acceptable on Master's Degree Programs in Psychology

UPPER DIVISION COURSES

- 517. Psychology of Verbal Behavior and Learning (3)**
Prerequisites: Psychology 210 and 270.
Analysis of linguistic and cognitive processes within the context of social behavior. (Formerly numbered Psychology 317.)

- 551. Clinical Psychology: Theory and Practice (4) I, II**
Two lectures and six hours of laboratory.
Prerequisites: Psychology 350, 405 and consent of instructor.
Clinical assessment, theory and practice of behavior change, and professional ethics.

- 570. Advanced Statistics (3) I, II**
Prerequisite: Psychology 270.
Further study of quantitative methods in psychology with emphasis on methods of correlation, chi-square, and contingency, and an introduction to the analysis of variance. (Formerly numbered Psychology 470.)

GRADUATE COURSES

Graduate courses in psychology are not open to postbaccalaureate unclassified students.

Priority for enrollment in graduate courses in psychology is given to psychology students who have the courses as requirements in their respective programs.

- 605. Seminar in Theoretical Psychology (3)**
Prerequisites: Psychology 580 and consent of graduate adviser.
Basic nature of theories, their relationships to data, and the characteristics of various types of constructs used in psychological theories.
Course may be repeated for a maximum of six units provided it is offered by a different instructor and the subject matter is substantially different. To enroll in the seminar for the second time, the student must submit a petition to be approved by the professor of the course and the graduate adviser.

- 621. Seminar in Personnel Psychology (3)**
Prerequisites: Psychology 320 and consent of graduate adviser.
Problems and procedures in selection, classification, and performance appraisal, focusing on testing in industry, the interview, and other selection and assessment devices. Criterion development and measurement methods.

- 571. Correlational Analysis (3)**
Prerequisites: Psychology 270 and consent of instructor.
Quantitative methods in psychology with emphasis on methods of correlation, multiple correlation, partial correlation, and factor analysis.

- 580. History of Psychology (3) I, II**
Limited to psychology majors with senior standing or graduate students.
The historical background of modern psychology.

- 587. Advanced Principles of Learning (3)**
Prerequisites: Psychology 210, 270 and consent of instructor.
The empirical data, basic principles and theoretical positions of major learning theorists.

- 596. Selected Topics in Psychology (3)**
Prerequisite: Six units of psychology.
Intensive study in specific areas of psychology. Topic to be announced in the class schedule. Maximum credit six units.

- 622. Seminar in Organizational Psychology (3)**
Prerequisites: Psychology 321 and consent of graduate adviser.
Applications of psychological principles and methods of investigation to problems of industrial relations and motivation of employees; factors influencing morale and employee productivity; criteria of job proficiency; psychological aspects of worker-management relationships and leadership.

- 650. Seminar in Counseling and Psychotherapy and Laboratory (4)**
Two lectures and six hours of laboratory.
Prerequisites: Psychology 551 and consent of graduate adviser.
Supervised practice in the application of psychotherapeutic and counseling techniques from selected cognitive, dynamic, interpersonal, and behavioral approaches.
This course is open only to students accepted in the clinical psychology concentration.

- 651. Seminar in Behavior Disorders of Childhood and Adolescence (3)**
Prerequisites: Psychology 330, 350 and consent of graduate adviser.
Contemporary approaches to emotional and behavioral problems of childhood and youth. Considers developmental, cognitive and social variables as well as theory and treatment.
- 652. Seminar in Behavior Disorders of Adults (3)**
Prerequisites: Psychology 350 and consent of graduate adviser.
Contemporary approaches to emotional and behavioral problems of adulthood. Considers developmental, cognitive and social variables as well as theory and treatment.
- 654. Seminar in Psychological Assessment I (4)**
Two lectures and six hours of laboratory.
Prerequisites: Psychology 350, 405, and consent of graduate adviser.
Theory and practice in assessment of intelligence and special abilities.
- 655. Seminar in Psychological Assessment II (4)**
Two lectures and six hours of laboratory.
Prerequisites: Psychology 654 and consent of graduate adviser.
Theory and practice in assessment of special abilities, personality and behavior disorders.
- 656. Seminar in Behavior Therapy and Laboratory (4)**
Two lectures and six hours of laboratory.
Prerequisites: Psychology 551 or 587, and consent of graduate adviser.
Supervised practice in the application of behavior therapy (individual treatment) and behavior modification (group method).
This course is open only to students accepted in the clinical psychology concentration.
- 670. Experimental Design (3)**
Prerequisites: Psychology 410, consent of graduate adviser and instructor.
Principles and methods of planning and carrying out systematic investigations to answer questions concerning human behavior with stress on the interdependence of experimental design and statistical evaluation of results. Practice in formulation of testable hypotheses, techniques of equating groups, solution of sampling problems, and interpretation of results.
- 675. Seminar in Principles of Test Construction (3)**
Prerequisites: Psychology 405, 670 and consent of graduate adviser.
Detailed consideration of adequate sampling techniques, item construction, item analysis, determination and enhancement of reliability and validity of tests.
- 700. Seminar (3)**
Prerequisite: Consent of graduate adviser.
An intensive study in advanced psychology. May be repeated with new content. Topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.
- 718. Seminar in Research in Operant Behavior (3)**
Prerequisites: Psychology 316 or 416 or 587 and consent of graduate adviser.
Selected research topics in the experimental analysis of behavior. Maximum credit six units.
- 745. Seminar in Problems in Social Psychology (3)**
Prerequisites: Psychology 340 or 412, and consent of graduate adviser.
Factors influencing the formation of attitudes, opinions, and stereotypes; the establishment of roles during socialization of the individual; social crises, change, and resistance to change; the causes and alleviation of interpersonal conflict.
Course may be repeated for a maximum of six units provided it is offered by a different instructor and the subject matter is substantially different. To enroll in the seminar for the second time, the student must submit a petition to be approved by the professor of the course and the graduate adviser.
- 746. Seminar in Political Psychology (3)**
Prerequisites: Psychology 340 or 410, and consent of graduate adviser.
Psychological factors of the individual's political behavior; psychological theory as it applies to political variables such as: ideology, conflict, consensus, and participation.

- 757. Seminar in Selected Topics in Clinical Psychology (3)**
Prerequisites: Psychology 551 and consent of graduate adviser.
Advanced study of such clinical topics as community mental health, forensic psychology, ethics, and autogenic training. Topics will vary on a semester basis.
Course may be repeated for a maximum of six units provided it is offered by a different instructor and the subject matter is substantially different. To enroll in the seminar for the second time, the student must submit a petition to be approved by the professor of the course and the graduate adviser.
- 760. Seminar in Physiological Correlates of Behavior (3)**
Prerequisites: Psychology 260 or six units of biology; and consent of graduate adviser.
An exploration of current research and theory in physiological psychology with emphasis on behavioral correlates and psychophysiology.
Course may be repeated for a maximum of six units provided it is offered by a different instructor and the subject matter is substantially different. To enroll in the seminar for the second time, the student must submit a petition to be approved by the professor of the course and the graduate adviser.
- 761. Seminar in Ethology and Comparative Psychology (3)**
Prerequisites: Psychology 414 or 417 or Biology 411, or Zoology 570, and consent of graduate adviser.
Current problems in ethology and comparative animal behavior. Maximum credit six units applicable on a master's degree. Not open to students with credit in Zoology 625.
- 764. Seminar in Psychopharmacology and Behavioral Disorders (3)**
Prerequisites: Psychology 260 and consent of graduate adviser.
Drugs as cause and cure of behavioral problems. A review of drugs commonly used to change behavior in primary schools, psychiatric centers, in-home programs and mental hospitals.
- 796. Clinical Practicum (3 or 6) Cr/NC**
Prerequisites: Psychology 551 and 650 and 654 and consent of the Department of Psychology Practicum Committee.
The student must arrange his practicum setting in cooperation with the chairman of the Psychology Department Practicum Committee and with the express approval of that committee during the semester prior to enrolling for credit in this course. Maximum credit six units.
This course is open only to students accepted in the clinical psychology concentration.
- 797. Research (1-3) Cr/NC**
Prerequisite: Consent of graduate adviser.
Research in one of the fields of psychology. Maximum credit six units applicable on a master's degree.
- 798. Special Study (1-3) Cr/NC**
Prerequisite: Consent of graduate adviser.
Individual projects involving library or laboratory research in any area of psychological investigation or interest. Maximum credit six units applicable on a master's degree.
- 799A. Thesis (3) Cr/NC**
Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree. Credit is contingent upon acceptance of the completed thesis by the Department of Psychology.
- 799B. Thesis Extension (0) Cr/NC**
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

Public Administration and Urban Studies

Faculty

Director, Public Administration and Urban Studies: J. A. Clapp
 Coordinator, City Planning Program: A. W. Corso
 Coordinator, Criminal Justice Administration Program: R. L. Boostrom
 Coordinator, Public Administration Program: W. R. Bigger
 Graduate Advisers:
 Master of Public Administration: W. R. Bigger, W. H. Dutton, J. A. Gazell, S. H. Gilbreath,
 D. K. Gupta, R. A. Hamilton, J. D. Kitchen, J. D. Ross, R. L. Stock, M. G. Walshok
 Master of Science in Criminal Justice Administration: R. L. Boostrom, G. T. Gitchoff,
 D. W. Perez
 Master of City Planning: J. A. Clapp, A. W. Corso, L. M. Rea
 Professors: Bigger, Clapp, Gazell, Gilbreath, Gitchoff, Kitchen
 Associate Professors: Boostrom, Dutton, Hamilton
 Assistant Professors: Corso, Gupta, Perez, Rea, Ross, Stock, Walshok

General Information

Public Administration and Urban Studies, in the College of Professional Studies, offers graduate study leading to the Master of Public Administration degree, the Master of Science in Criminal Justice Administration degree, and the Master of City Planning degree. Research facilities provided include the Institute of Public and Urban Affairs and the Public Administration Center. The San Diego metropolitan community affords significant internship opportunities for the graduate student in federal, state, and local government agencies.

Public Administration and Urban Studies is a member of the National Association of Schools of Public Affairs and Administration.

Master of Public Administration Degree

This degree permits the selection, under advisement, of a program of course and seminar work which may be oriented toward a generalist approach or toward an emphasis on organizational behavior and development, public policy, fiscal policy and administration, recreation administration, or urban administration. Since management responsibilities are shared by administrators in a number of professional areas in the public service, the student is encouraged to supplement his study of government and administration with graduate courses in economics, sociology, psychology, business administration, and other related areas.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. The student must also satisfy the following requirements: (1) a 3.0 grade point average in the undergraduate major and a 2.75 overall average; (2) an acceptable score on the Graduate Record Examination Aptitude Test; (3) two letters of reference from individuals who have known the student's academic work and/or employment performance; and (4) satisfactory completion of Public Administration 301, 330, 341, 450 or equivalent courses.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, as described in Part Three of this bulletin and be recommended by the faculty. In order to be recommended for advancement, a student must have (1) achieved a grade point average of 4.0 in the first 12 units of courses on the official program of study, or (2) passed satisfactorily a general written examination in public administration. The examination will be offered each semester for all students who have completed 12 or more units of study toward the master's degree.

Specific Requirements for the Master of Public Administration Degree

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Three of this bulletin. Students must also complete as a part of their programs: (1) at least 27 units of 600- and 700-numbered courses including Public Administration 600, 605 or 606, 620, 630, 650 and 660; (2) a minimum of nine additional units of upper division or graduate courses in public administration or related fields selected under advisement. An internship of 12 units (one semester) beyond the 36 units of course work is required of students who have not had equivalent experience. Public Administration 799A, Thesis, must be included in the program unless Plan B with a comprehensive examination in lieu of the thesis is selected by the student with the approval of a graduate adviser. The internship normally will be served in a governmental agency where the intern will perform duties of an administrative nature. Placements typically will be made in the office of a city manager, a budget office, a personnel office or in the office of the head of a major operating department.

Master of City Planning Degree

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. The student must also satisfy the following requirements: (1) possess a bachelor's or higher degree in also satisfy the following requirements: (1) possess a bachelor's or higher degree in sociology, geography, political science, economics, architecture, or landscape architecture, or any fields related to planning (students with degrees other than those listed may be allowed to enter the program under appropriate conditions); (2) have had a minimum of six units in political science, six units in sociology, six units in economics, and three units in geography, or the equivalent of these courses. In the event that deficiencies occur in a student's background and training, the graduate committee will examine the student's past record and recommend a program to make up the deficiencies.

Students seeking admission to the graduate program in urban planning which leads to the Master of City Planning degree should address their inquiries to the director of the program. Detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms. As there are specific requirements for the program it is not sufficient merely to file the general university admission forms. Students are admitted to the program only in the fall semester of each year and applications must be received no later than April 8.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, as described in Part Three of this bulletin and be recommended by faculty. In order to be recommended for advancement, a student must have (1) achieved a grade point average of 3.3 in City Planning 610, 620, 650, 670 and 700, or (2) passed satisfactorily a general written examination in city planning. The examination will be offered at the end of the spring semester for all students who have completed 12 or more units of study toward the master's degree.

Specific Requirements for the Master of City Planning Degree

In addition to meeting the requirements for classified graduate standing for the purpose of pursuing the Master of City Planning degree, the student must complete an approved program of studies consisting of at least 56 units of approved upper division and 600- and 700-numbered courses, to include:

1. City Planning 700, Urban Design and Land Use Planning Studio (3)
 City Planning 610, Seminar in Urban Planning (3)
 City Planning 620, Seminar in Urban Planning Methodologies (3)
 City Planning 630, Seminar in Urban Planning Implementation (3)
 City Planning 640, Seminar in Urban Planning Theory (3)

2. Public Administration 512, The Metropolitan Area (3)
3. Nine units of 600- and 700-numbered courses in planning administration, history, readings and research.
4. City Planning 796, Internship in Urban Planning (3-6)
5. Electives to complete the program will be selected with the assistance of the adviser from appropriate courses in anthropology, art, economics, geography, political science, social work, sociology, and other disciplines deemed appropriate.
6. Students in Plan B are required to pass comprehensive examinations in five areas of study. Students who have the approval of the graduate adviser to pursue Plan A must include on their programs City Planning 799A, Thesis.

At least 30 units must be completed in residence at San Diego State University, and at least 24 units of program courses shall be enrolled in and completed after advancement to candidacy.

Not more than a total of nine units in courses 797 and 798 will be accepted for credit toward the degree.

Master of Science in Criminal Justice Administration Degree

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin.

Students seeking admission to the graduate program in criminal justice administration which leads to the Master of Science in Criminal Justice Administration degree should address their inquiries to the director of the program. Detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms. As there are specific requirements for the program it is not sufficient merely to file the general university admission forms.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, as described in Part Three of this bulletin and be recommended by the faculty. In order to be recommended for advancement, a student must have passed satisfactorily a general written examination in criminal justice administration. An oral examination may also be required by the Graduate Review Committee.

Specific Requirements for the Master of Science Degree in Criminal Justice Administration

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Three of this bulletin. The student must also complete as a part of his program: (1) at least 24 units of 600- and 700-numbered courses including Public Administration 600 and Criminal Justice Administration 601, 602, 604 and 797; (2) a minimum of six additional units of 500-numbered or graduate courses in criminal justice administration or related fields selected under advisement. An internship of three units beyond the 30 units of course work is required of students who have not had equivalent experience. Criminal Justice Administration 799A, Thesis, must be included in the program unless Plan B with a comprehensive examination in lieu of the thesis is selected by the student with the approval of the Coordinator of the Criminal Justice Administration program.

