



ARCHIVES
SDSU

Robert W. Isensee

San Diego State University
Bulletin of the
Graduate Division

**1974
1975**

BULLETIN

ANNOUNCEMENT
OF THE
GRADUATE DIVISION

1974-1975

SAN DIEGO STATE UNIVERSITY
SAN DIEGO, CALIFORNIA 92115

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ACADEMIC CALENDAR

1974-1975

1974 SUMMER SESSIONS

June 3-21	Term I Summer Session (3 weeks)
June 15	Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.
June 15	Graduate School Foreign Language Test, by appointment four weeks in advance, Test Office.
June 24-August 2	Term II Summer Session (6 weeks).
July 13	Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.
July 19	Last day to apply for summer graduation with an advanced degree, Graduate Division Office.
August 2	Final date for depositing completed approved theses at Aztec Shops for processing for summer graduation. Also last day for reporting results on comprehensive examinations to the Graduate Division Office by department, school, or college.
August 3	Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.
August 5-23	Term III Summer Session (3 weeks).

FALL SEMESTER

August 1-31	Applications for admission or readmission to San Diego State University for the spring semester, 1975. Accepted after this date only until enrollment quotas are met.
August 14-31	Testing, advising, and registration.
August 30	Opening date of the academic year.
September 2	Holiday—Labor Day.
September 3	First day of classes.
September 17	Last day to apply for refunds.
September 20	Last day to withdraw or change program.
September 28	Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.
October 26	Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.
October 26	Graduate School Foreign Language Test, by appointment four weeks in advance, Test Office.
October 28	Holiday—Veterans' Day.
November 1-30	Application for admission or readmission to San Diego State University for the fall semester, 1975. Accepted after this date only until enrollment quotas are met.
November 5	Graduate Record Examination Aptitude Test for master's degree applicants, 6:15-10:00 p.m., by appointment four weeks in advance, Test Office.
November 8	Last day to apply for mid-year graduation with an advanced degree, Graduate Division Office.
November 28-30	Thanksgiving recess.
December 13	Last day of classes before final examinations.

Dec 1 last day to submit theses for review at home lib 5

ACADEMIC CALENDAR—Continued

1973-1974

FALL SEMESTER—Continued

- December 14 Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.
- December 14-21 Final examinations.
- December 20 Last day for depositing completed approved theses at Aztec Shops for processing for December graduation. Also last day for reporting results on comprehensive examinations to the Graduate Division Office by department, school, or college.
- December 31 Last day of fall semester.

SPRING SEMESTER

- August 1-31 Applications for admission or readmission to San Diego State University for the spring semester, 1975. Accepted after this date only until enrollment quotas are met.
- January 8-17 Testing, advising, and registration.
- January 13 First day, second semester.
- January 18 Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.
- January 18 Graduate School Foreign Language Test, by appointment four weeks in advance, Test Office.
- January 20 First day of classes.
- February 4 Graduate Record Examination Aptitude Test for master's degree applicants, 6:15-10:00 p.m., by appointment four weeks in advance, Test Office.
- February 6 Last day to apply for refunds.
- February 13 Last day to withdraw or change program.
- February 17 Holiday—Washington's Day.
- February 18 Holiday—Lincoln's Day.
- February 22 Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.
- March 8 Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.
- March 21 Last day to apply for May graduation with an advanced degree, Graduate Division Office.
- March 21 Last day of classes before spring recess.
- March 24-30 Spring recess.
- April 11 Last day for submitting committee-approved theses at Graduate Division Office for final approval prior to processing for May graduation and removal of incompletes.
- April 25 Last day for depositing completed approved theses at Aztec Shops for processing for May graduation. Also last day for reporting results on comprehensive examinations to the Graduate Division Office by department, school, or college.

ACADEMIC CALENDAR—Continued

1974-1975

SPRING SEMESTER—Continued

- April 26 Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.
- April 26 Graduate School Foreign Language Test, by appointment four weeks in advance, Test Office.
- May 9 Last day of classes before final examinations.
- May 10 Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.
- May 10-17 Final examinations.
- May 18 Commencement.
- May 26 Holiday—Memorial Day.
- May 30 Last day of spring semester.

1975 SUMMER SESSIONS

- June 2-20 Term I Summer Session (3 weeks).
- June 21 Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.
- June 21 Graduate School Foreign Language Test, by appointment four weeks in advance, Test Office.
- June 23-August 1 Term II Summer Session (6 weeks).
- July 12 Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.
- July 20 Last day to apply for summer graduation with an advanced degree, Graduate Division Office.
- August 2 Graduate Record Examination Aptitude Test for master's degree applicants, 8:30-12:00 noon, by appointment four weeks in advance, Test Office.
- August 3 Final date for depositing completed approved theses at Aztec Shops for processing for summer graduation. Also last day for reporting results on comprehensive examinations to the Graduate Division Office by department, school, or college.
- August 4-22 Term III Summer Session (3 weeks).

FEES

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

FEES MUST BE PAID AT TIME OF REGISTRATION

Materials and service	Fee
Units enrolled	
0- 3.9	\$72.50
4- 7.9	78.50
8-11.9	84.50
12 or more	93.50

The above fees also include a student activity fee of \$9.50, a student union fee of \$9.00, and a non-refundable facilities fee of \$3.00.

Auditors pay same fees as students carrying courses for credit.

Tuition for nonresident student:

(In addition to materials and service, activity, and student union fees)

Nonresident student enrolled for 15 units or more	\$650.00
Nonresident student enrolled for less than 15 units, or fraction thereof (per unit)	\$43.00

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

Tuition for foreign student (citizen and resident of a foreign country)

(In addition to materials and service, activity, and student union fees)

Foreign student enrolled for 15 units or more	\$650.00
Foreign student enrolled for less than 15 units or fraction thereof (per unit)	\$43.00

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

Health Insurance (mandatory):

Per semester	\$20.00
Per year	\$33.00

Parking fees:

Non-reserved park space, per semester	\$15.00
Car pool—see cashier at registration.	
Less than four-wheeled, self-propelled vehicle	3.75

MISCELLANEOUS FEES

(Fees payable when service is rendered)

Application fee for admission or readmission to the University (non-refundable)	\$20.00
Late registration	5.00
Failure to meet administratively required appointment or time limit	2.00
Photo-Identification card	2.00
Lost identification cards/stickers	
Card only	2.00
Registration sticker only	2.00
Card and sticker	4.00
Transcript of record	1.00
Check returned for any cause	5.00
Loss or damage of equipment and library books	Cost

REGULAR SESSION FEE REFUNDS

Materials and service fees:

To be eligible for a refund of materials and service fees a student must completely withdraw from the university. There will be no refund for a reduction of unit load. To be eligible for a refund of materials and service 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, CLS 108, not later than 14 days following the day the academic term begins. All but \$15.00 will be refunded. For additional information contact the Cashier's Office or telephone 286-5253.

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 therefor 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

Parking fee:

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

Nonreserved space per semester:

Period	Amount of refund
1-30 days	75 percent of fee
31-60 days	50 percent of fee
61-90 days	25 percent of fee
91-end of term	None

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

The late registration fee is not refundable.

The Cashier's Office should be consulted for further refund details.

SUMMER SESSION FEES

Tuition, each session	(per unit) \$30.00
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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

EXEMPTIONS

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

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 23762. Students qualifying for these benefits are known as Alan Pattee scholars.

VETERAN ALLOWANCES

Allowances for subsistence begin on the date the Business Office clears for payment of fees, or effective date of VA authorization, whichever is later, except that veterans clearing the Business Office on the regular registration days will be certified for subsistence beginning with the first day of the registration schedule.

DEBTS OWED TO THE UNIVERSITY

From time to time the student may become indebted to the university. This could occur, for example, when the student fails to repay money borrowed from the university. Similarly, debts occur when the student fails to pay university dormitory or library fees, or when the student fails to pay for other services provided by the university at the request of the student. Should this occur, Sections 42380 and 42381 of Title 5 of the California Administrative Code authorize the university to 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. For example, under these provisions the university may withhold permission to register, and may withhold other services, such as grades and transcripts. If a student feels that he or she does not owe all or part of a particular fee or charge, the student should contact the university business office. The business office, or another office of the university to which the student will be referred by the business 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.

NOTICE

The Board of Trustees of The California State University and Colleges, in Section 43800 of Title 5 of the *California Administrative Code*, has reserved the right to add, amend, or repeal any of its regulations, rules, resolutions, standing orders, and rules of procedures, in whole or in part, at such time as it may choose. None shall be construed, operate as, or have the effect of an abridgement or limitation of any rights, powers, or privileges of the Trustees. The Chancellor reserves the right to add, amend or repeal any of his Executive Orders, at such time as he may choose, and the President of San Diego State University reserves the right to add, amend, or repeal provisions of this catalog and rules of the University, including handbooks, at such time as he may choose. No Executive Order shall be construed, operate as, or have the effect of an abridgement or limitation of any rights, powers, or privileges of the Chancellor nor shall any catalog provision or rule of the University be construed, operate as, or have the effect of an abridgement or limitation of any rights, powers, or privileges of the President.

PART ONE

SAN DIEGO STATE UNIVERSITY

PRINCIPAL OFFICERS OF ADMINISTRATION

President of the University	Brage Golding
Vice President for Academic Affairs	Trevor Colbourn
Vice President for Planning and External Affairs	Ernest B. O'Byrne
Dean of Student Affairs	Daniel B. Nowak
Director of Business Affairs	William L. Erickson

ACADEMIC ADMINISTRATION

GRADUATE DIVISION

Dean of the Graduate Division and Research	James W. Cobble
Associate Dean of Graduate Studies	
Assistant Dean of Graduate Studies	Richard H. Lawson
Secretary of the Graduate Council	Evelyn J. Steel

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 Graduate Studies, and members of the faculty from the various schools and colleges appointed by the President. For the academic year 1973-1974, the membership of the Graduate Council was as follows:

James W. Cobble	Dean of the Graduate Division and Research
Trevor Colbourn	(ex officio) Vice President for Academic Affairs
Millard R. Biggs	Associate Dean of Graduate Studies
Richard H. Lawson	Assistant Dean of Graduate Studies
William F. Barber	School of Business Administration
Marybelle S. Bigelow	College of Professional Studies
Clarence E. Fishburn	School of Education
E. Nicholas Genovese	College of Arts and Letters
Barbara E. Gunning	College of Professional Studies
William A. Hunrichs	College of Sciences
Marion J. Kahn	School of Social Work
John P. Kern	College of Sciences
Iraj Noorany	School of Engineering
David J. Weber	College of Arts and Letters

(Membership for 1974-1975 will be determined prior to the beginning of the academic year.)

COLLEGES, SCHOOLS, AND DEPARTMENTS

Chairmen

COLLEGE OF ARTS AND LETTERS	Frank Marini, Dean
Associate Dean	Joyce O. Appleby
Assistant Dean for Student Affairs	Alvord G. Branan
Anthropology Department	Larry L. Leach
Classical and Oriental Languages and Literature Department	Steven C. Schaber
Economics Department	Frederick D. Sebold
French-Italian Languages and Literatures Department	Elizabeth R. Hanchett
Geography Department	James D. Blick
Germanic and Slavic Languages and Literatures Department	Ludek A. Kozlik
History Department	Dennis E. Berge
Linguistics Department	Orin D. Seright
Literature	Lowell Tozer
Philosophy Department	Walter H. Koppelman
Political Science Department	Charles F. Andrain
Religious Studies Department	G. Ray Jordan
Sociology Department	Thomas L. Gillette
Spanish-Portuguese Languages and Literatures Department	Gerald L. Head
COLLEGE OF PROFESSIONAL STUDIES	Maxwell L. Howell, Dean
Associate Dean	Millard R. Biggs
Associate Dean	Norman Rost
Assistant Dean for Student Affairs	George Hutchinson
Aerospace Studies Department	Lt. Col. James R. Pralle
Art Department	Paul A. Lingren
Athletics Department	O. Kenneth Karr, Jr.
Drama Department	Clarence E. Stephenson
Family Studies and Consumer Sciences	David M. Fulcomer
Health Science and Safety Department	William C. Burgess
Industrial Studies Department	Harold L. Marsters
Journalism Department	Frank S. Holowach
Music Department	J. Dayton Smith
Nursing Department	Elizabeth A. Petrie
Physical Education Department	Richard W. Wells
Public Administration and Urban Studies	James D. Kitchen
Recreation Department	Ray R. Butler
Speech Communication Department	Fred C. Sanders
Speech Pathology and Audiology Department	Harriet Kopp
Telecommunications and Film Department	K. Charles Jameson
COLLEGE OF SCIENCES	Albert W. Johnson, Dean
Associate Dean	John D. Schopp
Associate Dean	Hale L. Wedberg
Assistant Dean for Student Affairs	Celia Marshak
Astronomy Department	Burt Nelson
Biology Department	William E. Hazen
Botany Department	James V. Alexander
Chemistry Department	Earl P. Wadsworth, Jr.
Geology Department	Gary L. Peterson
Mathematics Department	Peter W. Shaw
Microbiology Department	Henry A. Walch, Jr.
Physical Science Department	Charles M. Shull, Jr.
Physics Department	Jacques D. Templin
Psychology Department	Robert Penn
Zoology Department	Roger E. Carpenter

SCHOOL OF BUSINESS ADMINISTRATION

Associate Dean	Robert P. Hungate, Dean
Assistant Dean for Graduate Study	Maurice L. Crawford
Assistant Dean for Student Affairs	William F. Barber
Accounting Department	Penny L. Wright
Finance Department	Robert A. Meier
Information Systems Department	William W. Reints
Management Department	Robert G. Langenbach
Marketing Department	William R. Sherrard
	Richard D. Darley

SCHOOL OF EDUCATION

Associate Dean	Tomás A. Arciniega, Dean
Assistant Dean	Robert R. Nardelli
Coordinator, Department of Educational Administration	Sam Blanc
Coordinator, Department of Counselor Education	Howard B. Holt
Coordinator, Department of Elementary Education	John D. Chamley
Coordinator, Department of Educational Technology and Librarianship	James M. Kaatz
Coordinator, Department of Secondary Education	Patrick J. Harrison
Coordinator, Department of Special Education	Sigurd Stautland
Coordinator, Higher Education Programs	Shirley E. Forbing
Coordinator, Graduate Programs	Robert D. Smith, Jr.
	Clarence E. Fishburn

SCHOOL OF ENGINEERING

Associate Dean	Martin P. Capp, Dean
Assistant Dean for Student Affairs	Fredrick T. Quiett
Aerospace Engineering Department	Andrew J. Crooker
Civil Engineering Department	John F. Conly
Electrical and Electronic Engineering Department	Frank E. Stratton
Mechanical Engineering Department	Shu-Yun Chan
	Richard A. Fitz

SCHOOL OF SOCIAL WORK

Associate Dean	Kurt Reichert, Dean
Assistant Dean for Student Affairs	Joseph B. Kelley
	Barbara S. Blourock

RESEARCH BUREAUS

Bureau of Business and Economic Research	John B. McFall, Director
Bureau of Marine Sciences	Glenn A. Flittner, Director
Bureau of Educational Services and Research	Lester A. Becklund, Coordinator
Center for Asian Studies	Alvin D. Coox, Director
Center for Economic Education	Joseph McClintic, Director
Center for Latin American Studies	Philip F. Flemion, Director
Center for Public Economics	George Babilot, Director
Center for Regional Environmental Studies	Charles F. Cooper, Director
Center for Research in Economic Development	Ibrahim Poroy, Director
Center for the Study of Counselor Education	Emery J. Cummins, Director
Center for Survey Research	Oscar Kaplan, Director
Economics Research Center	Robert Barckley, Director
Institute of Labor Economics	Clinton Jencks, Coordinator
Institute of Public and Urban Affairs	W. Richard Bigger, Director
Social Research Center	Aubrey Wendling, Director

PART TWO

GENERAL INFORMATION

SAN DIEGO STATE UNIVERSITY

San Diego State University is a publicly supported institution of higher learning which, since its founding in 1897, has been dedicated to the service of men and women in the pursuit of their educational goals. The southernmost link of the California State University and Colleges system, the University offers postbaccalaureate study and research in a wide variety of professional and graduate programs, leading to credentials, master's, and doctoral degrees.

The campus is situated near the eastern boundary of San Diego on a mesa overlooking Mission Valley, the site of the first mission founded in California by Father Junipero Serra. Greater San Diego is a large metropolitan area located in an ideal climate well suited to academic and cultural pursuits. Three other institutions of higher learning, as well as the famous San Diego Zoo, the Old Globe Theatre, the Fine Arts Gallery, the Timken Gallery, and the Museum of Natural History are within easy driving distance of the campus. The San Diego Stadium, Sports Arena, a number of fine beaches and the nearby Laguna Mountains and desert provide ample opportunity for recreational activities.

The faculty of the University is made up of over 1,400 scholars and teachers who are distinguished members of their professions coming from over 100 colleges and universities in the United States or abroad. Committed to good teaching, they are also engaged in research, scholarship and professional activities so necessary in maintaining a stimulating and exciting academic climate which is such an essential part of graduate training.

The degree of intellectual leadership which the University plays in higher education has been recognized by a number of learned societies which are located on campus, including the Phi Beta Kappa and Phi Kappa Phi honor societies. The University is fully accredited by the Western Association of School and Colleges, the National Council for Accreditation of Teacher Education, The California State Board of Education, and is approved by the Veterans Administration for the education and training of veterans. The master's degree programs in Business Administration are accredited by the American Association of Collegiate Schools of Business. The Department of Chemistry is on the approved list of the American Chemical Society, thereby enabling qualified students to receive the Certificate of the American Chemical Society. The Department of Music is a member of the National Association of Schools of Music. Public Administration and Urban Studies is a member of the National Association of Schools of Public Affairs and Administration. The School of Engineering is accredited in the fields of Aerospace, Civil, Electrical and Electronic, and Mechanical Engineering by the Engineer's Council for Professional Development. The Master of Social Work degree is accredited by the Council of Social Work Education.

San Diego State University also has memberships in the Western Association of Graduate Schools and the Council of Graduate Schools in the United States.

THE MALCOLM A. LOVE LIBRARY

The university library is located in the large new central Malcolm A. Love Library building opened to the students and faculty scholars in 1971. It provides ideal facilities for study and research. At the heart of the expanding campus, it is readily accessible from all directions. The five-floor building seats 3,000 readers and has an ultimate volume capacity of a million. Partially carpeted and furnished with many single place study carrels, the Love Library invites study and reflection.

The library's resources and services are noteworthy. Major services provided are: a central reference service, a library instructional service, a specialized lower division service, a special collections room for rare books and archives, and areas for the sciences and engineering library, documents, educational resources, current periodicals, and microforms and listening center.

Its collections are substantial. It has 720,000 volumes, including books, bound periodicals, and government documents. Additional resources include: 830,000 micro-

files and micro-opaque cards, 26,000 reels of microfilm, 12,000 college catalogs, 61,000 curriculum material items, 24,000 scientific reports, 275,000 archival papers, and many other media.

The library receives over 10,000 periodical and other serial titles excluding government documents. It is a depository for United States, California, Illinois, New York, and Texas government publications. It receives all United Nations and Organization of American States publications, and those of other national and international bodies.

Highly trained reference librarians assist students and faculty in their reading, study, and research. To aid the student in developing his powers in critical, independent thought through wide acquaintance with books, the library has an open shelf arrangement which gives direct access to nearly all books. Inexpensive copying machines are available throughout the building.

Several research centers on campus have collections not included in the library's holdings. Among them are: Public Administration and Urban Studies Laboratory, 50,000 items; Economics Research Center, 32,000 items; Geography and Geology Departments, 90,000 maps; International Relations Research Center, 14,000 items.

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.

The Bureau of Business and Economic Research in the School of Business Administration conducts research in the areas of economics and business with special reference to local and regional problems. The Bureau is a member of the Associated University Bureaus of Business and Economic Research.

The Bureau of Educational Services Research in the School of Education cooperates in community and service studies and disseminates educational research information.

The Bureau of Marine Sciences is organized to facilitate interdisciplinary education and marine science. It is operated under the guidance of the Faculty Marine Sciences Committee.

The Center for Asian Studies, an interdisciplinary organization in the College of Arts and Letters, develops and coordinates the curricula and activities relevant to the Asian Studies Program.

The Center for Economic Education works with the public schools to promote better economic education. The functions include research, development and use of appropriate materials, in-service and pre-service instruction, and service.

The Center for Latin American Studies seeks to encourage teaching and research related to Latin America. It has primary responsibility for the administration of Latin American undergraduate and graduate degrees and the Mexican Summer School programs.

The Center for Public Economics is a facility of the Department of Economics to encourage research by students and faculty in all phases of non-market economic decision-making. It maintains research materials and facilities to assist research and publications in the area of public economics.

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.

The Center for Research in Economic Development in the Department of Economics provides material and aid for research in problems related to less developed countries.

The Center for the Study of Counselor Education is an interdisciplinary organization under the Dean of the School of Education. It conducts programs and renders services related to counselor education and guidance.

The Center for Survey Research encourages non-profit 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.

The Economics Research Center in the Department of Economics collects research materials and publishes occasional monographs.

The Institute of Labor Economics in the Department of Economics provides materials and direction for research in labor problems, collective bargaining, labor legislation, and social security.

The Institute of Public and Urban Affairs conducts research related to community and governmental problems. It also sponsors institutes and conferences in community and governmental activities. Closely associated with the Institute is the Public Administration Center with a specialized collection of research materials.

The Social Research Center in the Department of Sociology provides physical equipment and space for the planning and processing of sociological research in such areas of investigation as urban growth and development, demographic factors, and social surveys.

LIVING ACCOMMODATIONS

Accommodations for 1,668 single students are available in six residence halls on campus. Each of the buildings is fireproof and air-conditioned throughout. Five red brick halls (one co-ed, one for men and three for women) accommodate 209 students each, with sleeping and study facilities on a two-students per room basis. The sixth residence, which is a high-rise co-ed, accommodates 623 students. Study hours are agreed on by residents. Participation in campus activities is encouraged. Student government in each residence sets standards for basic behavior in these residence halls. Each of the residence halls is staffed by personnel reporting to the Director of Housing.

Currently, the cost for room, including linens, is approximately \$269 to \$364 per semester. Three food service plans (19, 14 or 10 meals per week) are offered in The Commons at additional charges presently ranging from \$215 to \$295 per semester.

It is the responsibility of each student to contact the housing office if one wishes to obtain on-campus housing. Applications are given priority in date order as the demand exceeds the number of spaces on this campus. To apply for housing, the student should send a self-addressed envelope to the Director of Housing Office. When the application is completed, it should be accompanied with a \$20 deposit, mailed to the Cashier's Office in the Campus Laboratory School. Your request for a space is confirmed when you receive a contract and your first payment is received thirty days before the halls open. A student may apply as early as a year in advance. Applications are taken in order of date received. Though consideration will be given to a student's request for an individual hall and roommate, a specific assignment cannot be guaranteed.

No application can be honored if the student is not accepted for admission into San Diego State University by August 19 (January 15, spring semester). Clearing residence is not the same as being fully admitted to the university. Nor does receipt of a housing contract 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.

PERSONNEL SERVICES CENTER

The facilities of the Personnel Services Center are available to graduate students who may desire assistance in the solution of problems of an educational, occupational, or personal nature. Counseling appointments may be made at the Center or by telephone. Psychological testing is available upon arrangement with a counselor.

STUDENT HEALTH SERVICES

As a part of the program of student personnel services the university provides health services for the protection and maintenance of student health. These services are administered under the supervision of a medical director-administrator. A full-time physician staff is available to the students when school is in regular session for consultation, treatment of minor physical conditions, emergencies, and counsel as to follow-up procedures. Full-time nurses and technologists are also on duty when school is in regular session. Special clinics are conducted in family planning, ear, nose and throat, dermatology, and gynecology.

As a part of the admissions procedure a health history is required of all students. On the reverse side of the health history is a physical examination form to be completed by the private physician. Careful attention is given to students undergoing private remedial treatment, and those for whom a modified study load or a limited participation in physical education activities seems advisable. The physical examination must be completed as a condition to matriculation in accordance with Section 41200 of the California Administrative Code.

A student health insurance program sponsored by the Associated Students is currently in effect. This insurance, which covers hospitalization and specified medical and surgical services, may be purchased by the semester or the year through Aztec Shops, with enrollment open the first 30 days of each semester. Dependents are also eligible for coverage. Refund will be made to students graduating or withdrawing from school on a prorated basis.

CAREER PLANNING AND PLACEMENT CENTER

The Career Planning and Placement Center serves all divisions of the university. Through its professional staff the Center provides placement counseling for the assistance of any student in finding a position which will meet his individual needs and utilize his abilities. Over 1,000 business firms, government agencies, and school districts actively recruit through the Center each year. Many of these concerns are national in scope. On the average, each candidate is interviewed by three to five concerns in the process of finding the position best suited to him. The Early Match System (EMS) is available to all students registered with the Center except those in Education. EMS is a student's silent employer. Each candidate completes a card with twenty selector items on it and the card is then viewed by many firms and agencies. The EMS card should be completed the semester before graduation. The Center maintains a vocational library of current materials and company brochures from firms and agencies, as well as scholarship brochures, which graduate students may wish to use. A student employment placement service is provided for those who need financial aid in order to continue their education. Many of the part-time jobs are directly related to areas of student specialization. A diligent effort is made to follow up graduates in order to learn more about their success and to assist in such future job adjustment as may be necessary.

Career planning placement services are available to all students who have completed 12 semester units acceptable on a graduate program at San Diego State University. Assistance in finding part-time employment is given to all students who are enrolled for seven or more semester units.

CATALOGS AND BULLETINS

The *General Catalog*, published annually in May, may be obtained from the Aztec Shops Bookstore on the campus. The current price is \$1.30 plus tax if purchased at the Bookstore, and \$2.00 if ordered by mail. The catalog carries information on admissions, fees and tuition, programs and degrees, courses, scholarships, residence halls, student services and activities, and a faculty director.

The *Graduate Bulletin*, published annually in May, is available without cost upon request made to the Graduate Division Office.

The *Summer Sessions 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 and 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 upon his individual assessment of expenses while attending college. Varying personal circumstances, such as marital status, living accommodations, availability of resources from student self-help or savings, parents or spouse contribution, make it difficult to give specific information on the cost of attending college. At San Diego State University it is possible to live adequately and participate moderately in college life and activities on a modest budget. The estimated expenses provided below serve only as a guide to students in planning their college budget.

ESTIMATED EXPENSES FOR THE ACADEMIC YEAR *

Typical Cost of Living on Campus

Materials, service, student activity, and student union fee, and facilities fee....	\$187.00
(Non-resident tuition for foreign and out-of-state students of \$1,300 is in addition to above fee.)	
Books and supplies	180.00
Room, board, health services, parking	1,285.00
Personal	450.00
	<hr/> \$2,102.00

Typical Cost of Commuting Students

Materials, service, student activity, and student union fee	\$187.00
Books and supplies	180.00
Transportation and parking	270.00
Board and incidentals	720.00
Personal	360.00
	<hr/> \$1,717.00

* These estimates are based on System-wide figures which are provided for the purpose of determining financial aid.



PART THREE

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 acts for the faculty in setting overall university standards for graduate study and approves graduate courses, programs and degree requirements. Graduate study is highly individualistic and requires in-depth study and scholarship and not merely the completion of a prescribed set of courses. Further, thesis and dissertation research require 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 Genetics

MASTER OF ARTS

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

MASTER OF SCIENCE

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

MASTER OF BUSINESS ADMINISTRATION

MASTER OF CITY PLANNING

MASTER OF PUBLIC ADMINISTRATION

MASTER OF SOCIAL WORK

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, engineering, English, French, geography, geology, German, health science and safety, family studies and consumer sciences, industrial arts, mathematics, microbiology, physical education, physical science, physics, political science, psychology, public administration, Russian, sociology, Spanish, speech communication, and telecommunications and film.

Qualifications for appointment include admission to San Diego State University with unclassified graduate standing, admission to the Graduate Division with classified graduate standing for the purpose of obtaining a master's degree, and enrollment in not less than 6 units of 100- or 200-numbered courses each semester in the area in which the degree is sought.

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 16 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.

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 unclassified graduate standing, meet the requirements for admission to the Graduate Division with classified graduate standing, and enroll in and complete at least six units of 100- or 200-numbered courses in the area of their degree interest each semester in which they hold the appointment.

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 the following scholarships and awards may obtain application forms and further information from the Scholarship Office, unless otherwise indicated.

CALIFORNIA CONGRESS OF PARENTS AND TEACHERS, INC.

Six Education Scholarships of \$500 to be granted only to upper division or graduate students planning to teach in the public schools of California. A scholarship recipient must assume an obligation to teach in the public schools of California for one year immediately following graduation, or the award must be repaid in full. Applications available in Scholarship Office.

DOROTHY CRANSTON STOTT

A \$100 per year scholarship to a graduate of San Diego State University with a major in English. Selection is made by the faculty of Literature in May of each year.

K. W. STOTT

A \$100 per year scholarship to a graduate of San Diego State University with a major in history. Selection is made by the Department of History in May of each year.

STIPENDS FOR SOCIAL WORK

Graduate students admitted to the School of Social Work and to the Graduate Division 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 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 members of the University faculty who have themselves in the past received these fellowships. These Faculty Fellows may nominate students to the San Diego State University Graduate Fellowship and Scholarship Committee. 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 \$300.00 to full fees at the University of California and from \$500.00 to full tuition and/or fees at independent colleges and are in the amount of fees charged at state university and colleges, usually approximately \$160.00. 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 1st and December 15th. 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 1973-1974 academic year about 150 graduate students received scholarships, fellowships, grants, or stipends totaling approximately \$250,000 through the various Departments. Students should check with the Department of their major to determine what scholarship, fellowship, grant or stipend support 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, 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. Completion of at least one semester of full-time attendance at the university is required before the student is eligible. 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 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, 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 non-profit elementary or secondary schools. The loan may be cancelled at the rate of 12½ percent per year up to a maximum of fifty percent for certain specified military service performed after July 1, 1970.

UNITED STUDENT AID FUND PROGRAM

United Student Aid Fund Loans in conjunction with the student's participating home town bank are available to graduate students meeting specific requirements. The amount that may be borrowed, based on college-related need, may not exceed \$1,500 per year for graduate students. Repayment begins nine months from the time the borrower ceases to carry at least one-half the normal full-time academic work load, and may extend between three and ten years depending on the amount borrowed. Interest at the rate of seven percent per year begins when the loan is granted. In most cases this interest cost may be fully subsidized by the federal government while the student is in college and for nine months thereafter.

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 \$2,500 per academic year. Interest at the rate of seven percent per year begins when the loan is made. This interest, however, may be subsidized by the federal government during the period of full-time attendance and for nine months thereafter, if the student meets prescribed criteria. 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.

UNIVERSITY 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 \$1.90 to \$3.01 per hour. Job opportunities are available both on campus and with selected community and government agencies in the San Diego area.

MINIMUM REQUIREMENTS FOR ALL APPLICANTS

San Diego State University participates in the College Scholarship Service (CSS) of the College Entrance Examination Board. As a participant the institution subscribes to the principle that the amount of financial aid granted a student should be based upon financial need. The CSS assists the university in determining the student's need for financial assistance. All students who have resided with

their parents for over two weeks during the past year, or who have received over \$600 of financial assistance from their parents, are required to submit a copy of the Parent's Confidential Statement form to CSS, designating San Diego State University as one of the recipients. Other necessary forms and an information brochure may be obtained at the Financial Aid Office. Students who are independent of their parents must file a Student Financial Statement with the CSS.

ELIGIBILITY FOR AID

All the above aid programs, except 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

Students may request assistance for all programs explained above on financial aid forms contained in the Application for Admission booklet.

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: (1) admission to the university with unclassified graduate standing at the Office of Admissions, and (2) admission to the Graduate Division with classified graduate standing at the Graduate Division Office.

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 has been approved by the Veterans Administration and the California State Department of Education to offer graduate study for veterans leading to the master's degree, graduate teaching credentials, and other programs that require graduate training. Veterans who are interested in graduate work should visit the Campus Veterans Office at 5525 Hardy Avenue for information and counseling regarding veteran's benefits, prior to the date of registration.

TEACHING CREDENTIALS

San Diego State University offers credential programs requiring at least one year of postgraduate course work of upper division or graduate level for the following credentials:

- The Standard Teaching Credential with a Specialization in Elementary Teaching
- The Standard Teaching Credential with a Specialization in Secondary Teaching
- The Standard Teaching Credential with a Specialization in Community College Teaching.

In addition, graduate programs are offered for the following credentials:

- The Standard Designated Services Credential with a Specialization in Pupil Personnel Services (including the school psychologist and school psychologist endorsements)
- The Standard Designated Services Credential with a Specialization in Health
- The Standard Supervision Credential
- The Restricted Credential (Speech and Hearing Specialist)

A student who completes the prescribed programs for the above credentials will be recommended by the university to the State Department of Education for the credential.

For information regarding admission to teacher education and requirements for these credentials, refer to the General Catalog or write directly to the School of Education.

These credentials, authorized under the Fisher Bill are available only to students who are able to complete them by September 14, 1974, or who are on a lock list by December 1, 1973.

NEW CREDENTIALS

Assembly Bill 122 (Ryan Bill) has changed the credential structure in the State of California. Students not eligible for the credentials listed above must meet the requirements of the new credentials offered under Assembly Bill 122. Information on these new credentials is available in the offices of the several departments of the School of Education.

The Multiple Subjects credential (elementary) and the Single Subject credential (secondary), have been approved by the Commission for Teacher Preparation and Licensing. The following credentials are in a stage of development, and for further information students are advised to contact the appropriate Department.

SPECIALIST CREDENTIALS

- Early Childhood
- Reading
- Bilingual/Cross-Cultural
- Special Education

SERVICE CREDENTIALS

- Administrative Services
- Health Services Credential
- Librarian
- Pupil Personnel Services

ADMISSION OF GRADUATE STUDENTS TO SAN DIEGO STATE UNIVERSITY

The conditions for admission of graduate students to San Diego State University are determined by the Board of Trustees of the California State University and Colleges as follows:

- (a) For admission with graduate standing as an unclassified graduate student, a student shall have completed a four-year college course and hold an acceptable baccalaureate degree from an accredited institution; or shall have completed equivalent academic preparation as determined by the appropriate campus authorities; and must satisfactorily meet the professional, personal, scholastic, and other standards for graduate study, including qualifying examinations, as the appropriate campus authorities may prescribe.
- (b) Admission to a campus with graduate standing does not constitute admission to graduate degree curricula.

ADMISSION OF GRADUATE STUDENTS

All students holding a baccalaureate degree who desire to enroll at San Diego State University for postgraduate study must apply for admission to the university through the Office of Admissions. After the required application forms and official records have been filed in the Office of Admissions, the student may be:

- (1) Admitted with *unclassified graduate standing* if he holds an acceptable baccalaureate degree from an accredited institution.
- (2) Admitted as an *undergraduate student* if he does *not* hold an acceptable baccalaureate degree from an accredited institution.

Since admission with unclassified graduate standing does not constitute admission to graduate degree curricula, a graduate student who wishes to enter a graduate degree curriculum must file an application for admission to the Graduate Division with classified graduate standing as outlined in the section on Admission of Graduate Students to the Graduate Division.