Courses Acceptable on Master's Degree Programs in Public Administration and Urban Studies

UPPER DIVISION COURSES

CRIMINAL JUSTICE ADMINISTRATION COURSES

- 502. Juvenile Deviance and the Administration Process (3)**
Prerequisite: Criminal Justice Administration 321.
Problems of implementing and evaluating policies and programs for prevention of juvenile delinquency and treatment of juvenile offenders; an assessment of the proposed standards and goals for juvenile justice administration.
- 510. Contemporary Issues in Law Enforcement Administration (3)**
Prerequisite: Criminal Justice Administration 310.
Assessment of problems confronting administrators of law enforcement agencies and of recent efforts to enhance the capability of agencies to control criminal activity while guarding individual liberties.
- 520. Prosecutorial Function in Administration of Justice (3)**
Prerequisite: Criminal Justice Administration 301.
Analysis of prosecutor's function at local, state and federal levels and in selected foreign nations, including appraisal of proposed national standards and goals for prosecutors.
- 531. Probation and Parole (3) I**
Prerequisite: Criminal Justice Administration 301 or 330.
Basic concepts, history, legislation, and practices used in work with juveniles and adults who have been placed on probation or parole; criteria of selection, methods of supervision, and elements of case reporting.
- 540. Applied Planning, Research and Program Evaluation in Criminal Justice Administration (3)**
Prerequisite: Criminal Justice Administration 301.
Application of planning, research and program development and evaluation principles to the field of criminal justice.
- 543. Community Resources in Criminal Justice Administration (3)**
Prerequisite: Criminal Justice Administration 301.
Exploration of present and probable roles of public and private agencies and volunteers in criminal justice administration.
- 550. Crime Prevention Administration and Social Control (3)**
Prerequisites: Criminal Justice Administration 200 and 301.
Examination of policies and probable consequences of both public and private crime prevention efforts from a social control perspective.

PUBLIC ADMINISTRATION COURSES

- 510. Intergovernmental Relations in the United States (3) II**
Prerequisite: Public Administration 310 or 312 or 315.
Constitution, political and administrative characteristics of American federalism, including regionalism, interstate compacts, and grants-in-aid.
- 512. The Metropolitan Area (3) I, II**
Prerequisite: Public Administration 310 or 312.
Problems of government and administration arising from population patterns and physical and social structures of metropolitan areas.
- 520. Decision Making in the Urban Community (3) I, II**
Prerequisite: Public Administration 310.
Processes of decision making in the management of urban communities.
- 530. Negotiation and Bargaining in the Public Service (3)**
Prerequisite: Public Administration 301.
Specific issues such as strategies, the effects of threat, the physical setting, use of a third-party observer and theories of advocacy. Emphasis on analyzing simulations of the bargaining process and developing effective negotiation skills.

531. Governmental Employer-Employee Relations (3) I, II

Prerequisite: Public Administration 330.

Historical development, legal basis and organizational implications of governmental employer-employee relations; emphasis on California local government.

540. Public Administrative Systems Analysis (3)

Prerequisites: Public Administration 301 and a statistics course.

Systems and organization analysis; work standards and units; procedures analysis; administrative planning.

570. Administrative Law (3) II

Prerequisite: Public Administration 301.

The law of public office and public officers, powers of administrative authorities, scope and limits of administrative powers, remedies against administrative action. (Formerly numbered Public Administration 470.)

580. Comparative Public Administration (3) II

Prerequisite: Public Administration 301.

Administrative organization and process of selected foreign and American governments. Analysis of the cultural basis of administrative systems.

**GRADUATE COURSES
IN PUBLIC ADMINISTRATION****600. Scope of Public Administration (3)**

Prerequisite: Six upper division units in public administration.

The development of public administration as an academic discipline; a systematic evaluation of the rise and operations of large-scale public bureaucracies.

605. Seminar in Research Methods in Public Administration (3)

Prerequisite: Public Administration 600.

Examination of basic research approaches, i.e., legal, historical, and small-group, etc.

606. Seminar in Quantitative Approaches to Public Administration (3)

Prerequisite: Public Administration 600.

Study of techniques for the gathering of data on public administration with reference to survey research and methodology; examination of various data analysis methods.

620. Seminar in Management of Urban Governments (3)

Selected problems in the management of urban governments. Maximum credit six units applicable on a master's degree.

621. Seminar in The Metropolitan Area (3)

Prerequisite: Public Administration 310, 512 or 520.

Selected problems in the government and administration of the world's major metropolitan areas.

630. Seminar in Public Personnel Administration (3)

Prerequisite: Public Administration 600.

Analysis of selected problems in personnel administration; special emphasis on organizational development and consultation skills as emerging personnel functions. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

632. Seminar of Organization Development in the Public Sector (3)

Prerequisite: Public Administration 600.

Organization development theory and practice. Emphasis on organizational diagnosis, intervention theory, team building and process consultation skills as they apply to public sector organizations.

633. Collective Bargaining in the Public Sector (3)

Prerequisite: Public Administration 530 or 531.

Simulation of public sector collective bargaining. Students will participate in all facets of the bargaining process including data collection, proposal preparation, formal/informal negotiation, fact-finding and mediation. Videotape feedback will be used extensively.

640. Seminar in Public Administration (3)

Selected topics. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

642. Seminar in Administrative Theory (3)

Prerequisite: Public Administration 600.

Organization and management; the executive role, decision making; bureaucracy; authority and power; communication and control and organizational system; tactics and strategies in effective management.

643. Seminar in Administrative Behavior (3)

Prerequisite: Public Administration 340.

Intrapersonal, interpersonal and group development knowledge which enhances the administrator's effectiveness. Simulations and structured experiential designs examine behaviors encountered in public bureaucracies.

650. Seminar in Public Financial Management (3)

Prerequisite: Public Administration 450.

Problems in the administration and budgeting of public revenues.

660. Administration and Public Policy Development (3)

Prerequisite: Twelve upper division units in social science.

Social, political and administrative problems involved in governmental program development and change.

662. Science, Technology and Public Policy (3)

Prerequisite: Public Administration 600, or equivalent seminar in another department.

The influence of science and technology on governmental policy making; scientists as administrators and advisers; governmental policy making for science and technology; government as a sponsor of research and development.

670. Seminar in Administrative Law (3)

Prerequisite: Public Administration 570.

Legal aspects and problems of administration at the federal, state and local levels.

680. Seminar in Comparative Administration (3)

Prerequisite: Public Administration 301.

Selected problems in administration, organization, and processes of foreign and international governments. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

791. Readings in Public Administration (3)

Prerequisite: Credit or concurrent registration in Public Administration 600.

Selected readings in the literature of public administration.

792. Problem Analysis (3)

Analytical treatment of selected problems in Public Administration. Review of methods for investigation and reporting of data. Consideration of problems in preparation of projects or thesis.

796. Internship in Public Administration (3-12) Cr/NC

Students will be assigned to various government agencies and will work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences. Admission by consent of instructor.

The 12 units of 796 will be exempt from the University's requirement that courses graded Cr/NC be limited to 30% of units for the master's degree.

797. Research in Public Administration (3) Cr/NC

Prerequisite: Consent of Director, Public Administration and Urban Studies. Research in one of the areas of public administration. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Individual study. Maximum credit six units applicable on a master's degree. Prerequisite: Consent of staff, to be arranged with the Director and instructor.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP. Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

GRADUATE COURSES IN CITY PLANNING

- 610. Seminar in Urban Planning (3)**
Prerequisite: Public Administration 320.
Introductory seminar to the Master of City Planning Program, focusing on the planner's perspective of urban problems and goal formation.
- 620. Seminar in Urban Planning Methodologies (3)**
Prerequisite: City Planning 610.
Procedures and analytical techniques in urban planning.
- 625. Quantitative Techniques in Urban Planning (6)**
Three lectures and nine hours of laboratory.
Prerequisites: City Planning 610 and credit or concurrent registration in City Planning 620 for city planning majors.
Contemporary techniques and methodologies of planning analysis; a practicum emphasizing survey research, environmental impact techniques; case studies in demographic and economic analysis.
- 630. Seminar in Urban Planning Implementation (3)**
Prerequisite: City Planning 620.
Analysis of the content and function of zoning, subdivision regulation, codes, capital budgeting, urban renewal, model cities, and other implementation methods and programs.
- 635. Seminar in Housing and Housing Policy (3)**
Study, definition and analysis of housing needs and problems. Public policies and programs addressed to housing issues. Alternative solutions and the role of the private and public sectors.
- 640. Seminar in Urban Planning Theory (3)**
Prerequisite: City Planning 630.
Alternative theories of planning and organization of the planning function. Emphasis on conceptual foundations, relationship to governmental structure, decision making, and ideological and ethical orientations.
- 650. Seminar in Urban Theory (3)**
Prerequisite: Public Administration 320.
Study of the various empirically and normatively based theories of the city and urbanization process, with emphasis on communication and transaction and institutional approaches.
- 665. Seminar in Planning Policy Analysis (3)**
Investigation of issues, techniques and examples of policy design and evaluation for urban problems and relationships to the urban planning process.
- 670. History of Urban Planning (3)**
History of urban development and of the field of urban planning.
- 680. Seminar in Readings in Urban Planning (3)**
Selected topics in urban planning. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.
- 700. Urban Design and Land Use Planning Studio (3)**
One lecture and six hours of laboratory.
Prerequisite: City Planning 620.
Laboratory course concerned with graphic expression, principles of land use planning, land development, and urban design. Project integrating principles.
- 710. Seminar in Theories of Urban Design (3)**
Perspectives and methodologies of contemporary urban design and its contribution toward improving the quality of the physical, social and economic environment.
- 720. Seminar in Land Use and Environmental Law (3)**
Cases and studies in zoning, coastal planning, growth management and environmental assessment.
- 730. Seminar in Urban Transportation Planning (3)**
Issues, techniques and practices in urban transportation planning with general emphasis on interrelations between transportation and land use planning.

796. Internship in Urban Planning (3-6) Cr/NC

Students will be assigned to various government agencies and will work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences.

797. Seminar in Research in Urban Planning (3) Cr/NC

Prerequisite: Consent of Director of City Planning Program.
Research in one of the areas of urban planning. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff.
To be arranged with Director of City Planning and instructor. Individual study. Maximum credit six units.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned symbol of SP.
Registration required in any semester or term following assignment of SP in 799A in which student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

GRADUATE COURSES IN CRIMINAL JUSTICE ADMINISTRATION

601. Seminar in the Administration of Criminal Justice (3)

Prerequisite: Criminal Justice Administration 301 or 310.
Administrative problems of criminal justice systems.

602. Seminar in the Criminal Justice System as a Social Institution (3)

Prerequisite: Criminal Justice Administration 301.
Examination of criminal justice system as both cause and consequence of social change; nature of institutional change with application to criminal justice system components.

604. Seminar in Criminal Justice and Urban Administration (3)

Prerequisite: Criminal Justice Administration 540.
Critical analysis of influences on crime control and the criminal justice process of actions by urban administrators, legislators and the private sector in areas such as housing, education, public health and transportation, and urban development policies.

610. Seminar in Theory, Research and Analysis in Law Enforcement Administration (3)

Prerequisite: Criminal Justice Administration 301.
Exploration and application of potential role of theory, research and analysis in the administration of law enforcement agencies.

630. Seminar in Theory, Research and Analysis in Correctional Administration (3)

Prerequisite: Criminal Justice Administration 330.
Exploration and application of potential role of theory, research and analysis in the administration of correctional agencies and institutions.

631. Seminar in Correctional Group Method (3)

Prerequisite: Sociology 513 or 514 or Criminal Justice Administration 321 or 531.
An exploration of current research and use of group methods in the correctional segment of the criminal justice system.

633. Seminar in Judicial Administration (3)

Prerequisite: Criminal Justice Administration 333.
Exploration of leading issues from state and federal perspectives along with the interrelationships between courts and other components of the justice system, especially police and correctional agencies.

660. Seminar in Selected Topics in Criminal Justice Administration (3)

Prerequisite: Criminal Justice Administration 601 or 602.

Analysis of contemporary issues of major import to the administration of criminal justice. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

791. Seminar in Readings in Criminal Justice Administration (3)

Prerequisite: Six graduate units in criminal justice administration.

Selected readings in the literature of criminal justice administration.

797. Research in Criminal Justice Administration (3) Cr/NC

Prerequisite: Consent of Coordinator of Criminal Justice Administration.

Research in one of the areas of criminal justice administration. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with Coordinator and instructor.

Individual study. Maximum credit six units applicable on a master's degree.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

**Recreation****Faculty**

Chair, Department of Recreation: M. Duncan

Graduate Adviser: M. Duncan

Professor: Hanson

Associate Professors: Duncan, Geba, Lamke, Peterson

Assistant Professors: Dustin, Hutchinson, Namba

General Information

The Department offers an undergraduate degree and advanced course work in recreation. Graduate courses in recreation may be used toward fulfilling the requirements for master's degrees in other departments with the approval of the student's graduate adviser.

UPPER DIVISION COURSES

(Also Acceptable for Advanced Degrees)

548. Aquatic Administration (3)

Management of swimming pools, beaches, lakes and marinas; safety factors; legal requirements; health standards; facilities and programming. (Formerly numbered Recreation 448.)

549. Camp Administration (3)

Prerequisite: Recreation 110.

Operation of resident, day and travel camps. Staff management, health and safety, finances, food services, maintenance, planning and publicity. (Formerly numbered Recreation 449.)

575. Management of Recreation Areas and Facilities (3) I, II

Prerequisite: Recreation 465.

Role of the recreation administrator in the planning, acquisition, development, financing, staffing and maintaining of recreational lands, waters, and structures. Use of natural and man-made resources in the environment. (Formerly numbered Recreation 475.)

580. Leisure and The Aging Process (3)

Concepts of the relationship between leisure and gerontology are examined. Influence of leisure and recreation on work and life satisfaction of older adults.

GRADUATE COURSES**604. Seminar in Problems in Recreation (3) Alternate Years**

A survey of current problems facing the recreation profession, a review of literature, discussion of trends and observation of school situations together with the analysis and evaluation of actual problems. Written reports are required.

705. Seminar in Park Management (3) Alternate Years

Prerequisite: Recreation 465.

Fundamentals of general park maintenance. Principles of planning and development. Personnel and budget problems unique to park management. Coordination of activities with other public agencies.

760. Recreation Administration and Supervision (3) Alternate Years

Prerequisites: Recreation 465 and 484.

Methods, techniques and evaluation systems used by chief administrators, department heads and supervisors in both public and private agencies.

761. Seminar in Specialized Facilities (3)

Prerequisite: Recreation 575.

Management methods in planning, developing and operating specialized recreation facilities such as golf courses, zoos and aquaria, botanical gardens and arboreta, beaches and marinas, centers for the handicapped, sports stadia, and others. May be repeated once in a different area of specialization.

Russian

Faculty

Chair, Department of Germanic and Slavic Languages and Literatures: L. Kozlik
 Graduate Adviser: Vytas Dukas
 Credential Adviser: Vytas Dukas
 Professors: Dukas, Fetzer, Kozlik

General Information

The Department of Germanic and Slavic Languages and Literatures, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Russian.