APPLICATION FOR ADMISSION

All new graduate students (including graduates of San Diego State University and all former graduate students who have interrupted their attendance at San Diego State University by one or more semesters (without leave of absence) must comply with the following procedure in seeking admission or readmission to San Diego State University:

Application Procedure. All applicants for any type of post-baccalaureate status (e.g., master's degree applicants, those seeking credentials, and those interested in taking courses for professional growth, etc.) must file a complete application within the appropriate filing period. *Second baccalaureate degree aspirants should apply as undergraduate degree applicants.* A complete application for post-baccalaureate status includes all of the materials required for undergraduate applicants plus the supplementary graduate admissions application. Post-baccalaureate applicants who completed undergraduate degree requirements and graduated the preceding term are also required to complete and submit an application and the \$20.00 non-refundable application fee. Since applicants for post-baccalaureate 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 post-baccalaureate 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 Graduate Studies Office of any California State University or College campus in addition to the sources noted for undergraduate applicants.

Application Filing Periods.

Semester	Initial Filing Period	Extended Filing Period Begins (continues until quotas are reached)
Spring, 1975	August 1-31, 1974	September 1, 1974
Fall, 1975	November 1-30, 1974	December 1, 1974
Spring, 1976	August 1-31, 1975	September 1, 1975

Initial Filing Period. All applications postmarked or received during the initial filing period will be given equal consideration within established enrollment categories and quotas. There is no advantage in filing before the initial filing period. Applications received before the initial filing period may be returned, causing a delay in processing.

Extended Filing Period. Campuses not filling category quotas during the initial filing period will continue to accept applications during the extended filing period until quotas are filled. Application priority within the extended period will be granted in chronological order of application receipt by the campuses.

LIMITATION OF ENROLLMENT

Admission to a campus shall be limited to the number of students for whom facilities and competent instructors are available to provide opportunity for an adequate college education. The Board of Trustees shall determine the number of students for whom there are available facilities and competent instructors at the campus.

Hardship Petitions. Each campus has established procedures to consider qualified applicants who would be faced with an extreme hardship if not admitted. Prospective hardship petitioners should contact the campus regarding specific policies governing hardship admission.

REQUIRED OFFICIAL FORMS

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

- (1) Application for admission or readmission, accompanied by a \$20 non-refundable 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.

FILING OF RECORDS

File Official Transcripts. The applicant must file the following official transcripts with the Admissions Office:

- (1) Transcript from high school of graduation or last in attendance (not required of the graduate student who holds a bachelor's degree from an accredited institution, but is required of the student who holds a bachelor's degree from a nonaccredited institution).
- (2) Transcripts from EACH college attended (including 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.

RESIDENCY STATUS CLEARANCE

The laws of the State of California require this institution to determine the residency status of each student enrolling prior to the payment of fees and tuition (if required).

Tuition is free to every student who has been a legal resident of the State of California for a period of one year immediately preceding the residence determination date announced by the Board of Trustees.

Further information concerning a student's residency classification may be obtained from the Residency Status Office.

The residency classification received by any student is subject to review and change. Each student is held responsible for notifying the Residency Status Office of any change in his legal status as a resident of California. A new residency declaration must be made whenever a student interrupts continuous attendance at this university.

DETERMINATION OF RESIDENCE FOR NONRESIDENT TUITION PURPOSES

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

The following statement of the rules regarding residency determination for non-resident 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 are found in *Education Code* Sections 22800-22865, 23753.1, 23754-23754.4, 23758.2 and 23752, and in Title 5 of the *California Administrative Code*, Article 4 (commencing with Section 41901) 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, intending 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 may be established by 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 father (or from his mother if the father is deceased), 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 1974-1975 academic year are August 30, 1974 and January 15, 1975. If you have any questions respecting 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 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 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 credentialed, full-time employees of school districts.
8. 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.
9. Certain exchange students.
10. 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.
11. 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
5670 Wilshire Boulevard
Suite 1260
Los Angeles, California 90036

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 regulation between the time this catalog is published and the relevant residence determination date.

ADMISSION OF INTERNATIONAL (FOREIGN) GRADUATE STUDENTS TO SAN DIEGO STATE UNIVERSITY

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 Dean of Admissions, San Diego State University, San Diego, California, for information on admission requirements and procedures.

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 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). 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, USA. 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, undergraduates and graduate, are required to take one or more of the following courses, depending upon performance on the placement test: English 1X, English 1Y, English 5. These English 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.

A student whose undergraduate instruction has been in a language other than English will generally need at least two years for the completion of the requirements for the master's degree. Since no graduate fellowships or scholarships are available for foreign graduate students at San Diego State University, arrangements for financial support necessary for three or four semesters should be made before the student comes to the United States.

Subsequent to admission to the university by the Dean of Admissions as an unclassified graduate student, a student seeking an advanced degree must apply for admission to the Graduate Division with classified graduate standing. Application forms for this purpose may be obtained from the Dean of the Graduate Division. Admission to the university with unclassified graduate standing does not imply admission to a graduate degree program in the Graduate Division.

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.

Upon arrival at San Diego, the foreign graduate student should arrange for an appointment with the Coordinator of Foreign Student Admissions.

REGISTRATION

Only students who have received a Notice of Admission to the university from the Dean of Admissions and Records will be eligible for registration for the Fall or Spring Semesters.

PRIORITY FOR REGISTRATION AND PAYMENT OF FEES

Each student is assigned a priority number which determines the order in which he registers and pays fees. The schedule for registration and payment of fees is published in the *Class Schedule and Instructions for Registration*, which is available at the student Aztec Shops prior to the registration period for each semester. Priority numbers appear on the Notice of Admission for entering students, and on the permanent identification cards for students continuing their uninterrupted enrollment in the regular semesters.

UNCLASSIFIED GRADUATE STUDENT ENROLLMENT

An unclassified graduate student is not eligible to enroll in 200-numbered courses, except with permission of the instructor and concurrence of the Dean of the Graduate Division. All credit earned by an unclassified graduate student is subject to evaluation as to its acceptance for graduate credit in a master's degree curriculum.

CHANGES IN CLASS SCHEDULE

A student is responsible for any change in his 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 Registrar's Office.

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.

ADMISSION OF GRADUATE STUDENTS TO THE GRADUATE DIVISION

Students will be admitted to the Graduate Division only after they have been officially admitted to San Diego State University by the Dean of Admissions.

The requirements for admission of students to all graduate curricula are determined by the Board of Trustees of the California State University and Colleges and are stated in Section 41001 of the Administrative Code as follows:

"A student who has been admitted to a campus under Section 41000 may, upon application, be admitted to an authorized graduate degree curriculum of the campus as a classified graduate student if he satisfactorily meets the professional, personal, scholastic, and other standards for admission to the graduate curriculum, including qualifying examinations, as the appropriate campus authorities may prescribe. Only those applicants who show promise of success and fitness will be admitted to graduate degree curricula, and only those who continue to demonstrate a satisfactory level of scholastic competence and fitness, as determined by the appropriate campus authorities, shall be eligible to continue in such curricula. Students whose performance in a graduate degree curriculum is judged to be unsatisfactory by the authorities of the campus may be required to withdraw from all graduate degree curricula offered by the campus."

At San Diego State University, admission to any graduate degree curriculum is accomplished by being formally admitted to the Graduate Division with *classified* graduate standing. A student desiring to begin work for an advanced degree offered at this institution must first be admitted to the university with unclassified graduate standing. Subsequent to (or simultaneously with) the filing of his application for admission to the university, he must file application for admission to the Graduate Division with *classified* graduate standing and specify his graduate objective.

Applications for admission to the Graduate Division must be filed in duplicate on forms available at the Graduate Division Office.

A graduate student desiring to take courses, but who does not wish to earn an advanced degree at San Diego State University, is not required to gain admission to the Graduate Division. If a graduate student desires a credential but not an advanced degree, he must meet the admission requirements for the appropriate credential.

Classified Graduate Standing

In order to receive classified graduate standing in the Graduate Division, the applicant must:

- (1) Satisfy the requirements for unclassified graduate standing in the university.
- (2) Have earned not less than a 2.5 grade point average in all undergraduate work taken for the baccalaureate degree.
- (3) Obtain a satisfactory score on the Graduate Record Examination Aptitude Test. Scores made on this examination will be used in the determination of *classified* graduate standing and not as a criterion for advancement to candidacy. (Students holding a master's or higher degree from an institution which is a member of the Council of Graduate Schools are exempted from this requirement.)
- (4) Have completed an undergraduate major appropriate to the field in which he desires to earn an advanced degree.
- (5) Satisfy the special departmental or school requirements as stated in Part Four of this bulletin under Fields of Study and Courses of Instruction.
- (6) Meet the professional, personal, and scholastic standards for graduate study established by the Graduate Council.
- (7) Plan an official master's degree program which must be prepared in accordance with the requirements listed in the Graduate Bulletin current at the date of approval of the program by the Dean or Associate Dean of the Graduate Division.

When a department or school informs the Graduate Division Office of its intent to recommend the student for classified graduate standing and assigns a graduate adviser for the student, the student will be notified by the Graduate Division Office. The student will then arrange a conference with the assigned adviser to plan the official master's degree program. Upon receipt of the final departmental recommendation for classified graduate standing and the official program, the Graduate Division Office will notify the student that he has attained classified graduate standing.

Admission to the Graduate Division with classified graduate standing does not imply that the student will be advanced to candidacy for a graduate degree.

If a student does not receive a satisfactory score on the Graduate Record Examination Aptitude Test, or if he has earned less than a 2.5 grade point average in his undergraduate work, or if he does not meet the minimum requirements of a department or school, he may continue postgraduate work as an unclassified graduate for the purpose of removing deficiencies and otherwise demonstrating ability to succeed in a master's degree curriculum.

If the student succeeds in removing the deficiencies and receives the recommendation of the department or school, he may reapply for classified graduate standing and admission to the Graduate Division.

Advancement to Candidacy

After satisfactory completion of a specified portion of an official program for the master's degree, satisfactory completion of the required examinations, meeting such professional and personal standards as the Graduate Council may prescribe, and after receiving the recommendation of his department or school a student is eligible for advancement to candidacy.

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.

CONCURRENT MASTER'S DEGREE CREDIT

A senior who is within 12 units of completing requirements for the bachelor's degree at San Diego State University and whose overall graduate point average degree credit 100-numbered courses listed in the Graduate Bulletin as acceptable for master's degree programs, and certain 200-numbered courses approved by the department, with the remaining requirements for the bachelor's degree. Petitions must be submitted before the end of the fourth 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. No more than 3 units in 200-numbered courses will be accepted towards the minimum unit requirements for the master's degree.

SECOND MASTER'S DEGREE

A graduate 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.

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 this 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, 1974, will be required to follow the procedures and regulations stated in the 1974-1975 editions of the General Catalog and this 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.

NUMBERING OF COURSES

Courses numbered 1 through 99 or by letters (A, B, C, etc.) are in the lower division (freshman and sophomore years); those numbered 100 through 199 are in the upper division (junior and senior years); and those numbered 200 through 299 are strictly graduate courses. Courses numbered 300 or over are graduate professional education courses. Courses numbered X900-X999 are those offered exclusively in the extension program to meet the professional needs of specific community groups. These courses are not acceptable on 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), 4 points; B (commendable), 3 points; C (satisfactory), 2 points; D (passing), 1 point; F (failure), 0 points; I (incomplete), counted as units attempted, 0 points; SP (satisfactory progress), not counted in the grade point average; W (withdrawal), 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.

The symbol "Cr" is used to report the satisfactory completion of Courses 296, 297, 298, 299, and certain 200- and 300-numbered courses in the School of Education. Failure to satisfactorily complete such courses will result in the assignment of "NC."

No course in which a final grade below "C" was earned may be used to satisfy the requirements for an advanced degree.

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.

INCOMPLETE GRADE

An Incomplete signifies 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. 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 on which it was assigned. This limitation prevails whether or not the student maintains continuous enrollment. Failure to complete the assigned work will result in an Incomplete being counted as equivalent to an "F" (or an "NC") for grade point average and progress point computation.

A candidate for graduation whose record carries a grade of Incomplete will be graduated provided he is otherwise eligible for graduation. However, the Incomplete cannot be made up after the degree has been granted. If the student does not wish to be graduated with the grade of Incomplete on his record, he must cancel officially his application for graduation.

Students desiring to have their names listed on the June 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 symbol SP (satisfactory progress) is used in connection with courses that extend beyond one academic term. The symbol indicates that work in progress has been evaluated as satisfactory to date but that the assignment of a precise grade must await the completion of additional course work. Cumulative enrollment in units attempted may not exceed the total number applicable to the student's educational objective. All work is to be completed within one calendar year of the date of first enrollment (except for Thesis, 299—see below) and a final grade will be assigned to all segments of the course on the basis of overall quality. Any extension of this time must receive prior authorization by the Dean of Undergraduate Studies (for undergraduate courses) or the Dean of the Graduate Division (for graduate courses 297, 298, and 299).

UNCOMPLETED THESES

A student who registers for Course 299, 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, or up to two calendar years from the end of the semester or term of registration in the course, whichever occurs first. If, at the end of two years the thesis is not completed the grade NC (no credit) will be recorded on the student's record, unless extension of time for completion, due to extenuating circumstances, has been recommended in advance by the Thesis Committee Chairman and the Department Chairman, and is approved by the Dean of the Graduate Division. A second registration in Course 299, Thesis, is expressly prohibited.

A student who has been assigned the grade symbol SP for the thesis is required to register for Graduate Studies 300 (0 units, Cr/NC) in any semester or term (within the two year period, as outlined above) 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.

WITHDRAWALS

OFFICIAL WITHDRAWAL

Students who wish to withdraw from the university must initiate action formally through the Registrar's 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, is permitted without restriction or penalty before the end of the third week of classes. Such courses will not appear on the permanent record.

Withdrawal from a course, or courses, after the third week of classes and prior to the last three weeks of instruction is permissible only for serious and compelling reasons. Permission to withdraw during this time period is to be granted only with the approval of the instructor and the Department Chairman, and approvals are made in writing on the prescribed forms.

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 are to be handled as indicated above, except that such requests also must be endorsed by the Vice President for Academic Affairs or his designee.

Improper Registration in Graduate Courses. The unauthorized registration of undergraduate students in all courses numbered in the 200 and 300 series, and the registration of graduate students who have not met the stated prerequisites for Course 299, Thesis, at the time of registration, will be cancelled.

UNOFFICIAL WITHDRAWAL

Unofficial Withdrawal. A student withdrawing unofficially from class or from the university will receive failing grades in all courses which he stops attending. An unofficial withdrawal is one in which a student stops attending classes without filing official withdrawal forms with the Registrar within the established deadlines.

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 to a student's objective. Students are not penalized for taking leaves, and retain their priority numbers without change. No fees are involved.

At least five weeks prior to registration period for the semester during which he wishes a leave, a student must file application for the leave at the Registrar's 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 lapses between the time of his withdrawal and return to the university. Check calendar for deadline dates on readmission applications.

A \$20 application fee for readmission is required if the applicant was not regularly enrolled as a graduate student 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. Make check or money order payable to San Diego State University.

REPEATED COURSES

A graduate student may not repeat courses which have been taken as part of his official master's degree program, except in the case of courses required as prerequisites for that program.

PROBATION AND DISQUALIFICATION FOR SCHOLARSHIP

The regulations governing probation and disqualification of graduate students are determined by the Board of Trustees of the California State University and Colleges and are stated in Section 41300 of the Administrative Code as follows:

"Probation and disqualification of graduate students are subject to criteria established by each campus; provided, that criteria of probation and disqualification may not be less than those established for undergraduate students.

"A student disqualified for scholarship deficiency may not enroll in any regular session of the campus without permission from the appropriate campus authority, and may be denied admission to the summer session."

A. Standards for Placing Graduate Students on Scholastic Probation

1. A graduate student will be placed on scholastic probation at the end of a semester if his grade point average on all work attempted at San Diego State University, subsequent to his admission to the university as an unclassified graduate student falls below 2.5.
2. A graduate student who is on probation during a given semester will be continued on probation at the end of that semester if (a) his overall grade point average, including the semester in question, remains below 2.5 and (b) his grade point average on work taken during the semester is 3.0 or above.

B. Standards for Removing Graduate Students from Scholastic Probation

A graduate student who is on probation during a given semester will be removed from scholastic probation at the end of any semester in which his overall graduate grade point average is 2.5 or higher.

C. Standards for Scholastic Disqualification of Graduate Students

A graduate student may be disqualified from the university for scholastic reasons at the end of any semester during which he is on probation if at the end of that semester (1) his overall grade point average, including the semester in question, is below 2.5 and (2) his grade point average for work taken during that semester is below 3.0.

SCHOLASTIC DISQUALIFICATION FROM THE GRADUATE DIVISION

Any graduate student who has been admitted to a graduate degree curriculum in the Graduate Division 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 in the Graduate Division and his official status will be changed from classified graduate standing to unclassified graduate standing.

ADMINISTRATIVE-ACADEMIC PROBATION

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

- A. Withdrawal from all or a substantial portion of a program of studies in two successive terms or in any three terms.
- B. 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).
- C. 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:

- A. The conditions for removal of administrative-academic probation are not met within the period specified.
- B. The student becomes subject to academic probation while on administrative-academic probation.
- C. The student becomes subject to administrative-academic probation for the same or similar reason for which he has been placed on administrative-academic probation previously, although not currently in such status.

PETITION FOR READMISSION

A graduate student disqualified from the university under the foregoing regulations may be readmitted to the University by the Board of Admissions. Application for readmission must be made on forms available at the Office of Admissions.

STUDENT DISCIPLINE AND ATTENDANCE

Any student 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 the members of his family or the threat of such physical abuse.
- (f) Theft of, or non-accidental damage to, campus property; or property in the possession 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 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 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.