The Master of Arts degree provides advanced training for (a) students who plan to terminate their graduate studies at the master's level, and (b) those who plan to proceed to a doctoral degree in Russian or in Slavic linguistics.

There is a full range of graduate courses in Russian literature and in Slavic linguistics, and the student may concentrate in the area of preference. Library resources, both books and periodicals, provide excellent research bases in both areas.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. An undergraduate major in Russian, including 24 upper division units, must have been completed, at least six units of which must have been in a survey course in Russian literature.

Advancement to Candidacy

In addition to meeting the requirements for advancement to candidacy as described in Part Three of this bulletin, students may be required to pass a qualifying examination in Russian given by the Department of Germanic and Slavic Languages and Literatures.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units which includes a major consisting of at least 24 units in Russian, including at least 18 units in 600- and 700-numbered courses, including Russian 799A, Thesis. If Plan B is followed, the student must pass a comprehensive examination in lieu of Russian 799A.

Courses Acceptable on Master's Degree Programs in Russian

UPPER DIVISION COURSES

555A-555B. The Russian Short Story, Drama and Poetry of the Nineteenth Century (3-3)

Development of the Russian short story, drama and poetry of the nineteenth century.

561A-561B. The Russian Novel of the Nineteenth Century (3-3)

Development of the Russian novel of the nineteenth century.

563. Russian Literature of the Twentieth Century (3)

Poetry, prose and drama of the twentieth century.

570. Slavic Linguistics (3)

Prerequisites: Russian 202 and 212.
 Structural and comparative Slavic linguistics.

580. (130.) Russian Syntax and Stylistics (3)

Prerequisites: Russian 301 and 302.
 The structure of contemporary Russian.

581. (131.) Russian Phonetics and Morphology (3)

Prerequisites: Russian 202 and 212.
 The sounds and forms of contemporary Russian.

GRADUATE COURSES

600. Research and Criticism (3)

Prerequisite: Twelve upper division units in Russian.
 Purposes and methods of research in Slavic linguistics and in the literatures; theories and practice of literary criticism.

610. History of the Russian Language (3)

Prerequisite: Twelve upper division units in Russian.
 The historical development of the Russian language.

650A-650B. Old Church Slavic (3-3)

Prerequisite: Twelve upper division units in Russian.
 Structure of Old Church Slavic with readings and analysis of medieval Slavic texts.

680. Seminar in Slavic Linguistics (3)

Prerequisite: Twelve upper division units in Russian including Russian 570.
 Selected topics in historical and comparative Slavic linguistics.

700A-700B. Seminar in the Soviet Novel and Short Story (3-3)

Prerequisite: Twelve upper division units in Russian.
 Intensive study of major writers of Soviet prose fiction.

710. Seminar in Russian Poetry from Pushkin to the Present (3)

Prerequisite: Twelve upper division units in Russian.
 The major Russian poets of the nineteenth and twentieth centuries.

750. Seminar in Nineteenth Century Russian Literature (3)

Prerequisite: Twelve upper division units in Russian.
 Major developments in the literature of the time.

760. Seminar: A Major Author or Movement (3)

Prerequisite: Russian 600.
 A major author or movement. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Individual study. Maximum credit six units.
 Prerequisites: Eighteen upper division units in Russian and consent of staff; to be arranged with department chairman and instructor.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy.
 Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
 Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

Social Science

Faculty

Graduate Advisers:

Anthropology: L. Leach

Economics: J. Hambleton

Geography: J. Blick

Political Science: H. Janssen

Sociology: C. Hohm

Faculty members in the Departments of Anthropology, Economics, Geography, Political Science and Sociology are listed in the appropriate sections of this bulletin.

General Information

The Master of Arts degree in Social Science is offered in the Departments of Anthropology, Economics, Geography, Political Science, and Sociology, in the College of Arts and Letters. (The Master of Arts degrees in Anthropology, Economics, Geography, History, Political Science, and Sociology are described in the appropriate sections of this bulletin.)

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, students are expected to have completed at least 30 upper division units in at least three of the social sciences, of which at least 15 upper division units must be in the field in which they plan to concentrate, and at least six units in each of two other social science fields. A course in statistics, either upper or lower division, is required. In addition, the following courses or equivalents are required in the concentrations specified:

Anthropology: Have a minimum of 3.0 grade point average in anthropology courses taken for the baccalaureate degree; and at least 15 upper division units including courses in archaeology, ethnology, physical anthropology, and social anthropology.

Economics: Economics 320 and 321 or 324 and 325.

Geography: Geography 101 and 102, and 15 units of upper division courses in geography, including three units from each of the following blocks of courses: Systematic-Physical Geography; Theoretical Geography; Regional Geography; Systematic-Cultural Geography; Geographical Techniques and Methods.

Political Science: The required upper division units must be distributed among at least three of the six subfields listed in the General Catalog.

Sociology: Sociology 101, 110 and 401.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy which are described in Part Three of this bulletin.

Specific Requirements for the Master of Arts Degree in Social Science

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree as described in Part Three of this bulletin, the student must complete the following:

1. A minimum of 30 units from courses listed in this bulletin as acceptable on master's degree programs by the Departments of Anthropology, Economics, Geography, History, Political Science, and Sociology, including at least 15 units of 600- and 700-numbered courses in the social sciences.

2. A concentration in one of the areas of Social Science, except History, as determined by the graduate adviser. A concentration is defined to include at least 15 units in one area on the master's degree program including at least nine units of 600- and 700-numbered courses in the area of concentration.

3. Six units in each of two additional fields of social science, for a total of 12 units, including at least three units of 600- and 700-numbered courses in each.

4. Course 799A. Thesis, is required in concentrations in Anthropology, Political Science, and Sociology. Plan B, requiring a written comprehensive examination in lieu of thesis, is available in the Economics and Geography concentrations. In addition, the following courses are required in the concentrations specified.

Geography: Geography 600, Geographic Research and Techniques of Presentation (3).

Political Science: Political Science 601, Seminar in the Scope and Method of Political Science (3).

Courses Acceptable on Master's Degree Programs in Social Science

Refer to course listings in the sections of this bulletin under the Departments of Anthropology, Economics, Geography, History, Political Science, and Sociology. In addition, other courses may be accepted on master's degree programs provided that such courses are approved by the graduate adviser in the field of concentration and by the Academic Requirements Committee of the Social Science Graduate Advisers.

UPPER DIVISION COURSE

580. Topics (3)

Special topics appropriate to an interdisciplinary approach. Reading, observation and evaluation of research material and current scholarship in topics under consideration. Whenever possible taught by team of instructors representing two of six social science disciplines of anthropology, economics, geography, history, political science and sociology. See class schedule for specific content. Maximum credit six units.

GRADUATE COURSES

601. Interdisciplinary Methods (3)

Introduction to graduate research methods and presentation of findings in the social sciences.

680. Seminar in the Social Sciences (3)

Intensive study and research on a topic in the social sciences.



Social Work

(Courses in Social Welfare and Social Work)

Faculty

Director, (Interim) School of Social Work: E. Percil Stanford
 Associate Director, School of Social Work: William F. Lee
 Coordinator of the Field: Ruth M. Kukkonen
 Professors: Brenen, Griffin, Haworth, Ishikawa, Kahn, Kelley, Kukkonen, Lee, Reichert, Stanford, Stumpf
 Associate Professors: Anderson, Butler, Davis, Ellis, Guidry, Herman, Pepper, Riehman, Sardinas, Sprague, Valle
 Assistant Professors: Ajemian, Cohen, Pritchard, Raymer, Schmidt, Siman, Sucato

Program and Objectives

The School of Social Work offers a two-year graduate curriculum leading to the Master of Social Work degree under approval granted by the Board of Trustees of The California State University and Colleges in May, 1963. The curriculum was developed in close cooperation with the Council on Social Work Education and was fully accredited by its Accreditation Commission in June, 1966.

In addition to the undergraduate and graduate degree programs, the School maintains a Continuing Education Program in Social Work. The School of Social Work is committed to ethnic and cultural diversity in its student body, its faculty, the populations it serves and the unique concerns on which it focuses.

The objectives of the School of Social Work at San Diego State University are to equip students with the essential knowledge, philosophy and basic skills for their responsible practice in the profession of social work. In order to achieve these objectives, the School will assist students to develop a philosophy which recognizes individual human welfare as the purpose and goal of social policy; to acquire attitudes which will permit the development and maintenance of professional relationships and professional standards; to develop the discipline and self-awareness essential to the professional social worker; to attain a level of competence necessary for professional practice; to acquire knowledge in methods of research in social work; and to accept responsibility for the continued development of their competence in the practice of social work.

Concentrations

The preparation of a broadly educated social worker with maximum transferability of skills is an ambitious objective to achieve directly in a two-year graduate curriculum. To aid the student toward this goal the School of Social Work provides the opportunity for grounding the student's learning in the content and interventive modes appropriate to certain populations and the associated service delivery arrangements. Four "concentrations" are offered for this purpose.

At admission each student will be assigned to a concentration based on student preference and placement availability. The first semester is campus based with the students grouped by their concentration choice for study of both the generalized perspectives and special concentration content in the areas of Social Policy and Services, Human Behavior and Social Environment, Practice and Research.

The second and third semesters are essentially field instruction in the concentration accompanied by related practice instruction and completion of the research requirement.

The final semester is designed for completion of the concentration and maximum individualization of student program, based on student choice with advisory consultation.

The concentrations are:

A. Social Work with Aging

The concentration is concerned with the process of aging in this society and the problems and needs of the aged as a population at risk. Students are prepared for a wide range of professional roles in policy, planning, program development and direct

services. Curriculum content includes implications of a changing demography; characteristics and needs of the elderly; functional and dysfunctional elements in service systems; personal and social significance of life cycle changes; policy and program implications of theories on aging and social, psychological and biological research; interventive skills and strategies. There are opportunities for research and advanced study in selected areas.

B. Social Work in Mental Health

The concentration addresses human and institutional problems related to personal and family dysfunction reflected in acute life crises, and emotional, behavioral and mental disorders. The objective is social work knowledge and skill development in interdisciplinary community mental health planning, practice and research, with emphasis on roles and modalities of intervention that promote mental health, prevent mental disabilities and treat personal and family dysfunctions. Sociocultural responsiveness and accountability are stressed in comprehensive community oriented services. Roles include clinical diagnosis and treatment of outpatient and inpatient clientele, advocacy, community education, planning, program development and administration. These may be emphasized in accordance with students' career objectives.

C. Social Work in Health

The concentration focuses on the universal quest for health and the human and societal problems contributing to or resulting from illness in all phases of health care, various age groups and vulnerable populations. Development of knowledge and skills prepares students for a range of emerging and established social work roles, modalities and strategies, applied collaboratively with other disciplines in health promotion, prevention and treatment of psychosocial components of illness in individuals, families and groups, and in humanizing health care through consumer advocacy, policy and program development, planning and administration. Research and advanced study in selected areas are geared to individual student interests.

D. Social Work with Children, Youth and Families

The concentration focuses on social work practice in a variety of professional roles in developing and delivering services to children, youth and families. Functional and dysfunctional aspects of human development, socialization, education and other institutions are identified and analyzed from a cross-cultural perspective. Appropriate intervention strategies, involvement in planned change and prevention through social policy analysis, research evaluation, program planning and development are offered.

Application for Admission

In seeking tentative admission to the program leading to the Master of Social Work degree, the student should write directly to the School of Social Work Admissions Committee requesting appropriate application materials. Detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms.

STUDENTS ARE ADMITTED ONLY IN THE FALL SEMESTER OF EACH YEAR AND APPLICATIONS MUST BE RECEIVED BY THE DIRECTOR OR THE SCHOOL OF SOCIAL WORK ADMISSIONS COMMITTEE NOT LATER THAN FEBRUARY 1.

THE APPLICANT MUST ALSO FILE AN APPLICATION FOR ADMISSION TO SAN DIEGO STATE UNIVERSITY WITH THE OFFICE OF ADMISSIONS.

Admission to Graduate Study

In addition to satisfying the requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin, a student seeking admission to the School of Social Work must:

1. Have earned not less than a 2.75 grade point average on the undergraduate work taken for the baccalaureate degree. Desirable undergraduate preparation should include work in the behavioral and sociohumanistic studies and in statistics.
2. Submit a written personal history in the manner prescribed by the School of Social Work.
3. Be considered by references to be capable of graduate study and of developing professional responsibility. Such references may be secured from the student or otherwise obtained by the faculty.

4. Possess personal attributes judged suitable for the profession.
5. Arrange for an interview when so requested by the School.

Master of Social Work Degree

Advancement to Candidacy

Students who have been admitted to the School of Social Work *for the fall semester* will meet with their advisers during the second half of the spring semester following to discuss the advisability of undertaking the second year of the professional degree program.

To be eligible for advancement to candidacy and for admission to the second year of the program for this degree, the student must, in addition to holding classified graduate standing:

1. Have earned a 3.0 (B) grade point average in academic courses and received credit (CR) in field practicum in the first year of the program.
2. Be recommended by the faculty of the School of Social Work.
3. Be approved for advancement by the Graduate Division.
4. Successfully pass a written comprehensive examination on the first year's program under conditions determined by the Director or the faculty of the School of Social Work.

Specific Requirements for the Master of Social Work Degree

1. Fifty-six units of 500-, 600-, or 700-numbered courses within the curriculum of the School of Social Work are required for the degree. Of these units:
 - a. at least 24 must be completed in residence at San Diego State University.
 - b. all transfer credits accepted for the degree must have been earned in a school of social work accredited by, or in the process of being accredited by, the Council on Social Work Education at the time of the student's attendance. Normally, a student who wishes to transfer credit earned in such a school of social work must have completed the requirements of that school for the first full academic year of graduate study.
 - c. of the 56 units required for the MSW degree, nine units, with permission of the Director of the School of Social Work, may be in courses in other schools and departments on the campus.
2. Credits earned more than five years prior to the date of admission to the School of Social Work at San Diego State University are not acceptable and all work for the degree must be completed within seven years of the date of entering the program. In special circumstances, students may be permitted to validate credits earned outside these time limits by satisfactorily passing comprehensive examinations on the outdated course or courses.
3. All candidates for the degree must pass satisfactorily a comprehensive examination in lieu of a thesis under the provisions of Plan B as described elsewhere in this bulletin.
4. For regulations concerning grade point averages, final approval for the granting of the degree, award of the degree, and diplomas, see the section titled "Basic Requirements for the Master's Degree," in Part Three of this bulletin. In addition, the student must have earned a 3.0 (B) grade point average in academic courses and demonstrated professional competence, responsibility and performance including achieving credit (CR) for all required field practica.
5. A candidate for the degree must complete a *minimum* of 38 units in a concentration, not including the research requirement Social Work 691 A, B, C or D and Social Work 692 A, B, C or D.
6. All candidates for this degree must, in the judgment of this faculty, meet the standards for beginning practice in the profession. If a negative judgment is made, students must correct the deficiencies prior to the granting of the degree.