No fees or tuition paid by or for the student for the semester or summer session in which he is suspended or expelled shall be refunded. If the student is readmitted before the close of the semester or summer session in which he is suspended, no additional tuition or fees shall be required of the student on account of his suspension. In the event that a student who has not reached his twenty-first birthday is suspended or expelled, the President shall immediately notify his parent or guardian of the action by registered mail to the last known address, return receipt requested. (Reference: California Administrative Code, Chapter 5, Sections 41301 and 41302.)

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 Senate. A copy of the procedures may be obtained from the Dean of Students.

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

A student who does not wish to take a course for credit may, with the consent of the instructor, enroll as an auditor. An auditor must meet all admissions requirements and pay the same fees required of students taking the course for credit. No change from regular registration to audit, nor from audit to regular registration will be permitted during the semester. An auditor is not held for examinations and does not receive credit or a final grade in the course.

FINAL EXAMINATIONS

No final examination shall be given to individual students before the regularly scheduled time. Any student who is passing in a course and 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

The amount of transfer and extension course credit acceptable on master's degree programs is limited to a total of 6 units for the Master of Arts, the Master of Science, the Master of Business Administration, and the Master of Public Administration degrees; 26 units (including a maximum of 6 units of extension credit) for the Master of City Planning degree; and 32 units (including a maximum of 6 units of extension credit) for the Master of Social Work degree. 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 his 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.

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 200-numbered courses or 15 units of a combination of 100- and 200-numbered courses are the recommended maximum programs for any one semester. Graduate students who are employed full time should not attempt to earn more than 6 units per semester.

Graduate students who are employed as graduate teaching assistants at San Diego State University are limited to 16 units of combined teaching assignments and course work unless a request for excess load is approved by the Dean of the Graduate Division. 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.

OFFICIAL PROGRAMS OF STUDY

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

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

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

GENERAL REQUIREMENTS FOR DOCTORAL DEGREES

The degree Doctor of Philosophy (Ph.D.) is offered by three disciplines at San Diego State University in cooperation with their counterparts at University of California campuses—in chemistry with the University of California, San Diego; in ecology with the University of California, Riverside; 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, and Genetics.

Students who wish to become candidates for the degree Doctor of Philosophy in Chemistry, Ecology 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 THE GRADUATE DIVISIONS

An applicant for admission to a doctoral program must first be admitted to regular graduate standing in the Graduate Division of the University of California campus appropriate to his degree program and to the Graduate Division at 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 University of California campuses.

ADMISSION TO THE PROGRAMS

After a student has been formally admitted to the two Graduate Divisions with appropriate graduate standing, he must declare his 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 Graduate Divisions. The Graduate Adviser on each cooperating campus is the person consulted by the student for assessment of his 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 of California campus. 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 have demonstrated 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. The foreign language requirement in Chemistry has recently been discontinued.

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 writ-

ten 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 University of California campus with which he is associated for advancement to candidacy. After approval by both Graduate Deans, the student will be notified of his advancement to candidacy by the Graduate Dean, University of California (San Diego, Riverside, or Berkeley).
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 his 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 of Doctor of Philosophy in Chemistry, Ecology or Genetics will be awarded jointly by the Regents of the University of California and the Trustees of the California State University and Colleges in the names of the University of California (San Diego, Riverside or Berkeley, respectively) and San Diego State University.

PROCEDURES

The time required for a student to complete the requirements for the degree is not expressed in terms of units of credit or number of semesters 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 DEGREE

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, Fields of Study and Courses of Instruction for the Master's Degree:

(A) ADVANCEMENT TO CANDIDACY:

A student who holds *classified graduate* standing in the Graduate Division 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 appropriate 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 listed on his official program 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 on his official program 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 on his official graduate program in the School of Social Work 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 in Paragraph (G) of 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 Graduate Division Office.

A minimum of nine units of courses listed on the official program of study must be enrolled in and completed *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, and the Master of Social Work degrees must be enrolled in and completed *after* advancement to candidacy.

(B) EXAMINATIONS:

Prior to or during their first semester in residence, 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 Four, Fields of Study and Courses of Instruction 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.)

(C) FOREIGN LANGUAGE REQUIREMENT:

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

If the foreign language required is other than the three named above, the student should make arrangements with his graduate adviser and the appropriate language department to take the locally administered written examination, a copy of which is to be filed in the Graduate Division Office.

The student is required to pass his foreign language examination before he can be advanced to candidacy.

(D) UNIT REQUIREMENTS:

Credit earned by correspondence or by examination is not acceptable on advanced degree requirements.

Master of Arts, Master of Science, and Master of Public Administration degrees:

Thirty units (36 units for the Master of Science in Counseling degree and the Master of Science degree in Psychology with a concentration in clinical psychology) of approved 100- or 200-numbered courses earned in graduate standing, at least 24 of which must be completed in residence. At least 15 units must be in 200-numbered courses. Not more than a total of 6 units in approved extension and transfer courses may be used to satisfy the minimum 30 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 6 units in courses numbered 297 and 298 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 200-numbered courses specified by the School of Business Administration at least 24 of which must be completed in residence. Not more than 6 units of approved transfer credit are acceptable for this degree. Credit earned by correspondence is unacceptable. Not more than a total of 6 units in Course 297, Research, and Course 298, Special Study, will be accepted for credit toward the degree.

Master of City Planning degree:

Fifty-six units of approved 100- or 200-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. Credit earned by correspondence is unacceptable. Not more than a total of 9 units in courses 297 and 298 will be accepted for credit toward the degree.

Master of Social Work degree:

Fifty-six units of 200-numbered courses specified by the School of Social Work at least 24 of which must be completed in residence. Courses required to remove undergraduate deficiencies are in addition to the minimum 56 units for the degree. Credit earned by correspondence is unacceptable. Not more than a total of 9 units in courses 297A, 297B, and 298 will be accepted for credit toward the degree.

(E) COURSE REQUIREMENTS:

In all master's 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 the foregoing unit requirements except that the Graduate Council, on the recommendation of the department or school concerned, may extend the time for students who pass a comprehensive examination in the relevant course. A maximum of six units may be validated for recency by examination. With the approval of the appropriate graduate adviser and the Dean of the Graduate Division, a more recently completed course may be substituted for an outdated one, or substitute course work of equal unit value, not yet completed, may be assigned.

In the event that more than six units of course work become invalidated in the semester following the seven-year deadline, the departmental graduate

adviser shall determine which units may be validated by comprehensive examination. Substitute course work shall be assigned for the remaining outdated courses.

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.

Specific courses required in the basic 30, 36, 30-60, or 56 units and the requirements concerning foreign languages are listed in the appropriate sections of Part Four, Fields of Study and Courses of Instruction under Specific Requirements for the Master's Degree.

(F) THESIS:

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 299, 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 299, 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. Theses or projects must be completed well in advance of the date of the convocation at which the degree is to be conferred. Refer to the calendar in Part I of this Bulletin for deadline dates.

The thesis must be completed within two calendar years following the date of the end of the semester or term in which the student has registered in Course 299, Thesis. (Refer also to the section on Uncompleted Theses in this bulletin.)

All theses or projects must be typed on special water-marked thesis paper available at the Aztec Shops. Instructions for typing, preparing maps and charts, etc., are available at the Graduate Division Office.

Two micro-fiche 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 Instructions 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 I of this Bulletin for deadline dates.

(G) GRADE POINT AVERAGES:

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

1. All programed 100-numbered courses required for the removal of undergraduate deficiencies.
2. All programed courses including courses accepted for transfer credit and courses taken concurrently with or subsequently to courses accepted for transfer.
3. All 100-, 200-, or 300-numbered courses taken at San Diego State University concurrently with or subsequently 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.

(H) GRADE RESTRICTIONS FOR MASTER'S DEGREE PROGRAMS:

No 100-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 a A, B, C, D, F basis.

(I) FINAL APPROVAL:

The student's official program of study as approved by the appropriate 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.

(J) APPLICATION FOR GRADUATION:

Graduation is not automatic on the completion of degree requirements. The student must file an application in the Graduate Division Office (after having paid the graduation fee at the Cashier's Office) during the semester or term in which he expects to graduate. 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 graduate.

(K) 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.

(L) DIPLOMA:

The appropriate diploma is forwarded to the student by the Office of Admissions and Records.

PART FOUR

FIELDS OF STUDY AND COURSES OF INSTRUCTION

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. Graduate level (200-numbered and 300-numbered) courses carry course descriptions. Full descriptions for other courses may be found in the General Catalog. 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 any given 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 (200-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. Unclassified graduate students must obtain the permission of the instructor and the concurrence of the Dean of the Graduate Division before they may enroll in a graduate level course. Undergraduate students are not permitted to enroll in 200-numbered and 300-numbered courses except under special circumstances (see section "Concurrent Master's Degree Credit"). Unauthorized enrollment of undergraduate students in 200-numbered and 300-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.

Registration in Course 298, Special Study, must be arranged by the student through the instructor, the major adviser, and the chairman 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 299, Thesis. Clearance for registration in this course must be obtained by the student from the Graduate Division Office.

GRADUATE STUDIES (300)

This course is intended solely for those graduate students who have had prior registration in Thesis 299, with an assigned grade symbol of SP. A student is required to register in GS 300 (0 units, Cr/NC) in any semester or term following assignment of SP in Course 299 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 follow, 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

GENERAL INFORMATION

The Master of Arts degree in American Studies is an interdisciplinary degree administered by the American Studies Committee.

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.

ADMISSION TO THE GRADUATE DIVISION

In addition to meeting the 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, the student must present a Bachelor of Arts degree with a major in American Studies, or a Bachelor of Arts degree which included a minimum of 30 upper division units in American culture. 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.

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 listed below as acceptable on master's degree programs, of which at least 18 units must be in 200-numbered courses. Required courses are Humanities 180, Study of American Culture, and at least two seminars. The program must include a concentration of at least 12 (but not more than 15) units in one of the following fields:

- (a) American Literature and Philosophy
- (b) American History
- (c) Social Sciences and Education
- (d) Fine Arts

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

Students will be required to demonstrate a reading knowledge of a relevant foreign language, or complete six units in linguistics, chosen from American English courses (Linguistics 180, 181, 182, or 183). 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. A comprehensive examination, administered by the American Studies Committee, in lieu of thesis, is required (Plan B).

All programs will be approved by the American Studies Committee.

COMMITTEE ON AMERICAN STUDIES

- | | | |
|--|-------------------|---------------------|
| Lonna M. Malmshiemer,
<i>Chairman</i> | Karl Keller | R. W. Redding |
| D. G. Anderson | Rosemary Z. Lauer | W. A. Schultze |
| G. F. Drake | H. J. Lewin | Rose M. Sommerville |
| R. J. Forrey | H. C. McDean | R. G. Starr |
| Winifred H. Higgins | F. S. Moramarco | Pershing Vartanian |

FACULTY

Coordinator of Graduate Programs in American Studies: Lonna M. Malmshiemer
Graduate Advisers: Members of the American Studies Committee, as assigned by the Coordinator.
Faculty members in the departments participating in the degree program are listed in the appropriate sections of this Bulletin.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN AMERICAN STUDIES

UPPER DIVISION COURSES

(A) Literature and Philosophy:

English

- 130. Early American Literature (3)
- 131. The American Renaissance (3)
- 133. American Realism and Naturalism (3)
- 134. Modern American Fiction (3)
- 135. Modern American Poetry (3)
- 136. American Drama (3)
- 138. Topics in American Studies (3)
- 139. Topics in American Literature (3)

Linguistics

- 182. American English (3)

Philosophy

- 164. American Philosophy (3)

(B) History:

History

- 171A-171B. Rise of the American Nation (3-3)
- 172A-172B. Development of the Federal Union (3-3)
- 173A-173B. The U.S. from Jackson to Grant, 1828-1877 (3-3)
- 174. The Rise of Modern America, 1868-1900 (3)
- 175A-175B. The United States, 1901-1945 (3-3)
- 175C. The United States in the Nuclear Age (3)
- 177A-177B. Constitutional History of the United States (3-3)
- 178A-178B. The Development of American Capitalism (3-3)
- 179A-179B. Intellectual History of the American People (3-3)
- 180. Selected Studies in History (when content relates to American Studies) (3)
- 181A-181B. Westward Movement (3-3)
- 183A-183B. Black American Civilization (3-3)

(C) Social Science and Education:

Economics

- 111A-111B. Economic History of the United States (3-3)
- 135. Money and Banking (3)
- 138. Urban and Regional Economics (3)
- 174. Economic Concentration and Monopoly Power (3)

Geography

- 121. United States (3)
- 155. Urban Location and Settlement Geography (3)
- 171. Conservation of Natural Resources (3)

Political Science

- 105. American Political Thought (3)
- 116. American National Government (3)
- 123S. Contemporary American Politics (3)
- 139A-139B. American Constitutional Law (3-3)

Sociology

- 124. Social Stratification (3)
- 125. Minority Group Relations (3)
- 157. Urban Sociology (3)

Journalism

- 117. History of Mass Communications (3)
- 121. Current Problems in Mass Communications (3)

(D) Fine Arts:

Art

- 157. History of American Art (3)

APPLICABLE GRADUATE COURSES

(A) Literature and Philosophy: *English*

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

- 233. American Literature (3)
- 291. Seminar: A Major Author (3)
- 292. Seminar: A Cultural Period (3)
- 293. Seminar: A Literary Problem (3)
- 298. Special Study (1-3)

(B) American History: *History*

- 241. Directed Reading in United States History (3)
- 251. Seminar in United States History (3)
- 298. Special Study (when content relates to American Studies) (1-3)

(C) Social Science and Education: *Geography*

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

Refer to graduate course descriptions in the sections of this bulletin under the appropriate departments.

- 220. Seminar in Regional Geography (3)
- 250. Seminar in Systematic Geography (3)

Political Science

- 215. Seminar in American National Government (3)
- 221. Seminar in Political Preparation (3)

Education

- 202. Social Foundations (3)

(D) Fine Arts:

Art

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

- 292E. Seminar in Modern Art (3)
- 292F. Seminar in Primitive Art (3)

Music

- 252E. Seminar in Music History: American Music (3)

Speech Communication

- 280. Seminar in American Public Address, 1600-1850 (3)
- 281. Seminar in American Public Address, 1850 to Present (3)

ANTHROPOLOGY

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 THE GRADUATE DIVISION

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, students seeking the Master of Arts degree in Anthropology must have completed at least 18 upper division units including the courses in physical anthropology, archaeology, ethnology, and social anthropology which are equivalent to those required for an undergraduate major in anthropology at San Diego State University. The student must have an overall 3.0 grade point average (B) in undergraduate courses in anthropology or consent of the Department.

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 (201, 202, 203, and 204); (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 in 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 200-numbered courses in anthropology, to include:

- a. Anthropology 201, 202, 203, and 204 (with an overall grade point average of 3.0 or better);
- b. Six units of 200-numbered courses in anthropology;
- c. Six additional units of elective 100- or 200-numbered courses in anthropology or related fields, as approved by the graduate adviser;
- d. Anthropology 297, Research (3) (to be taken after advancement to candidacy);
- e. Anthropology 299, 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.

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.

FACULTY

Chairman, Department of Anthropology: L. L. Leach, Ph.D.
 Coordinator of Graduate Programs in Anthropology: Mary E. Shutler, Ph.D.
 Graduate Advisers:

Archaeology: Mary E. Shutler
 Physical Anthropology: Lois K. Lippold, Alexander Sonek, Jr.
 Ethnology: Victor Goldkind, D. D. Whitney
 Ethnohistory: A. J. Anderson, P. H. Ezell
 Social Anthropology: P. J. Dubbs, R. S. Himes
 Ethnolinguistics: P. J. Greenfeld

Professors: A. J. O. Anderson, Ph.D.; P. H. Ezell, Ph.D.; Victor Goldkind, Ph.D.; Mary E. Shutler, Ph.D.; L. C. Watson, Ph.D.; D. D. Whitney, Ph.D.

Associate Professors: R. S. Himes, Ph.D.; L. L. Leach, Ph.D.; Lois K. Lippold, Ph.D.; W. C. Pendleton, Ph.D.; P. S. Staniford, Ph.D.

Assistant Professors: P. J. Dubbs, B.A.; P. J. Greenfeld, Ph.D.; Mary J. Moore, Ph.D.; Barbara Pillsbury, M.A.; Vivian J. Rohrl, Ph.D.; Alexander Sonek, Jr., Ph.D.; R. V. Wagner, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN ANTHROPOLOGY

UPPER DIVISION COURSES

- | | |
|---|--|
| 115. Primatology (3) | 172B. Southwestern Ethnology (3) |
| 116. Human Paleontology (3) | 173. Advanced Archaeological Field Methods (3) |
| 122. Language in Culture (3) | 174. Prehistoric Archaeology of Europe (3) |
| 126. Field Methods in Linguistics (3) | 175. Cultures of Southeast Asia (3) |
| 147. Prehistory of South America (3) | 176. Early Near and Middle Eastern Civilizations (3) |
| 148. Cultures of Europe (3) | 178. Cultures of Oceania (3) |
| 149. Kinship and Social Organization (3) | 179. Applied Anthropology (3) |
| 150. Ethnological Field Methods (3) | 180. Preclassic Cultures of Mesoamerica (3) |
| 151S. Ethnographic Field Research Project (6) | 181. Classic Pre-Columbian Civilizations of Middle America (3) |
| 153. Primitive Religion (3) | 182. Post-Conquest Cultures of Middle America (3) |
| 155. Peasant Society and Culture (3) | 183. Archaic Hellenic, Aegean, and Italian Cultures (3) |
| 156. Culture Change and Processes (3) | 184. Archaeology of Sub-Saharan Africa (3) |
| 158. Economic Anthropology (3) | 185. Cultures of Sub-Saharan Africa (3) |
| 159. Cultural Ecology (3) | 186. Cultures of India (3) |
| 160. Primitive Technology (3) | 187. Political Anthropology (3) |
| 161. The California Indian (3) | 188A-188B. Archaeological Laboratory Methods (3-3) |
| 162. Cultures of South America (3) | 189. Topics in Arctic Archaeology (3) |
| 163. Contemporary Latin American Cultures (3) | 190. Archaeology of East Asia (3) |
| 164. Urban Anthropology (3) | 191. Chinese Society (3) |
| 165. Culture and Personality (3) | 192. Japanese Society (3) |
| 168. Evaluative Procedures in Culture and Personality (3) | |
| 170. Archaeology of North America (3) | |
| 171. Ethnology of North America (3) | |
| 172A. Southwestern Prehistory (3) | |

GRADUATE COURSES

200. 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.
201. Seminar in Physical Anthropology (3)
 Prerequisites: Anthropology 1 or 100A 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.

202. Seminar in Archaeology (3)

Prerequisites: Anthropology 1 or 100A and 12 upper division units in anthropology.
 History and theory in archaeological data collection, analysis, and interpretation.

203. Seminar in Ethnology (3)

Prerequisites: Anthropology 1 or 100B 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 socio-cultural change.

204. Seminar in Linguistics (3)

Prerequisites: Anthropology 104 or 122 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.

220. Seminar in Regional Anthropology (3)

Prerequisites: 12 units of upper division credit 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.

221. Seminar in Topical Anthropology (3)

Prerequisites: 12 units of upper division credit 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.

222. Historical Linguistics (3)

Prerequisites: Anthropology 104 and 124.
 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.

233. Social Structure (3)

Prerequisite: 12 units of upper division credit in anthropology.
 A structural and functional approach to the social organization of a wide range of cultures. An examination of theories and generalizations regarding the stability and integration of a wide variety of human societies.

255. Culture and Society in the Nahua Area (3)

Prerequisites: Anthropology 1 or 2 and 12 units of upper division credit in anthropology.
 A course design to permit concentrated studies of the area and those related to it, based on archaeology, aboriginal records, colonial accounts, and modern studies; and to permit various approaches to such studies.

256. Cultures and Societies in Southern Meso-America and Central America (3)

Prerequisites: Anthropology 1 or 2 and 12 units of upper division credit in anthropology.
 Concentrated studies of ancient civilization in areas of higher development, based on archaeology, aboriginal records, Colonial accounts, and recent studies; and to permit various approaches to such studies.

257. Classical Nahuatl (3)

Prerequisites: Anthropology 1 or 2 and 12 units of upper division credit in anthropology including Anthropology 157, or 180, or 181; reading knowledge of Spanish recommended.
 Nahuatl language study and analysis for translation of 16th-17th century texts, use of ancient and modern grammatical works and vocabularies; reading of manuscripts; relationship of the language to appropriate aspects of Nahua culture.

258. Ethnoscience (3)

Prerequisites: 12 units of upper division credit in anthropology.

Analysis and comparison of native categories, classifications, and bodies of systematic knowledge as demonstrated in preliterate and literate societies.

297. Research (3) Cr/NC

Prerequisite: Advancement to candidacy.

Independent investigation in the general field of the thesis.

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

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

Individual study directed toward the preparation of a paper upon a specific problem. Six units maximum credit.

299. 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.

ART

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, sculpture, crafts, printmaking, graphic communication, and the history of art. In addition to the excellent equipment of the Fine Arts Building at San Diego State University, 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 THE GRADUATE DIVISION

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 general, the student must have completed an undergraduate major in art with a minimum of 24 upper division units, including a course in the principles of art appreciation and two semesters' work in the general history of art, before he will be permitted to begin work on his graduate program. The student must also be able to show that he is adequately advanced both in drawing and design to carry out projects which measure up to graduate standards. This requirement will be measured by a formal presentation to the Graduate Committee of a portfolio of examples of the candidate's undergraduate work in drawing and in several design fields such as painting, crafts and sculpture. 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.

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, 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 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: 2

Art: 50A, 50B, 52A, 52B, 151, 153, 154, 155A, 155B, 156A, and 157 or 158

Students with an emphasis in art history must also pass a written and oral comprehensive examination in the field of art history and demonstrate a reading knowledge of French or German before 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'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 in art from courses listed below as acceptable on master's degree programs in art, of which at least 16 units must be in the 200-numbered courses. Those electing programs in studio arts must complete a minimum of 18 units in the area of specialization. One course in the Art 292 series, one course in the Art 294 series, and Art 299 are required. Art 290 is required of those students planning to submit a thesis under Art 299, but not required of those electing a creative project as fulfillment of Art 299.

In connection with the thesis or project, each candidate for the degree must present an exhibition on the campus of representative graduate work including the project (if applicable), and a portfolio of additional graduate work. An oral examination over the field of the thesis or project and related material is required.

THESES 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.

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 Chairman of the Department.

FACULTY

Chairman, Department of Art: P. A. Lingren, M.A.

Graduate Advisers: J. D. Swiggett (Coordinator); W. F. Bowne; J. H. Dirks; Winifred H. Higgins

Credential Adviser: JoAnn L. Tanzer

Professors: K. L. Baker, M.F.A.; R. J. Baxter, M.F.A.; R. V. Berg, M.A.; Marybelle S. Bigelow, M.A.; J. H. Dirks, M.F.A.; Arline M. Fisch, M.A.; Winifred H. Higgins, Ph.D.; J. R. Hopkins, M.F.A.; P. A. Lingren, M.A.; Martha W. Longenecker, M.F.A.; J. J. Rogers, M.S.; J. D. Swiggett, M.F.A.; JoAnn L. Tanzer, Ed.D.; R. D. Wallace, D.Litt.

Associate Professors: W. F. Bowne, M.A.; D. P. Covington, M.A.; D. G. Groover, M.F.A.; S. B. Hodge, M.A.; L. B. Hunter, M.A.; A. W. Miller, M.A.; F. J. Orth, M.F.A.

Assistant Professors: Joan F. Austin, M.F.A.; W. A. Childress, M.F.A.; Fay A. Frick, Ph.D.; E. R. Moaney, M.F.A.; F. F. Papworth, M.A.; Csilla P. Perczel, Ph.D.; T. A. Peterson, M.A.; Eugene Ray, M.F.A.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN ART

UPPER DIVISION COURSES

- | | |
|--|---|
| 100A-100B. Advanced Drawing (3-3) | 152A. The Art of India and South-east Asia (3) |
| 106A-106B. Printmaking (3-3) | 152B. The Art of Persia and the Islamic World (3) |
| 107. Contemporary Environmental Graphics (3) | 153. Ancient Art (3) |
| 111A-111B. Industrial Design (3-3) | 154A. Medieval Art (3) |
| 112A-112B. Design and Composition (3-3) | 154B. Coptic and Byzantine Art (3) |
| 113B. Advanced Furniture Design (3) | 155A. Renaissance Art in Italy (3) |
| 114A. Graphic Communication (3) | 155B. Northern Renaissance Art (3) |
| 114B-114C. Advanced Graphic Communication (3-3) | 155C. Baroque and Rococo Art (3) |
| 114D. Problems in Graphic Communication (3) | 156A. History of Modern Art (3) |
| 115A-115B-115C-115D. Life Drawing and Painting (3-3-3-3) | 156B. Contemporary Art (3) |
| 116A-116B-116C-116D. Advanced Painting (3-3-3-3) | 157. History of American Art (3) |
| 117A-117B-117C. Advanced Sculpture (3-3-3) | 158. Art of Primitive Peoples (3) |
| 118A-118B. Advanced Watercolor Painting (3-3) | 160. The History of Architecture (3) |
| 119A-119B-119C. Ceramics (3-3-3) | 161A-161B-161C-161D. Design in Enamels (3-3-3-3) |
| 119D. Advanced Ceramics (3) | 164. History of Costume (3) |
| 120A-120B. Advanced Design (3-3) | 170B. Jewelry and Metalwork (3) |
| 126A-126B. Intaglio Printmaking (3-3) | 170C-170D. Jewelry and Metalwork (3-3) |
| 126C. The History of Printmaking (3) | 180A-180B-180C-180D. Advanced Weaving (3-3-3-3) |
| 126D-126E. Intaglio Printmaking in Color (3-3) | 181. Nonwoven Textile Construction (3) |
| 127. Advanced Figurative Sculpture (3) | 182. Textile Design (3) |
| 129A-129B. History of Ceramics (3-3) | 186. Synergetic Environments (3) |
| 135A-135B-135C. History and Theory of Environmental Design (3-3-3) | 187. Environmental Prototypes (3) |
| 136A-136B. Lithography Printmaking (3-3) | 188. Environmental Theory (3) |
| 136C-136D. Lithography Printmaking in Color (3-3) | 191A-191B. Gallery Exhibition Design (3-3) |
| 146A-146B. Serigraphy (3) | 193A-193B. Drawing and Illustration for Graphic Communication (3-3) |
| 151A. Pre-Columbian Art of Middle and South America (3) | 195A. Residential Interior Design (3) |
| 151B. Colonial Art of Latin America (3) | 195B. Environmental Design (3) |
| | 195C. Professional Methods of Interior Design (3) |
| | 195D. Contract Interior Design (3) |
| | 196A-196B. Visual Communication Media (3-3) |
| | 197. Advanced Graphic Imagery (3) |

GRADUATE COURSES

206A-206B. 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.

214. Graphic Communication (1-3)

Two hours for each unit of credit.

Prerequisite: Art 114D.

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

216A-216B. Painting (1-3)

Two hours for each unit of credit.

Prerequisites: Art 112B and 116B.

Aesthetic organization of selected visual subject matter in the medium of colors in oils. Maximum credit six units applicable on a master's degree.

217A-217B. Sculpture (1-3)

Two hours for each unit of credit.

Prerequisite: Art 117C.

Aesthetic organization of selected subject matter in the media of sculpture. Maximum credit six units applicable on a master's degree.

219A-219B. Crafts (1-3)

Two hours for each unit of credit.

Prerequisites: Six units completed in upper division courses in crafts.

Advanced creative work in selected craft media. Maximum credit six units applicable on a master's degree.

221. Advanced Clay and Glaze Technology in Ceramic Design (3)

Six hours.

Prerequisite: Art 119B.

Experimentation with the use of ceramic materials and techniques as an integral part of the design process. Maximum credit six units applicable on a master's degree.

222. Art Education Colloquium (3)

Prerequisite: Minimum of 15 units of upper division art.

Historic and current art education philosophies.

270. Seminar in Jewelry and Metalwork (3)

Prerequisite: Art 170A.

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.

280. Seminar in Textile Design (3)

Prerequisite: Art 180A.

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.

290. Bibliography and Research Methods (2)

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

291. Seminar in Creative Art. (3)

Independent research in specified areas including the presentation of a paper with its oral defense.

Each course may be taken to a maximum of six units. No more than six units of 291 are applicable to a master's degree.

- A. Seminar in Painting
- B. Seminar in Sculpture
- C. Seminar in Printmaking
- D. Seminar in Ceramics
- E. Seminar in Crafts
- F. Seminar in Graphic Communication
- G. Seminar in Environmental Design

292A. Seminar in Ancient Art (3)

Prerequisites: Art 50A and 50B.

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

292B. Seminar in Medieval Art (3)

Prerequisites: Art 50A and 50B.

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

292C. Seminar in Renaissance Art (3)

Prerequisites: Art 50A and 50B.

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

292D. Seminar in Baroque and Rococo Art (3)

Prerequisites: Art 50A and 50B.

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

292E. Seminar in Modern Art (3)

Prerequisite: Art 156A.

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

292F. Seminar in Primitive Art (3)

Prerequisite: Art 158.

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

294A-294B. Seminar in the Principles of Design in the Space Arts (3-3)

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.

295. Creative Environmental Design (1-3)

Prerequisite: Six units of upper division work 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.

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

Individual study. Six units maximum credit.

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

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.

ASIAN STUDIES

GENERAL INFORMATION

The Master of Arts degree in Asian Studies with an emphasis on East Asia 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, 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 culture, societies, people, and social forces at work in the Asian/Pacific world.

ADMISSION TO THE GRADUATE DIVISION

In addition to meeting the 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, the student must present a Bachelor of Arts degree with a major in Asian Studies or its equivalent, as approved by the 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" 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 listed below as acceptable on master's degree programs with not less than 24 units in courses of Asian content, distributed as shown below. A minimum of 18 of the above 24 units shall be in courses of East Asian emphasis.

	200-numbered Courses	Upper Division Courses or 200-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 remaining 6 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 200-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.

MEMBERS OF THE CENTER FOR ASIAN STUDIES

A. W. Anderson
Lillian L. Chan
Paochin Chu
Ann W. Cottrell
T. R. Cox
D. D. DuFault
R. C. Gripp
R. S. Himes
Gloria Ho
G. R. Jordan

A. D. Coox, Director
T. J. Kahng
E. A. Keen
Martha Longenecker
M. C. Madhavan
D. D. McLeod
J. G. McLevie
J. E. Merrill
Hans Neyndorff
R. A. Oades
Barbara Pillsbury

R. H. K. Schulze
L. J. Shaw
R. T. Smith, Jr.
A. L. Srbich
P. S. Staniford
Yoshio Tanaka
R. D. Wallace
D. D. Whitney
Catherine Woo
C. C. Yahr
C. S. Yun

GRADUATE COMMITTEE

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

Paochin Chu, History (East Asia)
T. J. Kahng, Political Science (East Asia)
E. A. Keen, Geography (East Asia)
D. D. Whitney, Anthropology (East Asia)

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

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN ASIAN STUDIES

UPPER DIVISION COURSES

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| <p><i>Anthropology</i></p> <p>175. Cultures of Southeast Asia (3)
186. Cultures of India (3)
191. Chinese Society (3)*
192. Japanese Society (3)*
196. Topics in Anthropology (3)†</p> <p><i>Art</i></p> <p>152A. The Art of India and Southeast Asia (3)</p> <p><i>Comparative Literature</i></p> <p>170. Studies in Modern Oriental Literature (3)</p> <p><i>Economics</i></p> <p>102. Comparative Economic Systems (3)†
115. Economic Problems of South and East Asia (3)*
167. Contemporary Issues (3)†
189. Population and Economic Growth (3)†
190. International Economic Problems (3)†</p> <p><i>Geography</i></p> <p>131. Eastern Asia (3)*
133. Southeastern Asia (3)
134. Southern Asia (3)
150. Political Geography (3)†</p> | <p><i>History</i></p> <p>180. Selected Studies in History (3)†
190A-190B. Southeast Asia (3-3)
191A-191B. The Far East (3-3)*
192. Chinese Civilization (3)*
193. China in Modern Times (3)*
194. Japanese Civilization (3)*
195. Rise of Japan as a Modern State (3)*
196A-196B. The Indian Sub-Continent (3-3)
197A-197B. Intellectual History of Modern Asia (3-3)*</p> <p><i>Philosophy</i></p> <p>175. A Major Philosopher (3)†
196. Topics in Asian Thought (3)†</p> <p><i>Political Science</i></p> <p>187. Governments and Politics of the Far East (3)*
191. Governments and Politics of the Developing Areas (3)†</p> <p><i>Religious Studies</i></p> <p>121A-121B. Oriental Religions (3-3) Second Semester*
180. A Major Figure (3)†
181. A Metaphysical Doctrine (3)†</p> |
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* Course always applicable toward the minimum of 18 units of East Asian emphasis required for the master's degree program.
† Acceptable when of relevant content.

APPLICABLE GRADUATE COURSES

Anthropology

200. Seminar (3) +
220. Seminar in Regional Anthropology (3) +
222. Historical Linguistics (3) +
233. Social Structure (3) +

Art

- 206A-206B. Printmaking (1-3) +

Business Administration

228. Seminar in International Finance (3) +
252. Marketing Institutions (3) +
255. Seminar in International Marketing (3) +

Economics

208. Development Planning (3) +
210. Seminar in Economic History (3) +
292. Seminar in International Economics (3) +
295. Seminar in the Economics of Underdeveloped Countries (3) +

Education

204. Comparative Education (3) +

Geography

210. History of Geography (3) +
220. Seminar in Regional Geography (3) +
250. Seminar in Systematic Geography (3) +

All 297 (Research) and 298 (Special Study) courses in named departments, when relevant, are also applicable upon approval by the Graduate Committee. Those students electing Plan A will complete the 299 (Thesis) course in the department selected for the 12-unit concentration (Department A).

Refer to graduate course descriptions in the sections of this bulletin under the appropriate departments.

* Courses always applicable toward the minimum of 18 units of East Asian emphasis required for the master's degree program.

† Acceptable when of relevant content.

** Required of all students who offer History as Department A.

History

201. Seminar in Historical Method (3) **
243. Directed Reading in Asian History (3) +
253. Seminar in Asian History (3) +
296. Area Studies in History (3) +

Linguistics

295. Seminar in Linguistics (3) +

Philosophy

235. Seminar in Philosophy of Religion (3) +
236. Seminar in Philosophy of Art (3) +
295. Seminar in Selected Topics (3) +

Political Science

270. Seminar in International Relations (3) +
275. Seminar in Theories of International Relations (3) +
280. Seminar in General Comparative Political Systems (3) +
282. Seminar in the Political Systems of the Developing Nations (3) +
284. Seminar in Communist Political Systems (3) +

Sociology

270. Seminar in Population and Demography (3) +
275. Directed Readings in Population and Demography (3) +

ASTRONOMY

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 by a fifth year 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 360/40 and an IBM 1130 digital computer.

ADMISSION TO THE GRADUATE DIVISION

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 student must have an over-all 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 to the Department of Astronomy.

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:

- Complete at least 15 units of 200-numbered courses in astronomy not including 299.
- Complete at least nine units of graduate level or approved upper division courses in astronomy or related fields as approved by his departmental committee.
- If a student elects Plan A, he must enroll in Astronomy 299, 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.
- Complete 6 units of electives selected with approval of the adviser.
- A reading knowledge of scientific French, German, or Russian is recommended. Facility with a scientific computing language is desirable.