Course Requirements

The normal course of study to be followed by a student seeking the MSW degree is as follows:

Sequence	Semester				Total Units
	I	II	III	IV	
Seminar in Social Work Analysis	SW 755A, B, C, or D (2)	SW 755A, B, C, or D (2)			(4)
Seminar in Social Welfare Policy & Services	SW 600A, B, C, or D (3)				(3)
Seminar in Human Behavior and Social Environment	SW 620A, B, C, or D (3)				(3)
Research	SW-690A, B C, or D (3)	SW 691A, B, C or D* (3)	SW 692A, B, C or D* (3)		(9)
Practice	SW 630A, B, C, or D (3)	SW 730A, B, C, or D (3)	SW 731A, B, C, or D (3)		(9)
Practicum		SW 650A, B, C, or D (8)	SW 750A, B, C, or D (8)	(12-14)	(16)
Electives				(12-14)	(56-58)
Total Units	(14)	(16)	(14)	(12-14)	(56-58)

*Student to do research project related to concentration (exceptions by permission of dean).

Program of Study

The above course requirement pattern represents the Official Program of Study for MSW candidates. However, to insure maximum individualized learning within the pattern each student must plan with his/her adviser, based on guidelines available from the School office, an individual program of study. The initial plan will of necessity be tentative and subject to revision. By Advancement to Candidacy the student must file with the Director a plan for completion of the program including preferred electives. Revisions of the plan require approval by the Director.

Additional Information

Withdrawals

Students in the School of Social Work are governed by the general regulations of San Diego State University and the Graduate Division. For regulations governing withdrawals from courses, unofficial withdrawals, and probation and disqualification from San Diego State University, see the section titled "Regulations of the Graduation Division," in Part Three of this bulletin.

Any graduate student who has been admitted to the curriculum offered in the School of Social Work and whose performance therein is judged to be unsatisfactory with respect to scholastic, personal, or professional standards by the faculty of the School of Social Work and the Graduate Council, may be required to withdraw from all graduate curricula at San Diego State University.

Conditional Admission

Students who do not fully meet all requirements for admission to the School of Social Work may, under special circumstances, be admitted to the School of Social Work in conditionally classified graduate standing. At the end of the first semester's work, the faculty of the School of Social Work shall recommend to the Dean of the Graduate Division and Research that the student:

1. Be disqualified from further participation in the curriculum, or
2. Be continued in conditionally classified standing for a second semester, or
3. Be admitted to full participation in the curriculum with classified graduate standing.

Financial Assistance

Students in the School of Social Work are eligible for financial assistance as described in Part Three of this bulletin.

The School of Social Work has some scholarships, fellowships and other financial stipends available to students admitted to the School who need such help to finance their period of study. The requirements for these various stipends vary and can best be dealt with by direct correspondence with the Director of the School of Social Work.

Students who need assistance in financing their professional education may request such help at the time of application. Such requests will be considered on an individual basis. An applicant must be accepted for admission to the School of Social Work before he/she will be recommended for an award.

Field Practicum During Periods of University Holidays

Because of the nature of field education and the student's responsibility to the agency to which he/she is assigned, and the clientele it serves, field activities may continue on the regular work schedule of the agency under specially arranged circumstances.

REQUIRED COURSES IN M.S.W. PROGRAM

All with appropriate concentration section (A-Aging, B-Mental Health, C-Health, D-Children, Youth and Families):

Social Work 600, 620, 630, 650, 690, 691, 692, 730, 731, 750, 755.

Courses Acceptable on Master's Degree Program in Social Work

UPPER DIVISION COURSES IN SOCIAL WELFARE

520. Seminar in Contemporary Issues and the American Family (3)

Prerequisite: Upper division, undergraduate social welfare major; or classified graduate standing in the School of Social Work; or classified graduate standing in other programs of study and unclassified standing with the consent of the director.

Explores and analyzes a myriad of areas within the context of change of the family as a social institution. The family is viewed systemically. Such factors as industrialization, cybernetics and the changing nature of the marital bond are included.

530. Seminar in History of Social Work (3)

Prerequisite: Upper division, undergraduate social welfare major; or classified graduate standing in the School of Social Work; or classified graduate standing or unclassified standing with consent of the director.

Development of social welfare institutions as a function of industrial society in America. Historical trends in politics, economics, migration, and life styles are examined in relation to the development of social institutions for responding to human need including the development of the profession of social work.

540. Seminar in Social Effects of the Legal Process (3)

Prerequisite: Upper division, undergraduate social welfare major; or classified graduate standing in the School of Social Work; or classified graduate standing or unclassified standing with consent of the director.

Structure and functions of law as it bears upon such groups as defendants in criminal prosecutions, recipients of welfare programs, conservatees in mental health hearings, children in juvenile court dependency proceedings. The legal conflicts social workers may encounter between their ethics and their duties to clients and agency.

550. Seminar in Administration and Decision Making in Human Service (3)

Prerequisite: Upper division, undergraduate social welfare major; or classified graduate standing in the School of Social Work; or classified graduate standing or unclassified standing with consent of the director.

Relationship between the development of social policy and its actual implementation through program development and delivery of human services. Administrative actions including decision making, communication with regulatory and legislative bodies, and budget development are considered in the ways that policy is shaped and reflected through social programs.

596. Experimental Topics (1-4)

Selected topics in social work and social welfare. See class schedule for specific content. Maximum credit six units.

GRADUATE COURSES IN SOCIAL WORK

Prerequisite for enrollment in all graduate courses: admission to the School of Social Work.

600. Seminar in Social Welfare Policy and Services (3)

Social welfare as a social institution; philosophical, historical and comparative analysis of the welfare functions, issues and problems, plus conceptual analysis of social welfare programs in general and related to areas of concentration. Sectioned by:

- A. Aging
- B. Mental Health
- C. Health
- D. Children, Youth and Families

620. Seminar in Human Behavior and Social Environment (3)

Theoretical perspectives on the human condition based on biological, psychological, interpersonal and social assumptions, with emphasis on examining unusual behavior from several perspectives for social work practice. Sectioned by:

- A. Aging
- B. Mental Health
- C. Health
- D. Children, Youth and Families

630. Seminar in Social Work Practice (3)

Theories, principles, skills and objectives of social work practice with individuals, families, groups, organizations and communities. Sections related to needs of practice in:

- A. Aging
- B. Mental Health
- C. Health
- D. Children, Youth and Families

650. Field Practicum (8) Cr/NC

Prerequisite: Concurrent registration in Social Work 730 in same concentration.

Field instruction in public or voluntary social work setting. Experiences emphasize application of social work objectives, principles and skills in service to individuals, families, groups and communities related to:

- A. Aging
- B. Mental Health
- C. Health
- D. Children, Youth and Families

690. Seminar in Social Work Research Methods (3)

Definition and purpose of research in social work. Techniques and methods used in collecting, organizing and interpreting social welfare and related data; steps involved in planning a research project and selecting a research design, related to:

- A. Aging
- B. Mental Health
- C. Health
- D. Children, Youth and Families

691. Research Project Design (3)

Prerequisite: Social Work 690.

Design research project in the field of social work. Individual or group project related to:

- A. Aging
- B. Mental Health
- C. Health
- D. Children, Youth and Families

(Formerly numbered Social Work 797A)

692. Research Project (3)

Prerequisite: Social Work 691.

Completion of research project in the field of social work. Individual or group project related to:

- A. Aging
- B. Mental Health
- C. Health
- D. Children, Youth and Families
(Formerly numbered Social Work 797B.)

700. Seminar in Social Welfare Policy and Services (3)

Prerequisite: Social Work 600.

Problems and issues in emerging social welfare programs, including analysis of the structure of social services and of social work as a profession.

710. Seminar on Selected Topics (3)

Selected topics such as alcoholism, drug abuse, human sexuality, legislative processes and violence against children and implications to social work. May be repeated with new content. Topics announced in class schedule. Maximum credit nine units applicable on a master's degree.

720. Seminar in Human Behavior and Social Environment (3)

Prerequisite: Social Work 620.

Theories of natural and induced change in human behavior which have utility for social work practice.

730. Seminar in Social Work Practice (3)

Prerequisite: Social Work 630 in same concentration and concurrent registration in Social Work 650 in same concentration.

Social work practice with the objective of personal, family, organization and institution social situation analysis and problem solving. Emphasis on societal and cultural interactional contexts appropriate to:

- A. Aging
- B. Mental Health
- C. Health
- D. Children, Youth and Families

731. Seminar in Advanced Social Work Practice (3)

Prerequisite: Social Work 730 in same concentration and concurrent registration in Social Work 750 in same concentration.

Advanced social work practice in the areas of:

- A. Aging
- B. Mental Health
- C. Health
- D. Children, Youth and Families

734. Seminar in Social Work Practice With Organizations and Communities (3)

Prerequisite: Completion of first year courses.

Examines community problems, power and strategies in social planning and development under auspices of interorganizational systems, bureaucracies and informal associations. Applications of concepts and principles of planning social change in situational analysis, community organization, program development and evaluation.

740. Seminar in Management Knowledge and Technique (3)

Prerequisite: Social Work 600.

Examines problems and roles of administrators in social agencies; administrative and organizational theories; executive functions of planning, budgeting, directing, reporting and staffing; relationships and communications in ordinate, superordinate and subordinate levels.

741. Facilitative and Educational Roles in Human Service Organizations (3)

Prerequisite: Completion of first year courses.

Examines facilitative and educational roles of practitioner in human service organizations emphasizing supervision, consultation, staff development and evaluative processes. Theories in adult learning and educational assessment to enhance performance of staff including paraprofessional, volunteers and consumers will be explored.

742. Advanced Seminar in Facilitative and Educational Roles in Human Service Organization (3)

Prerequisite: Social Work 741.

Problems of facilitative and educational roles in human service organizations emphasizing problems and options experienced by directors of training and staff development, and directors of program development and evaluation. Attention given to learning professional roles in agencies employing multiprofessional staff.

750. Advanced Field Practicum (8) Cr/NC

Prerequisite: Social Work 650 in same concentration and concurrent registration in Social Work 731 in the same concentration.

Advanced field instruction in public or voluntary social work setting. Continuation and intensification of experiences in the application of social work objectives, principles and skills in service to individuals, families, groups and communities related to:

- A. Aging
- B. Mental Health
- C. Health
- D. Children, Youth and Families

755. Seminar: Social Work Analysis (1-4) Cr/NC

Student orientation to concentration in context of social work profession to include discussion, attendance at general presentations, field observation, and written assignments integrating experiences.

Maximum credit four units applicable on a master's degree.

- A. Aging
- B. Mental Health
- C. Health
- D. Children, Youth and Families

760. Seminar in Social Work and Racial-Ethnic Groups (3)

Prerequisite: Completion of first year courses.

Nature of institutional racism and its effect on social provision and social policy. Examines overt and covert forms of racism in but not limited to areas such as housing, schools, corrections, organized labor, job training for the poor, and social statistical reporting for implications to social work practice.

761. Seminar on Racial-Ethnic Groups (3)

Prerequisite: Completion of first year courses.

Exploration of social survival techniques of ethnic minority groups, their similarities and differences and implications to development of social service delivery systems and practice.

765. Seminar in Social Work and Aging (3)

Prerequisite: Completion of first year courses.

Exploration of social work principles and techniques related to the impact of the aged population on our society. Focus on becoming sensitive to the implied and actual changes taking place in service delivery systems, living arrangements, etc., which affect social work practice.

766. Seminar on Aging (3)

Prerequisite: Completion of first year courses.

In-depth survey and analysis of selected areas in aging which depict the contemporary trends in the social aspects of aging. Special attention given to developing social policy and the relationship between social work practice modifications in the field of aging.

770. Seminar in Social Work and Health (3)

Prerequisite: Completion of first year courses.

Examination of changing health definitions and health service delivery systems; their effects on consumers and providers of social services and implications for social work practice.

771. Seminar on Health (3)

Prerequisite: Completion of first year courses.

Examination of selected health-related topics: social and emotional aspects of health and disability; continuity of health care; relationship of social work to other health professions.

775. Seminar in Social Work and Mental Health (3)

Prerequisite: Completion of first year courses.

Analysis of selected areas of mental health service that critically examines social work responsibilities and roles in addressing a continuum of mental health needs in a changing society.

776. Seminar on Mental Health (3)

Prerequisite: Completion of first year courses.

Overview of mental health needs, problems and services with emphasis on philosophical, social, legal and therapeutic concerns, particularly as these relate to vulnerable population groups.

780. Seminar in Social Work and Selected Populations-at-Risk (3)

Social work practice with selected populations-at-risk such as one-parent families, children in institutions, ethnic minority immigrants, Native-Americans in the urban scene, and foreign-born brides of U.S. servicemen. Topics to be announced in class schedule. May be repeated with new content. Maximum credit six units applicable on a master's degree.

781. Seminar on Selected Populations-at-Risk (3)

Knowledge about and analysis of selected populations-at-risk, social work responsibilities in emerging service demands by diverse and needful, high risk segments of the population in a complex society, and implications for social work practice. Population-at-risk for study to be announced in class schedule. May be repeated with new content. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff; to be arranged with Director and instructor.

Individual study. Maximum credit six units.



Sociology

Faculty

Chair, Department of Sociology: J. Weeks

Graduate Adviser: K. Ima

Professors: Cottrell, Daniels, DeLora, El-Assal, Gillette, Johnson, Mouratides, Sandlin, Schulze, Sorensen, Wendling, Winslow

Associate Professors: Bloomberg, Buck, Chandler, Emerick, Hohm, Kennedy, Scheck, Weeks, Werner, Wood

Assistant Professors: Barclay, Gay, Ima, Kirkpatrick, Kolody, Preston, Robinson, Sanders, Schmidt, Stephenson,

Assistantships

Graduate teaching assistantships and graduate nonteaching assistantships in sociology are available to a limited number of qualified students. Application blanks and further information may be obtained from the chair of the department.

General Information

The Department of Sociology, in the College of Arts and Letters, offers graduate work leading to the Master of Arts degree in Sociology. For graduate work in connection with the Master of Arts degree in Social Science, refer to the section of this bulletin under Social Science. Research facilities provided by the Department of Sociology include a well-equipped Social Science Research Laboratory and Social Research Center for use by the faculty and graduate students.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. In addition, students seeking the Master of Arts degree in Sociology must have completed 18 upper division units in sociology, of which 15 units must include Sociology 401, Classical Sociological Theory, or Sociology 403, Contemporary Sociological Theory; Sociology 440, Social Psychology; Sociological Approaches; and one course from each of the following fields: social disorganization, social institutions or social organization, and urban sociology-demography.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Three of this bulletin. Students must take the four 600-level core courses (Sociology 601, 602, 603, and 604) and must complete each course with a minimum "B" (3.0) grade by the end of the first year in the master's program. A student may seek exemption from a maximum of two course areas by passing an exam in the respective areas.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree, as described in Part Three of this bulletin, students must include in their graduate program a total of 30 units. While six units of electives may be taken in other departments, these courses must be acceptable for master's degree credit in the particular departments in which they are offered. Students must include in their graduate program at least 18 units of sociology courses from the list of 600- and 700-numbered courses, including the optional 799A, Thesis. The program must also include at least six units in sociology seminars. The remainder of the program may be composed of 500-level in sociology courses listed below as acceptable on master's degree programs. A comprehensive examination in theory and methodology and completion of one of the following are required.

In Plan A all students will be expected to include Sociology 799A, Thesis, as three of the 18 units of 600- and 700-numbered courses required.