ASSISTANTSHIPS

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

FACULTY

Chairman, Department of Astronomy: Burt Nelson, Ph.D.

Graduate Adviser: J. D. Schopp, Ph.D.

Professors: C. T. Daub, Ph.D.; Burt Nelson, Ph.D.; J. D. Schopp, Ph.D.; Arthur Young, Ph.D.

Associate Professor: R. J. Angione, Ph.D.

Assistant Professor: F. D. Talbert, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN ASTRONOMY

UPPER DIVISION COURSES

170. Astrophysical Spectroscopy (3)

196. Advanced Topics in Astronomy (2-3)

GRADUATE COURSES

200. Seminar (2 or 3)

Prerequisite: Consent of instructor.

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

210. Binary Stars (3)

Prerequisite: Astronomy 112B.

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

220. Galactic Structure (3)

Prerequisite: Astronomy 112B.

Types, movements and characteristics of stars in the galaxy and a similar study of extragalactic structure.

225. Extragalactic Structure (3)

Prerequisite: Astronomy 112B.

The individual and collective properties of normal and peculiar galaxies.

Topics include classification, spectra, masses, luminosity distributions, distance indicators, clustering, and redshifts.

230. Stellar Interiors (3)

Prerequisite: Astronomy 112B.

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

240. Interstellar Matter (3)

Prerequisites: Mathematics 119, Astronomy 112B.

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.

250. Stellar Atmospheres (3)

Prerequisite: Astronomy 112A.

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

280. Orbit Theory and Computation (3)

Prerequisite: Astronomy 180.

A study of the derivation of the methods of determining orbits of comets, asteroids, and planets. The computation of an orbit will be required.

297. 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.

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

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

Individual study. Six units maximum credit.

299. 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

BIOLOGICAL SCIENCES

GENERAL INFORMATION

The Ecology Program Area in Biological Sciences at San Diego State University, and the College of Biological and Agricultural Sciences at the University of California, Riverside, offer a joint doctoral program leading to the degree of Doctor of Philosophy in Ecology. The Genetics Group in Biological Sciences at San Diego State University, and the Genetics Group, University of California, Berkeley, offer a joint doctoral program leading to the degree of Doctor of Philosophy in Genetics.

The Departments of Biology, Botany, Microbiology and Zoology, in the College of Sciences, offer graduate study leading to the degrees of Master of Arts in Biology and Master of Science in Biology. For the degree Master of Science in Microbiology see the Microbiology section in this Bulletin.

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 for a higher degree, if the student so desires. The Master of Science degree is an applied or technical degree. Concentrations for either of these degrees must be completed in one of the following Program Areas:

Biology: Ecology; Genetics and Developmental Biology; and Physiology

Botany: Botany

Microbiology: Microbiology

Zoology: Invertebrate Zoology; Vertebrate Zoology

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, and the Alvarado Filtration Plant of the City of San Diego. San Diego State University is establishing a biological research center on a 3,000 acre area in Temecula, Riverside County, has acquired acreage in the Camp Elliot area, and leases a field station at Camp Minnewawa near Dulzura.

ADMISSION TO THE GRADUATE DIVISION

In addition to the general requirements for admission to the Graduate Division 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 classified graduate standing:

- meet the requirements of an undergraduate major in a biological sciences department at San Diego State University in which graduate work is contemplated.
- have a grade point average of 2.75 or better on work taken for the baccalaureate degree.
- have a grade point average of 3.0 or better in upper division courses (at least 24 units) in the biological sciences.
- have a score of 1100 or better on the Graduate Record Examination Aptitude Test.
- 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.
- be considered as capable of graduate work in the biological sciences by two references submitted to the Biology Coordinator of Master's Degree Programs.
- be accepted by a Program Area and be sponsored by a faculty member of the area.

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 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 200-numbered courses in the biological sciences, including course 299, Thesis. 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 200-numbered courses in the biological sciences, including course 299, Thesis. A maximum of six units of the required thirty units may be selected from acceptable courses offered in the School of Education. A final oral examination on the field of the thesis and its implications in the broad fields of biology is also required.

SECTION II. JOINT DOCTORAL PROGRAMS

ECOLOGY

The ecologists in the cooperating faculties for the Doctoral Program in Ecology represent a broad spectrum of ecological specializations.

In general, research within the Ecology Program Area at San Diego State University is concentrated in the following major areas:

- Analysis and modelling of the dynamics of aquatic and terrestrial ecosystems.
- Physiological ecology of plants, particularly of the Mediterranean Zone, desert and Arctic tundra.
- Population dynamics of aquatic and terrestrial animals.
- Relations between ecological processes and the technological, social, and economic factors affecting environmental quality.

At the University of California, Riverside, ecologists are working on:

- Physiological ecology of desert animals and of desert plants.
- Population ecology and population genetics.
- Evolutionary aspects of ecology relating to distribution and speciation.

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 of study should include: genetics, physiology or biochemistry, ecology, a minimum of one year of inorganic chemistry, one semester of organic chemistry, and one year of physics. Mathematics through two courses in calculus and two years of a modern foreign language (German, Russian or French) are advised. Other majors in related fields may be considered for admission to the doctoral degree program in ecology.

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 normally spend his first year in the program completing his year of residency at the University of California, Riverside. It is desirable for the student to complete his foreign language requirements and his Qualifying Examination during this year and to be advanced to candidacy.

STAFF

Faculty members of the staff in ecology of the cooperating institutions who will act as principals in the doctoral program in ecology and be available for direction of research and as members of Doctoral Committees are as follows:

University of California, Riverside:

Graduate Adviser: William W. Thomson

Principals: Lars H. Carpelan, Robert W. Gill, George W. Gillett, Hyrum B. Johnson, Wilbur W. Mayhew, Eric T. Pengelley, Rodolfo Ruibal, Vaughan H. Shoemaker, Irwin P. Ting, Frank C. Vasek.

San Diego State University:

Graduate Adviser: Joy B. Zedler

Principals: Michael D. Atkins, Roger E. Carpenter, Mary E. Clark, Theodore J. Cohn, Boyd D. Collier, Charles F. Cooper, George W. Cox, Deborah M. Dexter, Thomas A. Ebert, Richard E. Etheridge, David A. Farris, Glenn A. Flittner, Richard F. Ford, Robert L. Hays, William E. Hazen, Stuart H. Hurlbert, Albert W. Johnson, Jason A. Lillegraven, Philip C. Miller, William C. Sloan, Joy B. Zedler, Paul H. Zedler.

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 behavior genetics. 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 Advisers: James Frstrom, Alec D. Keith

Principals: Spencer W. Brown, Donald R. Cameron, Seymour Fogel, James Frstrom, Alec D. Keith, I. Michael Lerner, William J. Libby, Jr., Roberta M. Palmour, Patricia St. Lawrence, Philip Spieth.

San Diego State University:

Graduate Adviser: William P. Diehl

Principals: Frank T. Awbrey, Adela S. Baer, Carol A. Barnett, Wayne F. Daugherty, Jr., Craig H. Davis, William P. Diehl, David G. Futch, Albert W. Johnson, Beatrice L. Kelly, Frank J. Ratty, Robert R. Rinehart, Kenneth M. Taylor, William M. Thwaites, Hale L. Wedberg.

ASSISTANTSHIPS

Graduate teaching assistantships and graduate non-teaching 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.

FACULTY

Chairman, Department of Biology: W. E. Hazen, Ph.D.
Chairman, Department of Botany: J. V. Alexander, Ph.D.
Chairman, Department of Microbiology: H. A. Walch, Ph.D.
Chairman, Department of Zoology: R. E. Carpenter, Ph.D.
Graduate Coordinator, Ecology: G. W. Cox, Ph.D.
Graduate Coordinator, Genetics: Adela S. Baer, Ph.D.
Ph.D.; B. D. Collier, Ph.D.; C. F. Cooper; G. W. Cox, Ph.D.; J. E. Crouch,
Coordinator, Master's Degree Programs: M. D. Atkins, Ph.D.
Graduate Departmental Advisers for General Counseling:
Biology:
Ecology: P. H. Zedler

Genetics and Developmental Biology: W. P. Diehl

Physiology: Mary E. Clark

Botany: H. W. Wedberg

Zoology:

Invertebrate Zoology: Norman McLean, Jr.

Vertebrate Zoology: Lo-Chai Chen

Credential Adviser: G. P. Sanders

Professors: M. D. Atkins, Ph.D.; Adela S. Baer, Ph.D.; W. L. Baxter, Ph.D.; K. K. Bohnsack, Ph.D.; C. L. Brandt, Ph.D.; J. A. Brooks, Ph.D.; R. E. Carpenter, Ph.D.; Mary E. Clark, Ph.D.; T. J. Cohn, Ph.D.; B. D. Collier, Ph.D.; C. F. Cooper, Ph.D.; G. W. Cox, Ph.D.; Deborah M. Dexter, Ph.D.; R. E. Etheridge, Ph.D.; D. A. Farris, Ph.D.; G. A. Flittner, Ph.D.; R. F. Ford, Ph.D.; A. H. Gallup, Ph.D.; R. D. Harwood, Ph.D.; W. E. Hazen, Ph.D.; E. W. Huffman, Ph.D.; Don Hunsaker, Ph.D.; A. W. Johnson, Ph.D.; Beatrice L. Kelly, Ph.D.; Jochen Kummerow, Ph.D.; William McBlair, Ph.D.; Norman McLean, Jr., Ph.D.; P. C. Miller, Ph.D.; R. E. Monroe, Ph.D.; H. B. Moore, Ph.D.; J. W. Neel, Ph.D.; C. E. Norland, M.S.; A. C. Olson, Ph.D.; J. A. Parsons, Ph.D.; F. J. Ratty, Ph.D.; R. R. Rinehart, Ph.D.; D. C. Shepard, Ph.D.; W. C. Sloan, Ph.D.; K. M. Taylor, Ph.D.; H. A. Walch, Ph.D.; H. L. Wedberg, Ph.D.; W. J. Wilson, Ph.D.

Associate Professor: J. V. Alexander, Ph.D.; F. T. Awbrey, Ph.D.; R. H. Catlett, Ph.D.; Lo-Chai Chen, Ph.D.; Gerald Collier, M.A.; R. W. Cooper, Ph.D.; W. F. Daugherty, Ph.D.; W. P. Diehl, Ph.D.; T. A. Ebert, Ph.D.; D. G. Futch, Ph.D.; S. H. Hurlbert, Ph.D.; Skaidrite Kleinbergs, Ph.D.; J. A. Lillegraven, Ph.D.; P. J. Paolini, Ph.D.; L. N. Phelps, Ph.D.; H. H. Plymale, D.V.M.; D. A. Preston, Ph.D.; D. L. Rayle, Ph.D.; H. C. Schapiro, Ph.D.; W. M. Thwaites, Ph.D.; P. H. Zedler, Ph.D.

Assistant Professors: E. A. Anderes, Ph.D.; Carol A. Barnett, Ph.D.; N. M. Carmichael, Ph.D.; C. H. Davis, Ph.D.; R. L. Hays, Ph.D.; S. H. Hurlbert, Ph.D.; Alice C. Jokela, Ph.D.; C. O. Krekorian, Ph.D.; D. J. Raidt, Ph.D.; J. F. Steenbergen, Ph.D.; Joy B. Zedler, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS

UPPER DIVISION COURSES

Biology

- 101. Cellular Physiology (4)
- 103. General Cytology (4)
- 109. Regional Field Studies in Biology (1-3)
- 110. Ecology (4)
- 111. Aquatic Biology (4)
- 112. Fisheries Biology (3)
- 113. Biological Oceanography (4)
- 114. Advanced Ecology (3)
- 121. Systems Ecology (5)
- 122. Environmental Measurement (3)
- 123. Simulation of Ecological Systems (4)
- 142A-142B. Comparative Animal Physiology (4-4)
- 144. Comparative Endocrinology (3)
- 144L. Comparative Endocrinology Laboratory (2)
- 148. Photophysiology (3)
- 148L. Photophysiology Laboratory (1)
- 150. Radiation Biology (3)
- 150L. Radiation Biology Laboratory (2)
- 151. Radioisotope Techniques in Biology (3)
- 155. Genetics (4)
- 156. Developmental Biology (4)
- 157. Cytogenetics (4)
- 158. Human Genetics (4)
- 160. Evolution and Population Genetics (4)
- 161. History of Biology (3)
- 162. Source Material in the History of Biology (3)
- 163. Microbial Genetics (4)
- 169. Ecological Genetics (4)
- 171. Mutagenesis (3)
- 172. Behavioral Genetics (3)
- 173. Advanced Genetics (3)
- 175. Statistical Methods in Biology (3)
- 181. Advanced Cellular Physiology (3)
- 182. Immunochemistry (3)
- 182L. Immunochemistry Laboratory (1)

Botany

- 100. General Botany (4)
- 101. Phycology (4)
- 102. Mycology (4)
- 103. Vascular Plants (4)
- 111. Advanced Phycology (3)
- 112. Cultivated Trees and Shrubs (3)
- 114. Plant Taxonomy (4)
- 126. Plant Pathology (4)
- 130. Plant Physiology (4)
- 132. Plant Metabolism (3)
- 133. Experimental Plant Metabolism (2)
- 140. Plant Anatomy (4)

- 162. Agricultural Botany (2)
- 172. Palynology (3)
- 196. Selected Topics in Botany (2-3)

Microbiology

- 101. General Microbiology (4)
- 102. Pathogenic Bacteriology (4)
- 103. Fundamentals of Immunology and Serology (4)
- 104. Medical Mycology (4)
- 105. Microbial Physiology (4)
- 107. General Virology (2)
- 107L. General Virology Laboratory (2)
- 109. Hematology (4)
- 111A-111B. Epidemiology (2-2)
- 114. Bacterial and Viral Genetics (2)
- 114L. Bacterial and Viral Genetics Laboratory (2)
- 115. Advanced General Microbiology (4)
- 116. Marine Microbiology (4)
- 120. Animal Viruses (4)
- 130. Experimental Immunology (4)
- 140. History of Microbiology (2)
- 180. Electron Microscopy (4)

Zoology

- 102. Invertebrate Embryology (3)
- 103. Embryology (4)
- 106. Comparative Anatomy of the Vertebrates (4)
- 108. Histology (4)
- 112. Marine Invertebrates Zoology (4)
- 115. Ichthyology (4)
- 116. Herpetology (4)
- 117. Ornithology (4)
- 118. Mammalogy (4)
- 121. General Entomology (4)
- 122. Special Topics in Entomology (3)
- 123. Immature Insects (3)
- 124. Insect Ecology (4)
- 125. Economic Entomology (4)
- 126. Medical Entomology (3)
- 127. Insect Control (2)
- 128. Parasitology (4)
- 129. Principles of Pest Management (3)
- 130. Advanced Invertebrate Zoology (3)
- 131. Insect Physiology (4)
- 140. Physiological Zoology (4)
- 145A-145B. Experimental Animal Surgery (2-2)
- 155. Principles of Taxonomy, Systematics and Phylogeny (4)
- 160. Vertebrate Paleontology (4)
- 161. Mammalian Paleontology (4)
- 170. Animal Behavior (4)

GRADUATE COURSES

Biology

200. Seminar (2 or 3)
Prerequisite: Consent of instructor.
An intensive study in advanced biology, topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.
210. Seminar in Cellular Physiology (2)
Prerequisites: Biology 101 and consent of instructor.
Maximum credit four units applicable on a master's degree.
220. Seminar in Developmental Biology (2)
Prerequisite: Biology 156.
May be repeated with new content. Maximum credit four units applicable on a master's degree.
221. Developmental Genetics (3)
Prerequisites: Biology 101 and Biology 156.
Regulation of genetic information in developing systems.
222. Morphogenesis (3)
Prerequisites: Biology 101 and Biology 156.
Regulation of pattern formation in developing systems; cell migration, cell division, cell death, dependent differentiation.
230. Speciation (3)
Prerequisites: Biology 110 and 155; or Biology 160.
Concepts and principles of the origin of species.
231. Seminar in Ethology and Comparative Psychology (3)
(Same course as Psychology 231)
Prerequisites: Psychology 114 or 117, or Biology 110 or Zoology 170, and consent of the Graduate Adviser.
Current problems in ethology and comparative animal behavior. Maximum credit six units applicable on a master's degree.
240. Seminar in Terrestrial Ecology (2)
Prerequisite: Biology 110.
Ecological concepts as applied to the terrestrial environment. May be repeated with new content. Maximum credit four units applicable on a master's degree.
241. Seminar in Aquatic Ecology (2)
Prerequisite: Biology 110.
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.
242. Population and Community Ecology (3)
Two lectures and three hours of laboratory.
Prerequisite: Biology 110.
Formulation, analysis, and experimental testing of the theories of the structure and dynamics of ecological systems at the population and community level.
243. Physiological Ecology (3)
Two lectures and three hours of laboratory.
Prerequisites: Biology 110 and consent of instructor.
The comparative physiological characteristics of natural plant and animal populations in relation to their habitats and environments.
244. Physical Aspects of Ecology (3)
Prerequisite: Biology 110.
Two lectures and three hours of laboratory.
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.

245. Aquatic Ecology (3)
Prerequisites: Biology 110 and consent of instructor.
Two lectures and three hours of laboratory.
Ecological concepts as applied to benthic and pelagic population and communities in fresh water and marine environments.
246. Behavioral Ecology (3)
Two lectures and three hours of laboratory.
Prerequisites: Biology 110 and consent of instructor.
Recommended: Zoology 170 or Psychology 141.
Behavioral mechanisms relating animals to their physical and biotic environment.
250. Biogeography (3)
Prerequisite: Biology 110 or 160.
Concepts and principles of the distributional history of plant and animal groups, and the origins and dispersal of modern faunas and floras.
260. Seminar in General Physiology (2)
Prerequisite: Biology 101.
May be repeated with new content. Maximum credit four units applicable on a master's degree.
261. Seminar in Environmental Radiation (2)
Prerequisites: Biology 150 and 151.
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.
262. Cytoplasmic Inheritance (3)
Prerequisites: Biology 101, 155, and consent of instructor.
Literature and techniques related to research in non-Mendelian genetics.
263. Seminar in Comparative Physiology (2)
Prerequisites: Biology 142A or 142B and consent of instructor.
Comparative aspects of function at the molecular through organismal levels. Maximum credit four units applicable on a master's degree.
264. Methods in Physiology (2)
Six hours of laboratory.
Prerequisite: Biology 101.
Current methods employed on physiological measurements. Maximum credit four units applicable on a master's degree.
265. Molecular Biophysics (3)
Prerequisites: Biology 101, Mathematics 22.
The description and analysis of biological processes and systems in terms of the properties of molecules and of basic principles.
270. Seminar in Genetics (2)
Prerequisite: Biology 155.
Maximum credit four units applicable on a master's degree.
276. Physiological Genetics (3)
Prerequisites: Biology 155 or 158; Chemistry 12.
Recommended: Chemistry 115A-115B.
Biochemical aspects of genetics of microbial and human systems.
290. 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.
291. Investigation and Report (3)
Analysis and research techniques in biology.

297. Research (1-3)

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

298. Special Study (1-3)

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

Individual study. Six units maximum credit.

299. Thesis or Project (3)

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

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

Botany

200. Seminar (2 or 3)

Prerequisite: Consent of instructor.

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

201. Seminar in Phycology (2)

Prerequisite: Botany 101.

Recent developments in phycology. Maximum credit four units applicable on a master's degree.

202. Seminar in Mycology (2)

Prerequisite: Botany 102.

Current problems in the taxonomy, morphology or physiology of the fungi. Maximum credit four units applicable on a master's degree.

203. Seminar in Vascular Plants (2)

Prerequisite: Botany 103.

Problems in the evolution of the vascular plants. Maximum credit four units applicable on a master's degree.

226. Seminar in Plant Pathology (2)

Prerequisite: Botany 126.

Advanced topics in the biology of plant pathogens. Maximum credit four units applicable on a master's degree.

230. Seminar in Plant Physiology (2)

Prerequisite: Botany 130.

Current investigations in one of the areas in plant physiology. Maximum credit four units applicable on a master's degree.

297. Research (1-3)

Research in one of the fields of botany.

Maximum credit six units applicable on a master's degree.

298. Special Study (1-3)

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

Individual study. Six units maximum credit.

299. Thesis or Project (3)

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

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

Microbiology

200. Seminar (2 or 3)

Prerequisite: Consent of instructor.

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

205. Seminar in Microbial Physiology (2)

Prerequisite: Microbiology 105.

May be repeated with new content. Maximum credit four units applicable on a master's degree.

210. Seminar in Pathogenic Bacteriology (2)

Prerequisite: Microbiology 102.

May be repeated with new content. Maximum credit four units applicable on a master's degree.

215. Seminar in Bacterial and Viral Genetics (2)

Prerequisite: Microbiology 114.

May be repeated with new content. Maximum credit four units applicable on a master's degree.

230. Seminar in Medical Mycology (2)

Prerequisite: Microbiology 104 or consent of instructor.

May be repeated with new content. Maximum credit four units applicable on a master's degree.

240. Seminar in General Microbiology (2)

Prerequisites: Microbiology 105, or consent of instructor.

May be repeated with new content. Maximum credit four units applicable on a master's degree.

245. Seminar in Aquatic Microbiology (2)

Prerequisite: Microbiology 105 or 116 or Biology 113.

Maximum credit four units applicable on a master's degree.

250. Seminar in Virology (2)

Prerequisite: Microbiology 107 or consent of instructor.

May be repeated with new content. Maximum credit four units applicable on a master's degree.

260. Seminar in Immunology and Serology (2)

Prerequisite: Microbiology 103 or consent of instructor.

May be repeated with new content. Maximum credit four units applicable on a master's degree.

270. Biology of Animal Pathogenic Fungi (4)

Three lectures and three hours of laboratory.

Prerequisites: Microbiology 103, 104, 105, and Chemistry 115B. Recommended: Botany 102, Biology 155, and Microbiology 102.

Research in one of the fields of botany.

Maximum credit six units applicable on a master's degree.

272. Advanced Pathogenic Bacteriology (4)

Three lectures and three hours of laboratory.

Prerequisite: Microbiology 102.

Biological and chemical nature of disease-producing bacteria. Application of experimental information to diagnostic laboratory procedures.

290. Bibliography (1)

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

291. 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.

297. Research (1-3) Cr/NC

Research in one of the fields of microbiology.

Maximum credit six units applicable on a master's degree.

298. Special Study (1-3)
Prerequisite: Consent of staff; to be arranged with department chairman and instructor.
Individual study. Six units maximum credit.

299. Thesis or Project (3)
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree.

Zoology

200. Seminar (2 or 3)
An intensive study in advanced zoology, topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

201. Seminar in Marine Zoology (2)
Prerequisite: Biology 110.
Recent developments in marine zoology. Maximum credit four units applicable on a master's degree.

206. Seminar in Vertebrate Morphology (2)
Prerequisite: Biology 106.
Current problems in the descriptive, functional and evolutionary anatomy of vertebrates. Maximum credit four units applicable on a master's degree.

209. Seminar in the Biology of Cold-blooded Vertebrates (2)
Prerequisite: Zoology 60 or 106.
Biology of ectothermic animals. Maximum credit four units applicable on a master's degree.

210. Seminar in the Biology of Warm-blooded Vertebrates (2)
Prerequisite: Zoology 60 or 106.
Biology of endothermic animals. Maximum credit four units applicable on a master's degree.

211. Animal Energetics (3)
Three lectures.
Prerequisites: An upper division course in physiology. A course in calculus and one in biochemistry are recommended.
Energy transformation in animals to include the physiology of starvation, animal energetic efficiency, nutrition, and temperature regulation.

212. Advanced Marine Invertebrate Zoology (3)
One lecture and six hours of laboratory.
Prerequisite: Zoology 112.
Selected topics in advanced marine invertebrate zoology. Maximum credit six units applicable on a master's degree.

215. Advanced Vertebrate Zoology (2)
Prerequisite: Consent of the instructor and any one of the following: Zoology 115, 116, 117, 118, depending on the specific topic announced in the class schedule.
Advanced treatment of ichthyology, herpetology, ornithology, or mammalogy. May be repeated with new content to a maximum of six units. Maximum credit six units applicable on a master's degree.

222. Advanced Entomology (3)
Two lectures and three hours of laboratory.
Prerequisite: Zoology 121, Biology 110, Botany 100 or 103.
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.

290. Bibliography (1)

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

291. Research Techniques (3)

Prerequisite: Consent of graduate adviser.
Analysis of research techniques in zoology.

297. Research (1-3) Cr/NC

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

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

Prerequisite: Consent of staff; to be arranged with department chairman and instructor.
Individual study. Six units maximum credit.

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.

BUSINESS ADMINISTRATION

GENERAL INFORMATION

The School 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 School of Business Administration is a member of the American Association 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 non-business undergraduate degree. The Master of Science degree in Business Administration is designed to provide for 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 Association of Collegiate Schools of Business.

Entrance requirements for the two master's degree curriculums 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 Assistant Dean for Graduate Studies in the School 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 School of Business Administration and the Department of Economics. Operationally, it is a part of the School 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 GRADUATE CURRICULUMS

A student seeking admission to either of the master's degree curriculums offered in the School of Business Administration must (1) be admitted to San Diego State University with unclassified graduate standing by the Office of Admissions and (2) be admitted to the Graduate Division with classified graduate standing. See Part Three of this Bulletin for information on admission procedures.

ADMISSION TO THE GRADUATE DIVISION AND THE SCHOOL OF BUSINESS ADMINISTRATION

Admission to the Graduate Division with classified graduate standing for the purpose of working toward either the Master of Business Administration degree or the Master of Science degree in Business Administration constitutes admission to the School of Business Administration. Students should request application materials from the Graduate Division Office. For additional information, see Part Three of this Bulletin under Admission of Graduate Students to the Graduate Division.

All students must have classified graduate standing prior to enrolling in any graduate (200-numbered) course. All three of the following factors are taken into consideration in evaluating a prospective student for classified graduate standing: (1) his undergraduate grade point average; (2) his score on the Admission Test

for Graduate Study in Business; and (3) his score on the Graduate Record Examination Aptitude Test. Transcripts and both test scores should be on file at San Diego State University at least four months prior to the date the student expects to register for classes. Details concerning both the Admission Test for Graduate Study in Business and the Graduate Record Examination Aptitude Test may be obtained from the Test Office, San Diego State University, or by writing to the Educational Testing Service, 20 Nassau Street, Princeton, New Jersey 08540. These tests are administered five times a year.

MASTER OF BUSINESS ADMINISTRATION DEGREE

ADMISSION TO THE DEGREE CURRICULUM

Regulations governing admission to the Graduate Division and to the School 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 200-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 six 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 24 of the total units required must be completed in residence at San Diego State University, and at least 9 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. 200. Financial Accounting (3)
B.A. 201A. Organization Theory (3)
B.A. 201B. Behavior in Organizations (3)
B.A. 202A. Quantitative Methods (3)
B.A. 202B. Quantitative Methods (3)
B.A. 203. Marketing (3)
B.A. 204. Law for Business Executives (3)
B.A. 205. Financial Principles and Policies (3)
B.A. 206. Managerial Economics (3)
B.A. 208. Managerial Accounting (3)
B.A. 209. Computer Programming and Systems Analysis (3)
Economics 203. Economic Analysis (3)

Satisfactory completion means that the student's grade in each equivalent course must be C 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. 207. Research and Reporting (3)
B.A. 284. 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 of which must include B.A. 299, Thesis (Plan A), or B.A. 290,

Directed Readings in Business Administration. Students choosing the Directed Readings option must then pass a comprehensive examination in their last semester of coursework in lieu of thesis (Plan B).

Concentrations available:

Accounting
Finance
Human Resources Administration
Information Systems
Insurance
International Business
Management
Management Science
Marketing
Production and Operations Management
Real Estate

(b) Electives: At least 3 units in coursework 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 6 units in courses 297, Research, and 298, 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 Graduate Division and admission to the School 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 200-numbered courses listed on the official master's degree program:

Business Administration 1A-1B, Principles of Accounting (4 units)
Economics 1A-1B, Principles of Economics (6 units)
Economics 2, Statistical Methods, or Mathematics 12, Elementary Statistics (3 units)
Business Administration 30A, Business Law (3 units)
Business Administration 83, Information Processing and Computer Programming (3 units)
Business Administration 126, Fundamentals of Finance, or Economics 135, Money and Banking (3 units)
Business Administration 132, Fundamentals of Management (3 units)
Business Administration 150, Marketing Principles (3 units)
Business Administration 190, Quantitative Analysis for Business (3 units)

Satisfactory completion means that the student's grade in each course must be C 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 School of Business Administration, and after the student has filed an official program.

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 twenty-one units in 200-numbered courses. Business Administration 299, Thesis, is required. Business Administration 206, Mana-

gerial Economics, is required unless the student has completed sufficient advanced economics courses as a part of his undergraduate preparation. At least twenty-four units must be in business administration and economics. Not more than a total of 6 units in Courses 297, Research, and 298, Special Study, may be accepted for credit toward the degree.

The following concentrations are available:

- | | |
|-----------------------------------|--|
| 1. Accounting | 7. Management |
| 2. Finance | 8. Management Science |
| 3. Human Resources Administration | 9. Marketing |
| 4. Information Systems | 10. Production and Operations Management |
| 5. Insurance | 11. Real Estate |
| 6. International Business | |

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.

ASSISTANTSHIPS

Graduate teaching assistantships and graduate non-teaching 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 School of Business Administration.

FACULTY

Dean, School of Business Administration: R. P. Hungate, Ph.D.
Associate Dean, School of Business Administration: M. L. Crawford, Ed.D.
Assistant Dean for Graduate Study in Business Administration: W. F. Barber, Ph.D.

Chairman, Department of Accounting: R. A. Meier, Ph.D.
Chairman, Department of Finance: W. W. Reints, Ph.D.
Chairman, Department of Information Systems: R. G. Langenbach, Ed.D.
Chairman, Department of Management: W. R. Sherrard, Ph.D.
Chairman, Department of Marketing: Richard D. Darley, Ph.D.
Graduate Advisers:

Accounting: V. E. Odmark
Human Resources Administration: D. W. Belcher
Finance: B. M. Neuberger, W. W. Reints
Information Systems: M. L. Crawford, W. E. Spaulding
Insurance: C. R. Smith
International Business: H. K. Soldner
Management: T. J. Atchison, L. H. Peters
Management Science: W. R. Sherrard
Marketing: John McFall, D. T. Vanier, T. R. Wotruba
Production and Operations Management: A. L. Srbich
Real Estate: Errol Cowan, W. H. Hippaka
Professors: E. C. Archer, Ed.D.; T. J. Atchison, Ph.D.; W. F. Barber, Ph.D.; J. A. Belasco, Ph.D.; D. W. Belcher, Ph.D.; Arthur Brodshatzer, D.B.A., C.P.A.; M. L. Crawford, Ed.D.; R. D. Darley, Ph.D.; L. J. Dodds, M.B.A., C.P.A.; D. B. Ferrel, M.B.A., C.P.A.; Oliver Galbraith, Ph.D.; J. V. Ghorpade, Ph.D.; R. W. Haas, D.B.A.; E. A. Hale, Ph.D.; D. R. Hampton, Ph.D.; W. W. Harned, Ph.D.; W. H. Hippaka, Jur.D.; R. G. Langenbach, Ed.D.; E. O. LeBarron, B.A., B.S.; D. A. Lindgren, Ph.D.; John McFall, Ph.D.; R. A. Meier, Ph.D.; D. G. Mitton, Ph.D.; W. A. Nye, Ph.D.; V. E. Odmark, Ph.D.; P. A.; L. H. Peters, Ph.D.; A. C. Pierson, Ph.D.; W. W. Reints, Ph.D.; Simon Reznikoff, J.D.; G. K. Sharkey, Ph.D.; W. R. Sherrard, Ph.D.; L. W. Snudden, D.B.A., C.P.A.; A. L. Srbich, Ph.D.; L. L. Straub, M.C.S.; H. W. J. Wijnholds, D.R.; T. R. Wotruba, Ph.D.
Associate Professors: F. C. Akers, Ph.D.; A. R. Bailey, Ph.D.; R. L. Block, J.D.; H. H. Fisher, Ph.D.; R. C. Hutchins, D.B.A.; K. M. Lightner, Ph.D.; B. M. Neuberger, D.B.A.; W. D. Schmier, J.D.; C. R. Smith, Ph.D.; H. K. Soldner, D.B.A.; W. E. Spaulding, Ph.D.; Ph.D.; P. A. Vandenberg, D.B.A.; D. T. Vanier, Ph.D.; J. E. Williamson, Ph.D.
Assistant Professors: J. R. Beatty, Ph.D.; H. L. Boschken, Ph.D.; D. G. Brooks, Ph.D.; Earl Chrysler, M.S.; Errol Cowan, Ph.D.; R. T. Fisher, Ed.D., J.D.; Rick Hesse, D.S.C.; Patrick Mahoney, M.B.A.; R. F. Meigs, D.B.A.; C. A. Potter, J.D.; R. A. Samuelson, Ph.D.; R. B. Settle, Ph.D.; J. L. Shutt, M.A.S.; J. T. Stenrall, D.B.A.; Mario Tilaro, M.S.; H. R. Toole, M.B.A.; R. R. Trippi, Ph.D.

**COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS
IN BUSINESS ADMINISTRATION**

GRADUATE COURSES

Classified graduate standing is a prerequisite for all 200-numbered courses.

200. Financial Accounting (3)

Basic concepts and principles of financial accountings; accounting as a data processing system; measurement of business income; financial statements.

201A. 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.

201B. Behavior in Organizations (3)

Prerequisite: Business Administration 201A.
Nature of the human resource in organizations. Analysis of organizational systems and managerial actions to direct and control human behavior.

202A-202B. Quantitative Methods (3-3)

In 202A: Measures 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. In 202B: The design of statistical experiments and various operations research techniques such as simulation, linear programming, queuing theory, and Markov chain analysis.

203. 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 150 or its equivalent.

204. 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.

205. Financial Principles and Policies (3)

Prerequisite: Business Administration 200.
Finance and financial institutions as they relate to the firm and the flow of funds. Emphasis upon the supply of and demand for capital; principles and tools of business finance; money and capital markets.

206. Managerial Economics (3)

Prerequisite: Economics 203.
Role of economic theory in management analysis and decisions. Study of demand, cost, and supply theories from a business viewpoint.

207. Research and Reporting (3)

Prerequisite: Business Administration 202B.
Principles of research design and data accumulation. The analysis and effective presentation of data related to business and industry.

208. Managerial Accounting (3)

Prerequisite: Business Administration 200.
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.

209. Computer Programming and Systems Analysis (3)

Prerequisite: B.A. 202A.
Fundamentals of computers, problem-oriented computer language, flow-charting logic and techniques, analysis of the synthesis of computer-based systems.

210. Theory and Analysis of Financial Statements (3)

Prerequisite: Business Administration 200.
The theories, principles, and concepts underlying financial statements; measurement and presentation of enterprise resources, equities, and income in accordance with generally accepted accounting principles; consideration of price level problems.

211. Advanced Accounting (3)

Prerequisite: Business Administration 210.
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.

212. Income Tax Accounting (3)

Prerequisite: Business Administration 200.
Provisions of the federal tax law, including preparation of returns for individuals, partnerships, corporations, estates, trusts; procedures for reporting deficiency assessments, refunds, and other administrative practices.

213. Auditing (3)

Prerequisite: Business Administration 211.
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.