In Plan B an alternative is offered to the thesis. This alternative consists of (a) Sociology

797, or 798 for 6 units, culminating in two papers or reports acceptable to the student's committee; or (b) one additional comprehensive examination in an area selected by the student with the approval of his committee, plus Sociology 797, or 798 for 3 units, culminating in a paper or report acceptable to the student's committee; or (c) two additional comprehensive examinations in areas selected by the student with the approval of his committee.

Courses Acceptable on Master's Degree Programs in Sociology

UPPER DIVISION COURSES

506. Modernization of Traditional Societies (3)

Prerequisite: Sociology 101.

Examines theories of social change relative to industrialization and urbanization of preindustrial societies. Comparative study of institutional and social-psychological consequences of industrialization, utilizing historical and contemporary study of macrosocial change.

508. Sociology of the Future (3)

Prerequisite: Sociology 101.

Examines sociological aspects of alternative futures and the role of contemporary behavior in creating those futures. Analysis of projections in selected areas such as family, technology, work and leisure.

510. Sociology of Deviance (3)

Prerequisite: Sociology 101.

Survey of many alleged abnormal phenomena in society as seen in society today in various forms of individual, family, community and world disorganization, such as crime, prostitution, extreme alcoholism, migratory workers, divorce, revolution, war, etc.

511. Current Topics in Sociology (3)

Prerequisite: Sociology 101.

Selected specialized, controversial or currently relevant topics in sociology. Maximum opportunity provided for student initiative in determining course content and procedures. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

512. Sociology of Conflict (3)

Prerequisite: Sociology 101.

Conflict as a social process: background, forms and consequences at the interpersonal, intergroup, class and international levels from a sociological frame of reference. Major theories of social conflict.

513. Criminology and Penology (3)

Prerequisite: Sociology 101.

The extent and characteristics of crime; consideration of physical, mental, economic and sociological causes of crime; study of methods of penal discipline, prison labor, parole and probation; programs of prevention.

514. Juvenile Delinquency (3)

Prerequisite: Sociology 101.

The nature and extent of delinquency; the causative factors involved; methods of control and prevention, with special attention to the protective and remedial measures offered by the school, home, juvenile court, correctional institutions and camps, probation and parole, and recreational agencies.

519. Topics in Comparative Societies (3)

Prerequisite: Sociology 101.

Analysis of contemporary social structure, the process of modernization and current social problems in selected areas of the world. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

520. Industrial Sociology (3)

Prerequisite: Sociology 101.

Group relationships within economic organizations. Problems of leadership, morale and conflict. Some attention to the sociology of occupations and professions.

521. Sociology of Occupations and Professions (3)

Prerequisite: Sociology 101.

Division of labor, status ranking of occupations, authority structures, occupational and professional organization, occupational socialization, problems of identity and role conflict.

523. The Sociology of Mental Illness (3)

Prerequisite: Sociology 101.

The social definition, ecology and control of mental illness across various societies. The implications of social differentiation, stratification and urbanization upon the incidence, prevalence and control of mental illness and the use of these empirical problems for sociological research.

525. Minority Group Relations (3)

Prerequisite: Sociology 101.

Theories of ethnic prejudice. Analysis of racial and ethnic discrimination. Analytical inquiry into sources of friction and causes of conflict between majority and minority groups.

526. Medical Sociology (3)

Prerequisite: Sociology 101.

A sociological analysis of health and medical institutions. Cultural factors in conceptions of disease, health and healing. Social structure of medical facilities and the role of personnel in such institutions. Relation of illness to income, housing and other socioeconomic factors. Not open to students with credit in Health Science and Safety 561.

527. Sociology of Aging (3)

Prerequisite: Sociology 101.

Status and roles of men and women in the second half of the life cycle. Ethnic, sex and class variables in aging. Cross-cultural comparisons of occupational, educational, familial, recreational and political opportunities for the aging.

528. Sociology of Death (3)

Prerequisite: Sociology 101.

Examines sociological concepts and theories of the process of dying. Comparative study of death and dying with emphasis on social, psychological and social organization approaches. Consideration of contemporary social-ethical issues surrounding dying in our society.

533. Sex Roles in Contemporary Societies (3)

Prerequisite: Sociology 101.

Male-female relationships in occupational, educational and familial settings viewed historically and cross-culturally. Changing concepts of femininity and masculinity. Images of men and women in literature, in the mass media, and in laws and judicial decisions.

534. Sexuality in Modern Society (3)

Prerequisite: Sociology 101.

Analysis of landmark sex research and pornography in the United States and in selected other societies. Changing norms in premarital, marital and extramarital attitudes and behaviors. Implications for the individual, family and society.

535. The American Family and Its Alternatives (3)

Prerequisite: Sociology 101.

Analysis of contemporary dating, engagement, marriage, family, and other intimate relationships in the United States as they are affected by changes in the culture.

536. The Family in Cross-Cultural Perspective (3)

Prerequisite: Sociology 101. Recommended: Sociology 535.

Comparative study of selected family systems in the past and present. Family and parafamily forms in intentional communities of the 19th century compared with contemporary communal experiments. Ethnic and class differences in family organization. (Not open to students with credit in Family Studies and Consumer Sciences 536.)

537. Political Sociology (3)

Prerequisite: Sociology 422.

Social organization of political processes. Power and authority, social class, primary groups, collective behavior, social change and other sociological factors considered in their relationships to political processes.

538. Sociology of Religion (3)

Prerequisite: Sociology 101. Recommended: Sociology 401 and 546.

The role of religion in society as cult and institution, including primitive religion, modern sects and churches, ritual, secularization and religious movements.

539. Sociology of Education (3)

Prerequisite: Sociology 101.

Social organization of education, teaching as a profession. Class, ethnic and other social factors affecting the educational process. Educational institutions and the community.

545. Sociology of Mass Communication (3)

Prerequisite: Sociology 101. Recommended: Sociology 440 and 546.

Sociological analysis of the processes and effects of mass communications in different social systems, their functions and dysfunctions and their relationships to other social institutions.

546. Collective Behavior (3)

Prerequisite: Sociology 440.

The basic processes of social behavior in masses and groups, including crowd behavior, fads, fashions, crazes, panics, rumors; sects and cults; heroes and scapegoats; social movements; effects of mass communication.

547. Sociology of Social Movements (3)

Prerequisite: Sociology 101. Recommended: Sociology 422 and 545.

Revolutionary and reform movements in relationship to the larger society. Conditions leading to development of social movements, emergence of leadership, ideologies, strategies, recruitment of members and social consequences, case studies in depth.

548. Small Groups (3)

Prerequisite: Sociology 440.

Processes, morale and organization of small groups; their role in society and institutions such as industry, military, recreation and education; recent studies and methods of research.

550. Population and Contemporary Issues (3)

Prerequisite: Sociology 101.

Analysis of population processes as they affect and are affected by such contemporary issues as rapid world population growth, famine, ecological pressures, abortion, women's liberation, racial and ethnic relations, and illegal migration.

557. Urban Sociology (3)

Prerequisite: Sociology 101.

The structure and function of the modern city; types of neighborhoods; forms of recreation; social forces in a metropolitan area; types of urban personalities and groups; rural-urban conflicts of culture. Practical field studies required.

563. The Logic of Sociological Inquiry (3)

Prerequisite: Sociology 201.

Systematic overview and analysis of explanation in the social sciences and history with emphasis on sociology. Problems of applying the natural scientific method to the social sciences, interpretation of meaning and objectivity.

597. Investigation and Report (3) I, II

Prerequisites: Fifteen units in sociology and consent of instructor.

Analysis of special topics in sociology. Maximum credit six units.

GRADUATE COURSES**601. Advanced Social Theory: Core Course (3)**

Prerequisites: Conditional graduate standing, Sociology 401.

Systematic treatment of the original European and American classic sociological writing and an overview of the major developments in contemporary social theory.

602. Advanced Research Methods: Core Course (3)

Prerequisites: Conditional graduate standing, Sociology 464.

Problems and techniques in social research with stress on philosophy of science, theory building, research design, measurement, and data analysis including fundamental critiques and alternatives.

603. Advanced Social Psychology**(Sociological Approaches): Core Course (3)**

Prerequisites: Conditional graduate standing, Sociology 440.

Investigation and analysis of original works in classical social psychological theory focusing on implications for research on topics such as socialization, motivation, perception, role, self, interaction and symbolic processes.

604. Advanced Social Organization: Core Course (3)

Prerequisites: Conditional graduate standing, Sociology 422.

Concepts, theories and findings concerning structure and change in society, institutions, formal organizations, the community and small groups. Special attention given key concepts of culture, stratification, division of labor, power, bureaucracy, role relationships and interaction.

695. Topics in Directed Readings (3)

Prerequisite: Credit or concurrent registration in at least one core course or one seminar.

Selected reading providing coverage of social theory, social disorganization, social organization, social institutions, social psychology, (sociological approaches), community research methods, population and demography, or special topics. May be repeated with new topic. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

700. Seminar in Social Theory (3)

Prerequisites: Sociology 401 and 464.

Classics of sociology, American social theory, theory construction, application of theory to research, theoretical models, sociology of knowledge, special topics. See class schedule for specific content. May be repeated with new content. Maximum credit six units applicable on a master's degree.

710. Seminar in Social Disorganization (3)

Prerequisites: Sociology 464 and 510.

Theories of social disorganization, anomie and alienation, deviance, crime, delinquency, personal pathology, institutional malfunction, social conflict, disaster, special topics. See class schedule for specific content. May be repeated with new content. Maximum credit six units applicable on a master's degree.

720. Seminar in Social Organization (3)

Prerequisites: Sociology 422 and 464.

Social groups, formal organization, organizational change, authority and leadership, special topics. See class schedule for specific content. May be repeated with new content. Maximum credit six units applicable on a master's degree.

730. Seminar in Social Institutions (3)

Prerequisites: Sociology 422 and 464.

The family and kinship, political organization, economic organization, religion, education, industry, occupations and professions, social stratification, special topics. See class schedule for specific content. May be repeated with new content. Maximum credit six units applicable on a master's degree.

740. Seminar in Social Psychology: Sociological Approaches (3)

Prerequisites: Sociology 440 and 464.

Socialization, role theory, motivation, perception, self, social context of personality, attitude theory, interaction, language and symbolic process, social types, collective behavior, small groups, special topics. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

750. Seminar in the Community (3)

Prerequisites: Sociology 464 and 557.

Ecological structure and process; community institutions and structure; community deterioration, planning and renewal; urbanization; suburbia; megalopolis; special topics. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

760. Seminar in Research Methods (3)

Prerequisites: Sociology 401 and 464.

Analysis of methods used in current sociological research, including evaluation of reported findings. Discussion of research designs appropriate to particular types of projects. Evaluation of research in progress by members of the seminar. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

770. Seminar in Population and Demography (3)

Prerequisites: Sociology 464 and 550.

Demographic theories, fertility, mortality, migration, construction and application of demographic indices, demographic prediction, world population trends, special topics. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

797. Research (3) Cr/NC

Prerequisite: Sociology 464.

Independent investigation of special topics. Maximum credit six units applicable on a master's degree.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff, to be arranged with department chair and instructor. Individual study. Maximum credit six units.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the University; also student must be registered in the course when the completed thesis is granted final approval.



Spanish

Faculty

Chair, Department of Spanish and Portuguese Languages and Literatures: C. B. Christensen
 Coordinator, Graduate Program: E. M. Barrera
 Graduate Adviser: Barrera
 Credential Adviser: C. B. Christensen
 Professors: Barrera, Case, Christensen, Head, Jimenez-Vera, Lemus, Segade, Walsh
 Associate Professors: O'Brien, Santalo, Talamantes, Weeter
 Assistant Professors: Young, Silverman

Assistantships

Graduate Teaching Assistantships in Spanish are available to a limited number of qualified students. New Teaching Assistants are required to enroll in Spanish 770 during their first semester as Teaching Assistants. Application blanks and additional information may be secured from the chair of the department.

General Information

The Department of Spanish and Portuguese Languages and Literatures, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Spanish.

The staff in charge of the graduate program in Spanish is composed of professors whose native tongue is Spanish, or who have studied and traveled extensively in Spain or in Spanish America, enabling them to represent authoritatively the Spanish language and culture. Library facilities include rich resources in Spanish literature and linguistics, including books, periodicals and newspapers. A foreign language laboratory with modern equipment is available to both graduate and undergraduate students.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin. An undergraduate major in Spanish, including 24 upper division units, must have been completed, at least six units of which must have been in a survey course in Spanish literature.

Advancement to Candidacy

In addition to meeting the requirements for advancement to candidacy as described in Part Three of this bulletin, students may be required to pass a qualifying examination in Spanish given by the Department of Spanish and Portuguese Languages and Literatures.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program of at least 30 units that includes a major consisting of at least 24 units in Spanish in a Literature specialty or 21 units in the Linguistics specialty as described below. At least 18 units must be in 600- and 700-numbered courses. Students may elect either Plan A, requiring a thesis, or Plan B, requiring a comprehensive written and oral examination in lieu of the thesis in consultation with the graduate adviser.

Candidates for the master's degree in Spanish must select one of the following areas of specialization:

1. **Spanish Linguistics:** Linguistics 790, Spanish 610 and 770; six units of Spanish selected from courses acceptable on the master's degree programs in the field of language or linguistics; at least one course in both Spanish Peninsular and Spanish-American Literatures from the 600- and 700-numbered courses; six units from the following linguistics courses offered by other departments:
 Anthropology 604 Seminar in Linguistics
 Linguistics 551 Sociolinguistics

Linguistics 552 Psycholinguistics
Linguistics 621 Phonology
Speech Communication 530 Semantics

2. **Spanish-American Literature:** Spanish 601; 12 units of coursework in Spanish-American Literature to include at least nine units of 600- and 700-numbered courses; nine units of coursework in Spanish Peninsular Literature to include at least six units of 600- and 700-numbered courses.
3. **Spanish Peninsular Literature:** Spanish 601; 12 units of coursework in Spanish Peninsular Literature to include at least nine units of 600- and 700-numbered courses; nine units of coursework in Spanish-American Literature to include six units of 600- and 700-numbered courses.

Courses Acceptable on Master's Degree Programs in Spanish

UPPER DIVISION COURSES IN SPANISH

- 510A-510B. Modern Spanish Drama (3-3)**
Prerequisites: Spanish 305A-305B.
The development of the drama of Spain from the beginning of the nineteenth century to the present time.
- 515A-515B. Mexican Literature (3-3)**
Prerequisites: Spanish 306A-306B.
Aspects of Mexican culture. Semester I: A rapid survey of Mexican literature from the colonial period to the twentieth century. Semester II: The twentieth century, with emphasis on the contemporary Mexican novel and theater.
- 520. Caribbean Area Countries Literature (3)**
Prerequisites: Spanish 306A-306B.
Literature of Caribbean Islands, Central America, Colombia and Venezuela, from colonial period to present. Special emphasis on contemporary era.
- 522. Andean Countries Literature (3)**
Prerequisites: Spanish 306A-306B.
Literature of Ecuador, Peru, Bolivia and Chile from the period immediately preceding the Spanish conquest to today.
- 524. River Plate Literature (3)**
Prerequisites: Spanish 306A-306B.
Literature of Argentina, Paraguay and Uruguay from colonial period to present.
- 530. Nineteenth Century Spanish Novel and Short Story (3)**
Prerequisites: Spanish 305A-305B.
The development of the novel and short story in Spain in the nineteenth century.
- 532. Twentieth Century Spanish Novel and Short Story (3)**
Prerequisites: Spanish 305A-305B.
The development of the novel and short story in Spain to 1936, with emphasis on the novel of the generation of 1898.
- 533. Contemporary Spanish Novel (3)**
Prerequisites: Spanish 305A-305B.
The development of the novel and short story in Spain since 1936.
- 548. Spanish Linguistics (3)**
Prerequisite: Spanish 302.
Structural, historical and applied Spanish linguistics.
- 549. Phonetics and Phonemics (3)**
Prerequisite: Spanish 302.
The sounds of Spanish, and Spanish phonemic systems, with special attention to the problems involved in the teaching of Spanish pronunciation to English-speaking students.
- 550. Golden Age Literature I (3)**
Prerequisites: Spanish 305A-305B.
Major writers and works, concentrating on prose and lyric poetry.

- 560. Golden Age Literature II (3)**
Prerequisites: Spanish 305A-305B.
Major writers and works, concentrating on drama.
- 570. Spanish-American Poetry (3)**
Prerequisites: Spanish 306A-306B.
Spanish-American poetry of the 19th and 20th centuries.
- 571. Spanish-American Short Story (3)**
Prerequisites: Spanish 306A-306B.
Principal Spanish-American short story writers.
- 572. Spanish-American Theatre (3)**
Prerequisites: Spanish 306A-306B.
Principal Spanish-American dramatists and movements.
- 580. Modern Spanish Poetry (3)**
Prerequisites: Spanish 305A-305B.
- 596. Selected Studies in Spanish (3)**
Prerequisites: Spanish 301 and 302.
Topics in Spanish or Spanish-American language, literature, culture and linguistics. See class schedule for specific content. Maximum credit six units.

PORTUGUESE COURSES

- 534. Portuguese Literature (3)**
A study of important movements, authors and works in the literature of Portugal from its beginnings to the present.
- 535. Brazilian Literature (3)**
A study of the important movements, authors and works of the literature of Brazil from the colonial period to modern times.
Related Fields: Related courses in the fields of anthropology, geography, history, political science, comparative literature, and others, may be selected with the approval of the graduate adviser.

GRADUATE COURSES IN SPANISH

- All graduate courses in the Department of Spanish and Portuguese Languages and Literatures have a prerequisite of 12 upper division units in Spanish, or consent of instructor.*
- 601. Research and Criticism (3)**
Purposes and methods of research in the fields of the language and literature, including bibliography, literary terms and textual criticism.
- 610. History of the Spanish Language (3)**
Prerequisite: Credit or concurrent enrollment in Spanish 548 or 549.
The development of the Spanish language in Spain and Spanish America, with particular attention to the phonology, morphology and syntax of medieval Spanish.
- 620. Cervantes (3)**
The principal prose works of Cervantes: The *Novelas ejemplares* and *Don Quixote*.
- 630. Lope de Vega and Calderon (3)**
The works of Lope de Vega and Calderon.
- 640. The Spanish-American Novel (3)**
The Spanish-American novel to 1935.
- 650. The Gaucho Epic (3)**
The *Poesía gauchesca*, with particular emphasis on *Martin Fierro*, *Fausto*, and *Santos Vega*.
- 660. Modernism (3)**
The *Modernista* movement in Spanish America, with special attention to representative poets.

670. Medieval Spanish Literature (3)

Prerequisite: Spanish 610.

The literature of Spain from the earliest extant works to the *Celestina*.

680. The Modern Spanish Essay (3)

The thinkers, essayists and philosophers of Spain from the generation of 1898 to the present.

690. The Spanish-American Essay (3)

Principal Spanish-American essayists of the 19th and 20th centuries.

695. Contemporary Spanish-American Prose Fiction (3)

The principal writers of prose fiction in Spanish America from the mid-thirties to today.

720. Seminar in Spanish Golden Age Literature (3)

A representative author, a genre or movement of the Spanish Golden Age. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

730. Seminar in 19th Century Spanish Literature (3)

A representative author, a genre or movement of the 19th century in Spain. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

740. Seminar in 20th Century Spanish Literature (3)

representative author, a genre or movement of the 20th century in Spain. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

750. Seminar in Spanish-American Literature (3)

A genre or movement of Spanish America. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

755. Seminar in Spanish-American Culture and Thought (3)

Works of representative authors of Spanish America. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

770. Applied Spanish Linguistics for Teachers (3)

Prerequisite: Spanish 548 or 549.

The application of linguistic theory to the teaching of Spanish at the secondary and college levels.

798. Special Study (1-3) Cr/NC

Prerequisite: Consent of staff, to be arranged with department chair and instructor. Individual study. Maximum credit six units.

799A. Thesis (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

Speech Communication**Faculty**

Chair, Department of Speech Communication: S. W. King
 Coordinator, Graduate Program: A. R. Weitzel
 Graduate Adviser: A. R. Weitzel
 Credential Adviser: A. R. Weitzel
 Professors: Adams, Benjamin, King, Mills, Samovar
 Associate Professors: Sanders, Weitzel
 Assistant Professor: Lustig

Assistantships

Graduate teaching assistantships in speech communication are available to a limited number of qualified students. Application blanks and further information may be obtained from the department chair.

General Information

The Department of Speech Communication, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Speech Communication. The department offers advanced study in the areas of public address and communication.

Admission to Graduate Study

Students must meet the general requirements for admission to the University with classified graduate standing, as described in Part Three of this bulletin.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, as described in Part Three of this bulletin. In addition, students seeking the Master of Arts degree in Speech Communication are required to have completed Speech Communication 700.

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Three of this bulletin, the student must complete a graduate program which includes at least 30 units acceptable on master's degree programs in speech, of which at least 18 units must be in 600- and 700-numbered courses. Speech Communication 700, 735, 750, 751 or 790, and 799A, Thesis, are required courses for those electing Plan A. If Plan B is followed three additional units in 600- and 700-numbered courses in speech communication must be taken, and a comprehensive examination must be passed in lieu of the thesis.

Courses Acceptable on Master's Degree Programs in Speech Communication**UPPER DIVISION COURSES****508. Advanced Interpretation (3) I, II**

Three lecture-demonstrations per week and 32 hours of laboratory per semester.

Prerequisite: Speech Communication 111A.

Analysis of techniques of literary composition as guides to oral interpretation. Achievements of the creative artists as they affect the interpretive artist.

509. Readers Theatre (3)

Prerequisite: Speech Communication 508.

Theory, concepts and history of Readers Theatre. Principles of literary analysis and oral interpretation applied to methodologies and techniques in the development of texts into media of group communication of non-dramatic literature.

530. Semantics (3) I, II

Recognition of various types of linguistic meaning; logical distinctions in discourse; distinction between real and verbal disagreement; recognition and correction of semantic fallacies.

535. Theories of Human Communication (3) I, II

Prerequisite: Six units of speech communication.

Special emphasis on various communication theories and models; the relationship of mental variables such as perception, roles and status, behavior change, language and motivation to the entire communication process.

537. Empirical Study in Speech Communication (3) I, II

Prerequisite: Six units of speech communication. Recommended: Speech Communication 135.

Philosophy of social science and application to current research in speech communication. Theories and constructs related to communication: analysis of current research literature.

580. Communication and Politics (3)

Prerequisite: Speech Communication 103 or 104.

Contemporary political communication events and processes, with a focus on speeches, debates, and campaigns.

589. Ethics of Speech Communication (3)

Prerequisite: Six upper division units in philosophy or speech communication.

Classical and modern ethical concepts applied to oral persuasion.

592. Persuasion (3) I, II

Prerequisite: Speech Communication 103 or 104.

Persuasion with emphasis on psychological principles. Research project on a significant problem.

GRADUATE COURSES**700. Seminar in Research and Bibliography (3)**

Basic reference works, scholarly and critical journals; introduction to bibliographical techniques; exercises and problems in methods and exposition of research as it relates to speech communication. Recommended for first semester of graduate work, and prerequisite to advancement to candidacy.

708. Seminar in Oral Interpretation (3)

Prerequisite: Speech Communication 508.

Aesthetic discipline applied to oral interpretation of various forms of literature. Analysis of thought and emotional content, and aesthetic form. Investigation of advanced problems of delivery.

730. Seminar in the Analysis of Language (3)

Prerequisite: Speech Communication 530.

Special problems in language theory which may be integrated into the larger bodies of rhetorical and communication theory.

735. Seminar in Communication Theory (3)

Prerequisite: Speech Communication 535.

Theories of communication; communication models, codes, perception and effects.

750. Seminar in Rhetorical Theory (3)

Leading figures in rhetorical theory from Plato to contemporary theorists. Special attention given to the application of theory to public address.

751. Seminar in Rhetorical Criticism (3)

Major systems of speech criticism. Special attention to measuring the effectiveness of a given piece of discourse in terms of actuality and potentiality.

775. Seminar in Intercultural Communication (3) I, II

Prerequisite: Speech Communication 475.

Analysis of cultural influences on human communication acts. Emphasis on cultural values, perception, social organizations, language and nonverbal codes.

780. Seminar in Public Address (3)

Case studies of rhetorical events which illustrate rhetorical theory. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable on a master's degree.

790. Seminar in Experimental Procedures in Speech Communication (3)

Prerequisites: Credit or concurrent registration in Speech Communication 592 and 700.

Examination and evaluation of appropriate experimental procedures and traditional methods; special problems in research design.

791. Seminar in Group Communication (3)

Prerequisite: Speech Communication 391.

A study of descriptive and experimental literature on group discussion covering such topics as interaction, leadership, and means of evaluation.

792. Seminar in Persuasion (3) I, II

Prerequisite: Speech Communication 592.

Contemporary theories and models of persuasion, methods of assessing persuasive effect, and analysis of research literature.

798. Special Study (1-3) Cr/NC

Individual study. Maximum credit six units.

Prerequisite: Consent of staff, to be arranged with department chair and instructor.

799A. Thesis or Project (3) Cr/NC

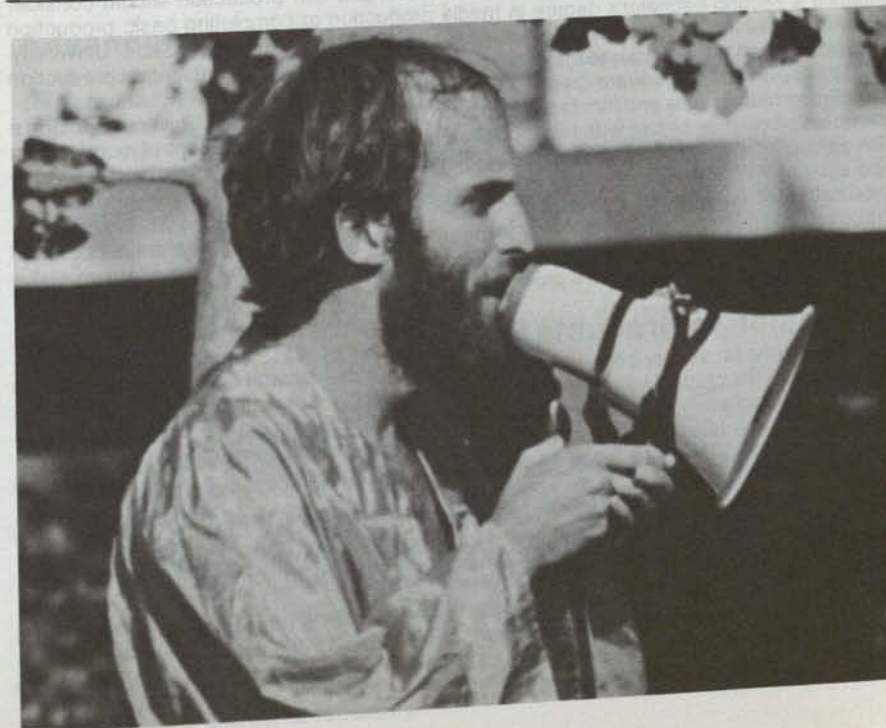
Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

799B. Thesis or Project Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.



Telecommunications and Film

Faculty

Chair, Department of Telecommunications and Film: K. K. Jones

Graduate Adviser: J. S. Johnson

Professors: Anderson, Heighton, Jameson, Johnson, Jones, Lee, Madsen, Steen, Wylie

Associate Professors: Martin, Meador, Misiorowski

Assistant Professor: McKee

Assistantships

Graduate assistantships in telecommunications and film are available to a limited number of qualified students. Application blanks and further information may be obtained from the department chair.

General Information

The Department of Telecommunications and Film, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Radio and Television. This degree permits advanced study in the areas of telecommunications and film management, process and effects, and public telecommunications. In addition, the department participates in the Master of Science degree in Mass Communications which is designed to offer systematic training for students: (1) who plan to continue their study in doctoral or other advanced programs in mass communications or in disciplines emphasizing areas of mass communications; (2) who plan a career in secondary or junior college teaching; or (3) who seek a broad background for careers in the mass media, business, or government service (see Mass Communications in this bulletin for specific requirements for this degree).

Both the Master of Arts in Radio and Television and the Master of Science in Mass Communications (with an emphasis in Telecommunications and Film) assume a scholarly interest in theoretical and applied problems relating to media. Postbaccalaureate students interested in learning basic techniques of television and film production should consider pursuing a second bachelor's degree in media production or completing basic production courses elsewhere before applying for graduate study at San Diego State University. Students with an undergraduate major or minor in media may enroll in advanced production courses approved for graduate credit.

Telecommunications and film facilities now in use at San Diego State University include a television production center with two studios, a radio complex with five control rooms, and a film production center. The Department of Telecommunications and Film participates in the operation of KPBS-TV/FM, operates a television production center for the origination and syndication of public television programs, and maintains the San Diego State University closed-circuit instructional television production and origination facility. The entire operation provides telecommunications and film experience for all students in the curriculum and a laboratory for investigating media problems for graduate students.

Admission to Graduate Study

Applications for admission to the graduate programs in telecommunications and film will be referred to the graduate adviser of the department who will send to the applicant detailed instructions concerning applications procedures. Applications must be submitted prior to March 1 for the fall semester, and October 1 for the spring semester, in order to be considered by the Graduate Admissions Committee of the Department of Telecommunications and Film.

In addition to meeting the general requirements for admission to the University with classified graduate standing, as outlined in Part Three of this bulletin, a student applying for admission to a graduate program in the Department of Telecommunications and Film must meet the following requirements:

1. Undergraduate major in telecommunications and film (or its equivalent) if advanced study of media development is proposed. Note: Graduate students will not be permitted to enroll in entry-level (lower division) production courses at San Diego State University. Students with other baccalaureate degrees may pursue a

nonproduction course of study leading to the M.A. or M.S. degree, but will be expected to complete one or more media survey courses (such as Telecommunications and Film 315) which will not apply toward the units required for the degree.

2. Undergraduate grade point average not less than 2.75 overall, and 3.0 in the last 60 units attempted.
3. Total score (verbal and quantitative) on the GRE Aptitude Test of 950.

To be considered for admission to a graduate program in the department, a student must submit the following in addition to materials required by the University:

1. Three letters of recommendation.
2. A personal statement in which the student discusses his or her background, interests and abilities as they apply to the desire for an advanced degree, and in particular, a graduate degree in telecommunications and film at San Diego State University.

Students accepted for graduate study in the Department of Telecommunications and Film will first be given Conditional Graduate Standing (classified). Full classified standing will be given only after the student has completed Telecommunications and Film 600 with a grade of B or better, and has filed an official graduate program. In addition to meeting the requirements for classified standing described in Part Three of this bulletin, all students must complete Telecommunications and Film 600 in their first semester in residence.

Specific Requirements for the Master of Arts Degree

Further specific information on the master of science degree is listed under the heading "Mass Communications." Candidates for the Master of Arts in Radio and Television must also include the following in their programs:

1. Telecommunications and Film 799A (Thesis or Project).
2. At least 21 units from the courses listed below as acceptable for graduate credit. Up to nine units from other departments can be included providing the courses are acceptable for graduate credit in the department in which they are taken, and they are approved by the Graduate Adviser of the Department of Telecommunications and Film.
3. At least 18 units in the program must be graduate-level courses.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, which are described in Part Three of this bulletin.

Courses Acceptable on Advanced Degree Programs in Telecommunications and Film

UPPER DIVISION COURSES

500. Broadcast Management (3) I, II

Prerequisite: Telecommunications and Film 100.

Administration and organization of radio and television, including radio and television as advertising media, broadcasting research, station organization, promotion and sales, and current developments in radio and television as mass media.

501. Business Aspects of Television and Film Production (3) I, II

Prerequisites: Telecommunications and Film 260 or 280. Normally taken concurrently with Telecommunications and Film 560 or 581.

Financing, preproduction planning, and postproduction of television and film.

505. Regulation of Broadcasting (3) I, II

Prerequisite: Telecommunications and Film 100.

Responsibilities of broadcasters as prescribed by law, governmental policies and regulations, and significant court decisions.

510. Script Writing for Broadcasting and Film (3) I, II

Prerequisites: Telecommunications and Film 260 or 280, and successful completion of the University's writing competency requirement.

Development of a single program and series ideas. Scripting of dramatic original and adaptation forms, and the documentary.

- 520. Directing Television and Film Drama (3) I, II**
Two lectures and more than three hours of activity.
Planned for prospective directors of plays for television and film. The student will become acquainted with principles, procedures and methods. Practical experience in University-sponsored productions.
- 530. Radio Programing (3) II**
Two lectures and more than three hours of scheduled activity.
Prerequisites: Telecommunications and Film 100 and 121.
Formats, policies, production practices and research in modern programing. Student work is broadcast on KPBS-FM.
- 535. Television Programming (3) I, II**
Prerequisite: Telecommunication and Film 100.
Structure of television programing. Problems such as ratings, advertisers and scheduling. Social effects and criticism of television programing.
- 540. Broadcast Advertising (3) I, II**
Prerequisites: Two courses in broadcasting or journalism.
Theory, procedures, and the role of broadcast advertising, including marketing and media research, campaign planning, media strategy, time purchasing, and evaluation.
- 541. Broadcast Commercial Practices (3) II**
Prerequisites: Telecommunications and Film 121, 280, 540, and permission of instructor.
Planning and execution of broadcast advertising and promotion campaigns; creative strategy and production techniques; use of research; campaign evaluation.
- 550. Advanced Lighting and Staging for Television and Film (4) I, II**
One lecture and more than nine hours of activity.
Prerequisites: Telecommunications and Film 120, 122, 123.
Production elements of television and film, to include lighting and staging techniques, art and graphics, scene design and scene decoration. Practical experience in University-sponsored productions.
- 560. Film Production (3) I**
One lecture and more than six hours of activity. Practical experience in University-sponsored productions.
Prerequisites: Telecommunications and Film 260, 510, and 520.
Advanced practicum in film production. Cameras, lighting, design, sound techniques for super-8 and 16mm productions. (Formerly numbered Telecommunications and Film 560A.)
- 561. Film Direction (3) II**
Two lectures and more than three hours of activity.
Prerequisites: Telecommunications and Film 501, 550, and 560.
Studio and location work in the preparation of dramatic and nondramatic films. Practical experience in University-sponsored productions. (Formerly numbered Telecommunications and Film 560B.)
- 562. Documentary and Propaganda Film (3) I, II**
Prerequisite: Telecommunications and Film 160.
Viewing and analysis of the major conceptual forms and cinematic techniques of these genres from 1922 to the present.
- 563. Film Classics (3) I, II**
Prerequisite: Upper division standing.
Viewing and analysis of those American and foreign theatrical films, particularly of the sound era, which represent milestones in the development of the cinema. May be repeated with new content. See class schedule for specific content. Maximum credit six units.
- 565. Animated Film Techniques (3) II**
Two lectures and more than three hours of activity.
Screening of representative examples and production of a filmograph or animated motion picture. Practical experience in University-sponsored productions.
- 570. Educational Telecommunications (3) I, II**
Prerequisite: Telecommunications and Film 100.
The role of instructional and public broadcasting in the United States; utilization of telecommunications in the classroom and industrial training programs.

- 580. Advanced Programing and Development for Television (3) I, II**
One lecture and more than six hours of activity.
Prerequisites: Telecommunications and Film 280, 510, and consent of instructor.
The development of program ideas into formats for television productions of all types. Practical experience in developing and producing programs for University-sponsored productions.
- 581. Advanced Television Directing (3) I, II**
One lecture and more than six hours of activity.
Prerequisites: Telecommunications and Film 100, 280, 520 and consent of instructor.
Presentational techniques and individual projects in the direction and production of television programs. Practical experience in University-sponsored productions.
- 590. International Broadcasting (3)**
Prerequisite: Telecommunications and Film 100 or 315, or Journalism 100.
Comparative study of broadcasting in various world areas; economic, social and political determinants of broadcasting patterns.
- 596. Selected Topics in Telecommunications and Film (1-3) I, II**
Prerequisite: Twelve units in telecommunications and film.
Specialized study of selected topics from the areas of telecommunications and film. May be repeated with new content. See class schedule for specific content. Maximum credit six units. (Formerly numbered Telecommunications and Film 496.)

GRADUATE COURSES

- 600. Seminar in Research and Bibliography (3)**
Basic reference works, scholarly and critical journals; bibliographical techniques; exercises and problems in methods and exposition of research as it relates to the various areas of telecommunications and film.
- 602. Seminar in Mass Communication Theory (3)**
Prerequisite: Speech Communication 535.
Analysis of theoretical models of mass communication. Application of operational models for the diffusion of information, and the adoption of innovation, to problems in the mass media.
- 603. Seminar in Mass Communications Message Design (3)**
Prerequisite: Speech Communication 535.
Selection and organization of message design elements in the mass communications media. Analysis of different effects of various types of mass communications formats, presentations, and systems on individuals and groups.
- 610. Seminar in Writing for Broadcast and Film (3)**
Prerequisites: Telecommunications and Film 260, 363 and 510.
Dramatic structures as they apply to broadcasting and cinema. Writing a full-length script or scenario.
- 615. Seminar in Criticism of Broadcasting and Cinema (3)**
Prerequisite: The equivalent of an undergraduate major in telecommunications and film.
Standards for objective appraisal of the ethical and artistic aspects of radio, television and film programs.
- 620. Seminar in History of Broadcasting (3)**
Prerequisite: The equivalent of an undergraduate major in telecommunications and film.
The development of broadcasting in its social, legislative and economic settings, with emphasis on broadcasting in the U.S.
- 640. Seminar in Broadcast Advertising Problems (3)**
Prerequisite: The equivalent of an undergraduate major in telecommunications and film.
Analysis of social, economic and cultural context of advertising in commercial broadcasting; criticism and evaluation of the function of the advertiser; survey of broadcast advertising theory and research.
- 660. Seminar in Directing the Dramatic Film (3)**
Prerequisites: Telecommunications and Film 520, 561, and consent of instructor.
Analysis of techniques and stylistic contributions of major directors as seen in their films. Production of a short dramatic film embodying concepts so learned.

670. Seminar in Educational Telecommunications (3)

Prerequisite: Telecommunications and Film 570.

Educational uses of electronic media. Use of telecommunications in classrooms and school systems. Relationship of noncommercial radio and television (public broadcasting) to commercial broadcast media and education.

680. Seminar in Programing and Production (3)

Prerequisite: The equivalent of an undergraduate major in telecommunications and film. Theory and analysis of programing and production of broadcasting.

700. Seminar in Broadcast Management (3)

Prerequisite: The equivalent of an undergraduate major in telecommunications and film. The legal and regulatory milieu of broadcasting from the perspective of station management.

705. Seminar in Broadcast Law and Regulations (3)

Prerequisite: Telecommunications and Film 505 or Journalism 502.

Analysis of legal concepts and issues as applied to commercial and noncommercial broadcasting; relationship of local, state and federal government to broadcast media.

770. Seminar in Teaching Broadcasting and Film (3)

Broadcast and film curriculum development. Methods of teaching both theory and laboratory courses in broadcasting and film. Analysis of organizations for administering broadcast and film curricula in colleges and universities with public TV stations and/or on-campus instructional TV systems.

798. Special Study (1-3) Cr/NC

Individual study. Maximum credit six units.

Prerequisite: Consent of staff; to be arranged with department chairman and instructor.

799A. Thesis or Project (3) Cr/NC

Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

799B. Thesis or Project Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with as assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.



Upper Division Courses

(Also Acceptable for Advanced Degrees)

The following courses are acceptable on selected advanced degree programs.

AMERICAN INDIAN STUDIES COURSE

533. Problems in American Indian Education (3) II

Prerequisite: American Indian Studies 110 or 120.

Survey of education system imposed on Indian America from the close of the Indian-White military conflict period to the present. Philosophies, government policy and public school accommodation will be central to the topic. Studies, recommendations and resultant programs that affect the overall educational process will be assessed.

CLASSICS COURSES

550G. Advanced Reading in Greek (3 or 4)

Prerequisite: Classics 304G.

Extended, intensive reading in a major author such as Aeschylus, Thucydides, Herodotus, Aristotle, Aristophanes. Emphasis on style, content, interpretation. May be repeated with new content. See class schedule for specific content. Maximum credit nine units. (Formerly numbered Greek 550.)

550L. Advanced Reading in Latin (3 or 4)

Prerequisite: Classics 304L.

Extended, intensive reading in a major author such as Lucretius, Tacitus, Livy, Horace, Petronius, Juvenal. Emphasis on style, content, interpretation. May be repeated with new content. See class schedule for specific content. Maximum credit nine units. (Formerly numbered Latin 550.)

EUROPEAN STUDIES COURSE

580. Seminar: Topics (3)

Special topics appropriate to the interdisciplinary study of Europe. Reading, observation and evaluation of scholarly literature of topic under consideration. See class schedule for specific content. Maximum credit six units.

OCEANOGRAPHY COURSE

541. Oceanography (3) I, II

Prerequisites: Chemistry 200, 200L; Mathematics 121 and 122 or 150; Physics 124A or 195, 195L.

Multidisciplinary examination of the physical, chemical, biological and geological aspects of the marine environment and the relationship of man with the sea. Intended for science majors only.

RELIGIOUS STUDIES COURSES

501. Religions of India (3)

Prerequisite: Three units of religious studies. Phenomenological studies in the major religious traditions of India, especially Hinduism and Buddhism.

503. Religions of the Far East (3)

Prerequisite: Three units of religious studies. Phenomenological studies in the major religious traditions of east Asia, especially China and Japan.

506. Scriptures of India (3)

Prerequisite: Three units of religious studies. The religious and philosophical modes of thought and ways of life in India as reflected in major scriptures; reading and analysis of primary texts in translation.

508. Scriptures of Far Eastern Traditions (3)

Prerequisite: Three units of religious studies. The religious and philosophical modes of thought and ways of life in east Asia, especially China and Japan; reading and analysis of primary texts in translation.

518. The Oracular Tradition (3)

Prerequisite: Three units of religious studies.
Oracular traditions of East and West, with special attention to the *I Ching* and the *Tarot*.

520. Religious Consciousness in American Society (3)

Prerequisite: Three units of religious studies.
Critical investigation of the traditions which have helped to shape religious pluralism within American society.

522. Religion in America (3)

Prerequisite: Three units of religious studies.
Selected topics in religion in America, such as Deism, transcendentalism, pragmatism, church-state relations, Jewish identity, etc. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

524. Religion and Public Education (3)

Prerequisite: Valid teaching credential or enrolled in a credential program. credential program.
Examination of federal and state legislation and guidelines of boards of education affecting the teaching about religion in the public schools. Teaching materials and curriculum will be evaluated in the light of these contexts.

580. A Major Figure (3) I, II

Prerequisite: Three units of religious studies.
Life, works and significance of one major figure in a religious tradition. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

581. A Metaphysical Doctrine (3) I, II

Prerequisites: Philosophy 102, Religious Studies 101 or 201, and three upper division units in religious studies.
Systematic study of a selected theme or problem basic to the teachings of one of the major religious traditions. May be repeated with new content. See class schedule for specific content. Maximum credit six units.

WOMEN'S STUDIES COURSE

595. Seminar in Women's Studies (3)

Prerequisites: Six upper division units in women's studies.
Directed research in women's studies. Field of investigation will vary with instructor. Methods of investigation development of bibliography, presentation of paper based on original research. See class schedule for specific content. (Formerly numbered Women's Studies 495.)

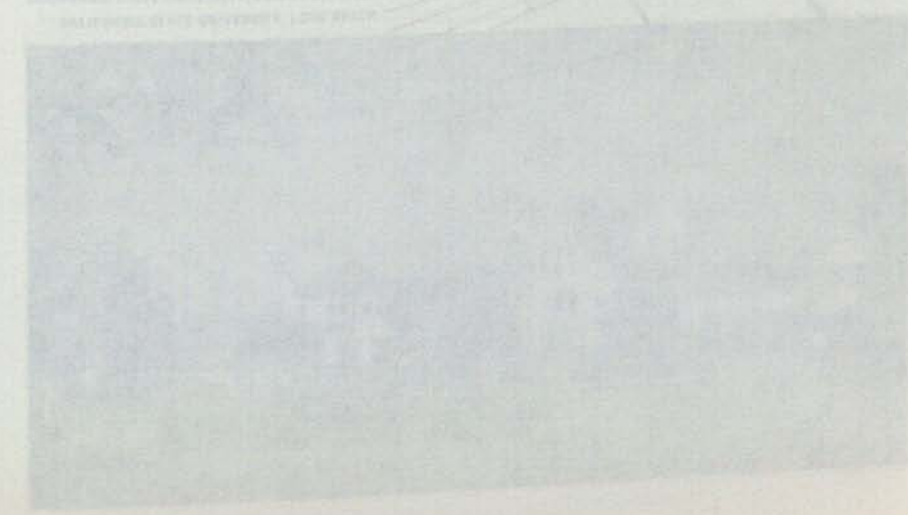


The California State University and Colleges

The history of California State University and Colleges was brought together as a system by the passage of the California State University and Colleges Act of 1962. In 1962, the system became The California State University and Colleges. Today, 13 of the 19 campuses have the title "University". The other six campuses—San Jose State University—was founded in 1887 and became the first public university in California; San Francisco State University—founded in 1909 and became the first public university in the San Francisco Bay Area; and Stanislaus State University—founded in 1909 and became the first public university in the Central Valley—were established as public universities in 1962. The system was created by the California State University and Colleges Act of 1962, which provided for the creation of a system of public higher education in California. The system was created by the California State University and Colleges Act of 1962, which provided for the creation of a system of public higher education in California. The system was created by the California State University and Colleges Act of 1962, which provided for the creation of a system of public higher education in California.

Appendix

The history of California State University and Colleges was brought together as a system by the passage of the California State University and Colleges Act of 1962. In 1962, the system became The California State University and Colleges. Today, 13 of the 19 campuses have the title "University". The other six campuses—San Jose State University—was founded in 1887 and became the first public university in California; San Francisco State University—founded in 1909 and became the first public university in the San Francisco Bay Area; and Stanislaus State University—founded in 1909 and became the first public university in the Central Valley—were established as public universities in 1962. The system was created by the California State University and Colleges Act of 1962, which provided for the creation of a system of public higher education in California. The system was created by the California State University and Colleges Act of 1962, which provided for the creation of a system of public higher education in California. The system was created by the California State University and Colleges Act of 1962, which provided for the creation of a system of public higher education in California.



The California State University and Colleges

The individual California State Colleges were brought together as a system by the Donahoe Higher Education Act of 1960. In 1972 the system became The California State University and Colleges. Today, 16 of the 19 campuses have the title "University."

The oldest campus—San Jose State University—was founded in 1857 and became the first institution of public higher education in California. The newest campus—California State College, Bakersfield—began instruction in 1970.

Responsibility for The California State University and Colleges is vested in the Board of Trustees, whose members are appointed by the Governor. The Trustees appoint the Chancellor, who is the chief executive officer of the system, and the Presidents, who are the chief executive officers on the respective campuses.

The Trustees, the Chancellor and the Presidents develop systemwide policy, with actual implementation at the campus level taking place through broadly based consultative procedures. The Academic Senate of The California State University and Colleges, made up of elected representatives of the faculty from each campus, recommends academic policy to the Board of Trustees through the Chancellor.

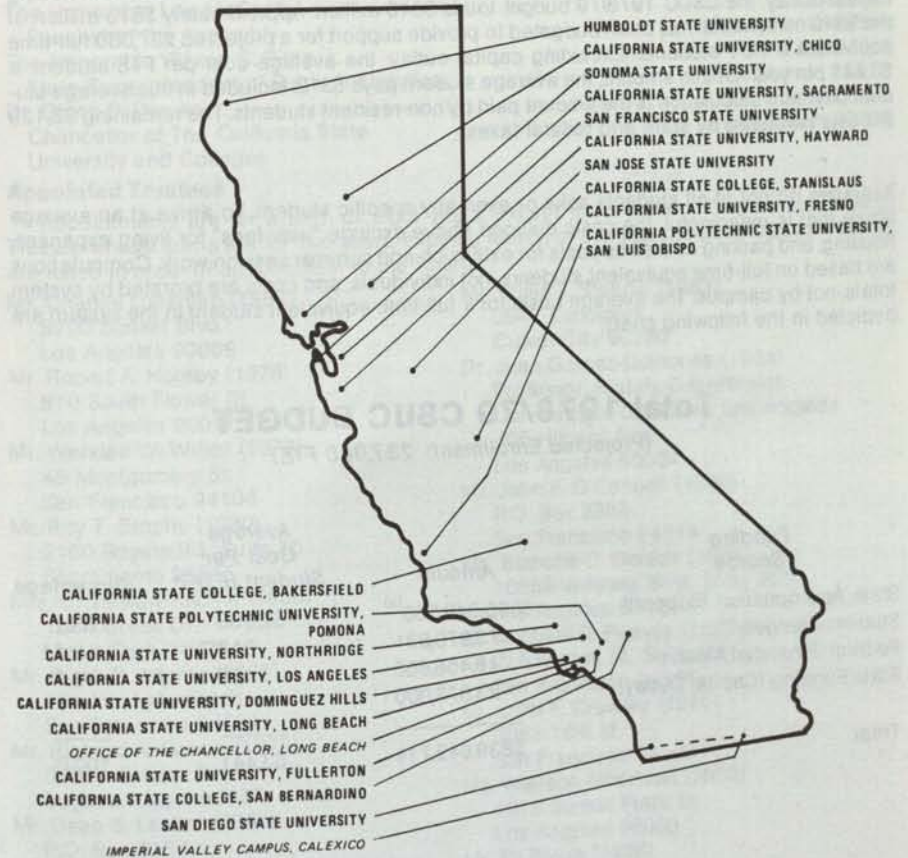
Academic excellence has been achieved by The California State University and Colleges through a distinguished faculty, whose primary responsibility is superior teaching. While each campus in the system has its own unique geographic and curricular character, all campuses, as multipurpose institutions, offer undergraduate and graduate instruction for professional and occupational goals as well as broad liberal education. All of the campuses require for graduation a basic program of "General Education—Breadth Requirements" regardless of the type of bachelor's degree or major field selected by the student. A limited number of doctoral degrees are offered jointly with the University of California, and with private universities in California.

Presently, under the system's "New Approaches to Higher Education," the campuses are implementing a wide variety of innovative programs to meet the changing needs of students and society. Among pilot programs under way are instructional television projects, self-paced learning plans, minicourses, and credit-by-examination alternatives. *The Consortium of The California State University and Colleges* fosters and sponsors local, regional and statewide external degree and certificate programs to meet the needs of individuals who find it difficult or impossible to attend classes on a campus.

Enrollments in fall 1978 totaled approximately 300,000 students, who were taught by a faculty of 17,500. Last year the system awarded over 53 percent of the bachelor's degrees and 33 percent of the master's degrees granted in California. Over 700,000 persons have been graduated from the nineteen campuses since 1960.



THE CALIFORNIA STATE UNIVERSITY AND COLLEGES



Average Annual Costs and Sources of Funds per Full-Time Equivalent* Student in The California State University and Colleges

The 19 campuses and the Chancellor's Office of The California State University and Colleges are financed primarily through funding provided by the taxpayers of California. Including capital outlay, the CSUC 1978/79 budget totals \$840 million. Approximately \$815 million of the \$840 million total has been budgeted to provide support for a projected 237,080 full-time equivalent (FTE*) students. Excluding capital outlay, the average cost per FTE student is \$3,441 per year. Of this amount, the average student pays \$312. Included in this average student payment calculation is the amount paid by non-resident students. The remaining \$3,129 in costs is funded by state and federal taxes.

Averages do not fit all students alike or even any specific student. To arrive at an average figure that is meaningful, the costs outlined above exclude "user fees" for living expenses, housing, and parking as well as costs for extension and summer session work. Computations are based on full-time equivalent students, not individuals, and costs are prorated by system totals, not by campus. The average costs for a full-time equivalent student in the system are depicted in the following chart:

Total 1978/79 CSUC BUDGET (Projected Enrollment: 237,080 FTE)

Funding Source	Amount	Average Cost Per Student (FTE)*	Percentage
State Appropriation (Support)	\$695,340,533 ^(a)	\$2,933	85.2
Student Charges	73,970,331	312**	9.1
Federal (Financial Aids)	46,458,850	196	5.7
State Funding (Capital Outlay)	23,873,000	***	***
Total	\$839,642,714	\$3,441	100.0

(a) This amount will be reduced by the CSUC share of the statewide budget reductions required by Budget Act Section 27.1 (a statewide reduction of \$42,400,000 in Operating Expense and Equipment) and Section 27.2 (a statewide reduction of \$54,000,000 in personal services pursuant to the hiring freeze).

* For budgetary purposes, full-time equivalent (FTE) translates total head count into total academic student load. The term assumes that a full-time student in The California State University and Colleges is enrolled for 15 units of academic credit. Some students enroll for more than 15 units; some students enroll for fewer than 15 units.

** The average costs paid by a student include the student services fee, health facilities fee, college union fee, student body fee, and the non-resident tuition. This amount is derived by taking the total of all student fees and dividing by the total full-time equivalent student enrollment. Individual students may pay more or less than \$312 depending on whether they are part-time, full-time, resident or non-resident students.

*** Not included in the Average Cost Per Student (FTE), and Percentage columns. The estimated replacement cost of all the system's permanent facilities and equipment on the 19 campuses is currently valued at \$2.6 billion, excluding the cost of land.

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The Honorable Wilson C. Riles	Sacramento 95814
State Superintendent of Public Instruction	400 Golden Shore
Dr. Glenn S. Dumke	Long Beach 90802
Chancellor of The California State University and Colleges	

Appointed Trustees

Appointments are for a term of eight years, except for a student Trustee and alumni Trustee whose terms are for two years, expiring March of the years in parentheses. Names are listed in order of appointment to the Board.

Mr. Charles Luckman (1982)	Mr. Willie J. Stennis (1983)
9220 Sunset Blvd.	3947 Landmark
Los Angeles 90069	Culver City 90230
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810 South Flower St.	Professor, History Department
Los Angeles 90017	University of California, Los Angeles
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45 Montgomery St.	Los Angeles 90024
San Francisco 94106	Mr. John F. O'Connell (1980)
Mr. Roy T. Brophy (1980)	P.O. Box 3965
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Mr. Richard A. Garcia (1979)	3068 16th St.
31851 E. Nine Dr.	San Francisco 94103
Laguna Niguel 92677	Ms. Wallace Albertson (1986)
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P.O. Box 5166	Los Angeles 90069
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450 North Grand	Los Angeles 90064
Rm. G353	Mr. Kevin Gallagher (1980)
Los Angeles 90012	CSC, San Bernardino
Dr. Mary Jean Pew (1983)	5500 State College Parkway
2021 N. Western Ave.	San Bernardino 92407
Los Angeles 90027	

* Appointment subject to State Senate confirmation.

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Dr. Stanford Cazier, President
(916) 895-5011

California State University, Dominguez Hills
Carson, California 90747
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(213) 515-3300

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(209) 487-9011

California State University, Fullerton
Fullerton, California 92634
Dr. L. Donald Shields, President
(714) 870-2011

California State University, Hayward
Hayward, California 94542
Dr. Ellis E. McCune, President
(415) 881-3000

Humboldt State University
Arcata, California 95521
Dr. Alistair W. McCrone, President
(707) 826-3011

California State University, Long Beach
1250 Bellflower Boulevard
Long Beach, California 90840
Dr. Stephen Horn, President
(213) 498-4111

California State University, Los Angeles
5151 State University Drive
Los Angeles, California 90032
Dr. John A. Greenlee, President
(213) 224-0111

California State University, Northridge
18111 Nordhoff Street
Northridge, California 91324
Dr. James W. Cleary, President
(213) 885-1200

California State Polytechnic
University, Pomona
3801 West Temple Avenue
Pomona, California 91768
Dr. Hugh O. LaBounty, Jr., President
(714) 598-4592

California State University, Sacramento
6000 J Street
Sacramento, California 95819
Dr. W. Lloyd Johns, President
(916) 454-6011

California State College, San Bernardino
5500 State College Parkway
San Bernardino, California 92407
Dr. John M. Pfau, President
(714) 887-6311

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5300 Campanile Drive
San Diego, California 92182
Dr. Thomas B. Day, President
(714) 286-5000
Imperial Valley Campus
720 Heber Avenue
Calexico, California 92231
(714) 357-3721

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1600 Holloway Avenue
San Francisco, California 94132
Dr. Paul F. Romberg, President
(415) 469-2141

San Jose State University
125 South Seventh Street
San Jose, California 95192
Dr. Gail Fullerton, President
(408) 277-2000

California State Polytechnic
University, San Luis Obispo
San Luis Obispo, California 93407
Dr. Dale W. Andrews, Acting President
(805) 546-0111

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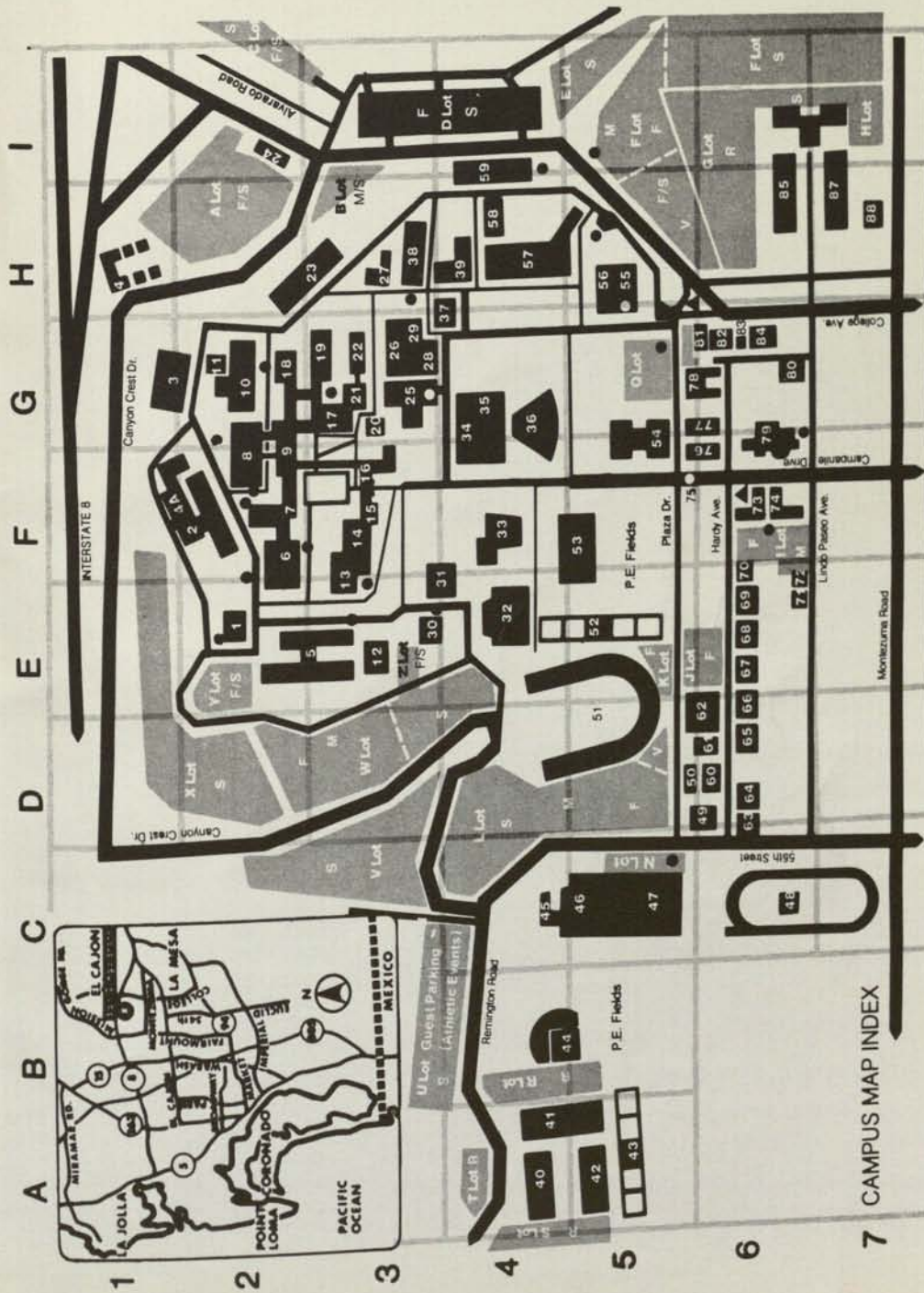
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