214. Seminar in Accounting Information Systems (3)

Prerequisites: Business Administration 202B and 208.
Systems design and related controls. Emphasis on mathematics, statistics, and computers in planning and reporting.

215. Seminar in Managerial Accounting (3)

Prerequisite: Business Administration 208.
Managerial cost accounting concepts and procedures, including budgetary planning, cost control, advisory functions, measurement of divisional profitability, product pricing, and investment decisions.

219. Seminar in Accounting Theory (3)

Prerequisite: Business Administration 211.
Historical development of accounting principles and theory; problems in valuation, income determination, and statement presentation.

220. Legal Aspects of Labor-Management Relations (3)

Legal aspects of union organizational activities, representation proceedings, unfair labor practices, collective bargaining and contracts, grievances and arbitration, strikes, picketing, boycotts and injunctions.

221. 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.

222. World Business Environment (3)

Prerequisite: Economics 203.
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.

223. Seminar in Business Finance (3)

Prerequisite: Business Administration 205.
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.

224. Seminar in Investments (3)

Prerequisite: Business Administration 205.

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.

225. Seminar in Insurance (3)

Prerequisite: Business Administration 221.

Risk management in effective business operations. Programing of personal and business risk problems. Insurance institutions.

226. Seminar in Security Analysis and Portfolio Management (3)

Prerequisites: Business Administration 209 and 224.

Security valuation and price forecasting. Portfolio management theory. Risk management and reduction analysis. Establishment of performance objectives.

227. Seminar in Quantitative Analysis for Financial Decisions (3)

Prerequisites: Business Administration 202B, 205, and 209.

Quantitative techniques and the computer as employed to optimize financial decisions.

228. Seminar in International Business Finance (3)

Prerequisite: Business Administration 205.

International finance applied to the business firm.

229. Seminar in Financial Markets (3)

Prerequisite: Business Administration 205.

Analysis of money and capital markets. Emphasis on factors of influence and sources and uses of data. Survey of literature in the field.

230. Production and Operations Management (3)

Prerequisite: Business Administration 202B.

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.

231. Methods Engineering and Job Design (3)

(Formerly Advanced Methods Engineering and Work Measurement)

Prerequisite: Business Administration 230.

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.

232. Quality Control (3)

Prerequisite: Business Administration 230.

Statistical techniques for controlling quality, reliability and maintainability, types of control and limit charts.

233. Operations Planning and Control Systems (3)

Prerequisite: Business Administration 230.

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.

234. Seminar in Production and Operations Management (3)

Prerequisite: Business Administration 230.

Case studies of selected industries, emphasizing integration of the manufacturing and operations function with the major goals of the organization.

236. Operations Research: Deterministic Systems (3)

Prerequisites: Business Administration 202B and 209.

Mathematical optimization techniques for deterministic systems. Advanced topics in linear programming; nonlinear, dynamic, and integer programming; selected examples of application.

237. Operations Research: Stochastic Systems (3)

Prerequisites: Business Administration 202B and 209.

Use of probability and statistical decision theory for decision-making under conditions of uncertainty. Markov processes, queuing theory, and the theory of games.

238. Computer Applications in Operations Research (3)

Prerequisite: Business Administration 236.

Computer simulation techniques for analysis of complex decision problems. Implementation of optimization algorithms through use of the digital computer.

239A. Seminar in Management Science: Theory (3)

Prerequisite: Business Administration 236.

Examination of recent developments in management science/operations research theory and methodology.

239B. Seminar in Management Science: Application (3)

Prerequisite: Business Administration 236.

Quantitative techniques for managerial planning and decision-making. Applications of operations research and other concepts to industrial situations.

240. Seminar in Manpower Planning and Staffing (3)

Prerequisites: BA 201-B, or any one of Public Administration 241, Economics 250, Psychology 220, Sociology 220.

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.

241. Seminar in Union-Management Relations (3)

Prerequisites: BA 201-B, or any one of Public Administration 241, Economics 250, Psychology 220, Sociology 220.

Interaction of unions and business organizations with particular emphasis upon collective bargaining. Effects upon management and society. Trends in collective bargaining and in the organization of employees.

242. Seminar in Compensation (3)

Prerequisites: Business Administration 201-B, or any one of Public Administration 241, Economics 250, Psychology 220, Sociology 220.

The organizational process of compensating employees. Compensation theory from economics, psychology, and sociology. Compensation systems and their effects upon organizations and individuals.

243. Seminar in Organizational Development (3)

Prerequisites: BA 201-B, or any one of Public Administration 241, Economics 250, Psychology 220, Sociology 220.

The process of developing human resources and organizations. Theories of organizational development; tools and techniques, analysis of manpower and organizational development programs.

249. Seminar in Human Resources Administration (3)

Prerequisites: BA 201-B or any 6 units of courses in Human Resources Administration.

Analysis of issues and application of behavioral science theory in acquiring, developing, rewarding, and utilizing human resources.

250. Seminar in Marketing and the Economy (3)

Prerequisite: Business Administration 203.

Advertising, selling, sales promotion, and merchandising as they relate to society, business and the economy.

251. Seminar in New-Products Marketing (3)

Prerequisite: Business Administration 203.

The study of new-products management in relation to planning and implementation of marketing strategy.

252. Marketing Institutions (3)

Prerequisite: Business Administration 203.

Analysis of development of wholesaling and retailing and of growth, change, and efficiency of these institutions in the American and other economies.

253. Seminar in Marketing Price Policy (3)

Prerequisite: Business Administration 203.

Study of pricing strategy and price determination in business organizations.

254. Seminar in Sales Management (3)

Prerequisite: Business Administration 203.

Sales management and personal selling decisions and strategies in business organizations.

255. Seminar in International Marketing (3)

Prerequisite: Business Administration 203.

The impact of cultural social, political, economic, and other environmental variables upon international marketing systems and the decision-making process of multinational marketing operations.

256. Seminar in Consumer Behavior (3)

Prerequisite: Business Administration 203.

The study of consumer behavior in relation to marketing strategy and the changing environment of business.

257. Seminar in Industrial Marketing Management (3)

Prerequisite: Business Administration 203.

The management of marketing decisions and strategies peculiar to the industrial market.

258. Seminar in Industrial and Government Procurement Management (3)

Prerequisites: Business Administration 201A and 203.

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.

259. Market Analysis and Research (3)

Prerequisites: Business Administration 203 and 202B.

Application of statistical and mathematical methods to market problems, consumer research, and product analysis.

260. Principles of Real Estate (3)

Functions and regulation of the real estate market, real estate finance, property management, real estate appraisal theory, specialized properties, urban development, and contemporary real estate problems. (Formerly numbered Business Administration 222.)

261. Seminar in Real Estate (3)

Prerequisites: Business Administration 260.

Current problems in real property. Regional land use planning. (Formerly numbered Business Administration 226.)

262. Seminar in Real Estate Investment (3)

Prerequisite: Business Administration 260.

Investment characteristics of real property. Analysis of real estate investment by institutions, corporations, individuals, and government. Measuring investment yield potential of industrial, commercial, and residential projects. Real estate investment and social policy.

263. Seminar in Real Estate Finance (3)

Prerequisite: Business Administration 260.

Theories and factors governing the financial functions of lenders, borrowers, governmental agencies, and collateral in financing real estate.

264. Seminar in Valuation of Real Property (3)

Prerequisite: Business Administration 260.

Valuation of real property by the cost, income, and market approaches to value. Evaluation of property taken in eminent domain proceedings, air rights, inverse condemnation, lease-hold interests.

270. Seminar in Business Education (3)

Study of some phase of business education, such as administration and supervision; distributive and basic business education; trends in and methods of teaching shorthand and typewriting.

273. Computer Organizations and Software Systems (3)

Prerequisites: Business Administration 209.

Computer architecture, programming languages, programming systems, and operating systems.

274. Information Theory (3)

Prerequisite: Business Administration 209.

Data structures, data communications, computer-centered information networks, and addressing and indexing schemes.

275. Measurement and Control of Information Systems (3)

Prerequisites: Business Administration 273 and 274.

Information systems models, information utility, performance measurement, applications and systems evaluations, and computer based adaptive control concepts and organizations.

276. Seminar in Advanced Information Topics (3)

Prerequisite: Business Administration 274.

Self-reproducing automata, artificial intelligence, self-organizing information systems.

278. Seminar in Management of Information Systems (3)

Prerequisite: Business Administration 273.

Advanced information systems. Emphasis on current managerial trends and developments and on individual student research.

279. Seminar in Data Systems Design (3)

Prerequisites: Business Administration 202B and 274.

Research in the analysis and design of data processing systems.

281. Behavioral Sciences for Management (3)

Prerequisite: Business Administration 201B.

Applications of findings from behavioral sciences to management problems and decisions. Study of organization cultures and subcultures. Impact of human behavior on the enterprise.

282. Group Processes and Leadership (3)

Prerequisite: Business Administration 201B.

Perceptions and processes in work groups. Experience in interpersonal networks, influence and rewards, stereotypes; managing differences and conflicts.

283. Origins and Nature of American Business Enterprise (3)

Prerequisite: Business Administration 201B.

Factors underlying the American system of business enterprise: modern corporations, the corporation man, technological change, the business community and politics, and other significant issues.

284. Policy Formulation (3)

Prerequisite: 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.

285. Seminar in Business Planning (3)

Prerequisites: Business Administration 201A, 203, 205, and nine units in Business Administration courses numbered 210 or above.

Strategic decision-making, long range forecasting, and corporate planning with major emphasis on product-market relationships.

286. Seminar in Comparative Management (3)

Prerequisite: Business Administration 201B.

Concepts, theories, techniques, and practices of management in various countries.

287. Quantitative Forecasting and Planning (3)

Prerequisite: Business Administration 236 or 237.

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.

288. The Entrepreneur (3)

Prerequisite: Business Administration 201B.

Examination of the entrepreneurial approach; concepts, theory and techniques of managerial innovation and implementation; analysis of entrepreneurial skills.

289. Seminar in Organization and Management (3)

Prerequisite: Business Administration 201B.

Analysis of problems in business and other organizations. Organization and decision theory and contemporary developments in management science are emphasized.

290. 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.

295. Seminar in Selected Topics (3)

Selected areas of concern in business administration; the topic to be announced in the schedule of classes. Maximum credit six units applicable on a master's degree.

297. Research (3) Cr/NC

Prerequisite: Advancement to candidacy.

Research in one of the fields of Business Administration.

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

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

Individual study. Six units maximum credit.

299. 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.

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 a JEOL Model JNM-PS-100 NMR Spectrometer with Fourier Transform capability, a Hitachi RMU-6E Mass Spectrometer, Cary Model 14 and 16 Spectrophotometers, a Gilford Spectrophotometer, a Microwave Spectrometer, a Perkin-Elmer 621 I.R. Spectrophotometer, a Varian E-3 ESR Spectrometer, a Jarrel-Ash Laser Raman Spectrometer, a variety of chromatographic equipment, several high temperature calorimeters, a high voltage electrophoresis apparatus, a pulsed Nd:glass laser system and optical multichannel analyzer, ultra and refrigerated centrifuges, a Durrum Stopped-flow Spectrophotometer System interfaced with a Varian 620 i computer and a variety of radiation counters including a liquid scintillation counter. Also available on campus are IBM 360 and 1130 computer facilities.

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 THE GRADUATE DIVISION

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 student with a major in chemistry from another accredited institution should have included in the undergraduate program a year course in each of the following fields: general chemistry, analytical chemistry, organic chemistry, and physical chemistry. The course in physical chemistry must have included laboratory work. In addition, the student should have had enough specialized elective courses in chemistry to give a minimum of 24 units in upper division courses, including at least one course which has three years of chemistry as a prerequisite.

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. In addition, the student must pass an orientation examination in chemistry. This examination 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 200-numbered courses, excluding Chemistry 290, 297 and 298. Chemistry 211 and 291 are required. Subject to departmental approval, the student may elect Plan A with the thesis (in which case the program must include Chemistry 290 and 299), 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 200-numbered courses, excluding Chemistry 290, 297, 298. Chemistry 211, 290, 291, and 299 are required. A student must pass a final oral examination on his thesis and must demonstrate a reading knowledge of scientific German or Russian. The foreign language requirement will be considered to have been met by the student who holds the American Chemical Society Certificate.

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 analytical, 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 during this year 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: James R. Arnold; Alternate: Joseph E. Mayer

Staff: James R. Arnold, Martin D. Kamen, Joseph Kraut, Joseph E. Mayer, Stanley L. Miller, Charles L. Perrin, G. N. Schrauzer, Teddy G. Traylor, Harold C. Urey, Robert L. Vold, Bruno H. Zimm.

San Diego State University:

Graduate Adviser: R. W. Isensee; Alternate: A. N. Wick.

Staff: Mitchel T. Abbott, Larry E. Bennett, Edward Grubbs, Reilly C. Jensen, Walter D. Jones, Edward O'Neal, William H. Richardson, Morey A. Ring, Clay M. Sharts, Charles J. Stewart, Arne N. Wick.

ASSISTANTSHIPS

Graduate teaching assistantships and graduate non-teaching 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.

FACULTY

Chairman, Department of Chemistry: E. P. Wadsworth, Jr., Ph.D.

Graduate Adviser: R. W. Isensee

Credential Adviser: J. G. Malik

Professors: M. T. Abbott, Ph.D.; J. W. Cobble, Ph.D.; Brage Golding, Ph.D.; E. J. Grubbs, Ph.D.; N. J. Harrington, Ed.D.; L. H. Hellberg, Ph.D.; R. W. Isensee, Ph.D.; Reilly Jensen, Ph.D.; W. D. Jones, Ph.D.; V. J. Landis, Ph.D.; J. G. Malik, Ph.D.; J. H. Mathewson, Ph.D.; H. E. O'Neal, Ph.D.; W. H. Richardson, Ph.D.; M. A. Ring, Ph.D.; C. M. Sharts, Ph.D.; J. A. Spangler, Ph.D.; C. J. Stewart, Ph.D.; E. P. Wadsworth, Jr., Ph.D.; Harold Walba, Ph.D.; Arne N. Wick, Ph.D.; J. H. Woodson, Ph.D.

Associate Professors: L. E. Bennett, Ph.D.; Dewitt Coffey, Ph.D.; M. M. Malley, Ph.D.; S. B. W. Roeder, Ph.D.

Assistant Professor: A. S. Dahms, Ph.D.

COURSES ACCEPTABLE ON ADVANCED DEGREE PROGRAMS IN CHEMISTRY

UPPER DIVISION COURSES

- | | |
|--|---|
| 116A-116B. General Biochemistry (3-3) | 155. Advanced Instrumental Methods (2) |
| 118. Advanced Physical Chemistry (3) | 160A-160B. Principles of Chemical Engineering (3-3) |
| 127A-127B. Inorganic Chemistry (3-3) | 170. Radiochemical Analysis (4) |
| 131. Theoretical Organic Chemistry (3) | 180. Chemical Oceanography (3) |
| 154. Organic Qualitative Analysis (3) | 191. Chemical Literature (1) |

GRADUATE COURSES

200. Seminar (1 to 3)

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

210. Advanced Topics in Physical Chemistry (1-3)

Prerequisite: Consent of instructor.

Selected topics in physical chemistry. Maximum credit six units applicable to a master's degree.

211. Chemical Thermodynamics (3)

Prerequisite: Chemistry 110B.

Chemical thermodynamics and an introduction to statistical thermodynamics.

212. Chemical Kinetics (3)

Prerequisite: Chemistry 110B.

Theory of rate processes; applications of kinetics to the study of reaction mechanisms.

213. Quantum Chemistry (3)

Prerequisite: Chemistry 110B.

Quantum mechanics of atomic and molecular systems; applications to chemical bonding theory.

214. Molecular Structure (3)

Prerequisite: Chemistry 110B.

Theory and techniques used in the determination of molecular structure.

220. Advanced Topics in Inorganic Chemistry (1-3)

Prerequisite: Chemistry 127A.

Selected topics in inorganic chemistry. Maximum credit six units applicable on a master's degree.

221. Mechanisms of Inorganic Reactions (3)

Prerequisite: Chemistry 127A.

Mechanisms in inorganic reactions with an emphasis on coordination chemistry.

222. Chemistry of the Nonmetals (3)

Prerequisite: Chemistry 127A.

An advanced systematic study of the nonmetallic elements and their compounds.

230. Advanced Topics in Organic Chemistry (1-3)

Prerequisite: Chemistry 112.

Selected topics in organic chemistry. Maximum credit six units applicable on a master's degree.

231. Mechanisms of Organic Reactions (3)

Prerequisites: Chemistry 110B and 112.

Reactivity and mechanism in organic reactions.

232. Advanced Organic Chemistry (3)

Prerequisite: Chemistry 112.

Applications and limitations of organic reactions from the viewpoint of synthesis.

250. Advanced Topics in Analytical Chemistry (1-3)

Prerequisite: Chemistry 110B.

Selected topics from the field of analytical chemistry. Maximum credit six units applicable on a master's degree.

260. Advanced Topics in Biochemistry (1-3)

Prerequisite: Chemistry 116B.

Selected topics in biochemistry. Maximum credit six units applicable on a master's degree.

261. Advanced Biochemical Techniques (2)

Prerequisite: Chemistry 116A.

Six hours of laboratory. Theory and practice of current research techniques in biochemical research.

262. Enzymology (2)

Prerequisite: Credit or concurrent registration in Chemistry 109B or 110B.

Theory and techniques used in the study of the mechanism of action of enzymes.

270. Nuclear Chemistry (2)

Prerequisite: Chemistry 110B.

Theoretical applications of radioactivity to chemistry, radiation, chemistry, decay laws and processes, nuclear structure and reactions.

290. 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.

291. Research Seminar (1)

Prerequisite: Consent of department chairman.

Discussions on current research by students, faculty, and visiting scientists. Each student will make a presentation based on the current literature.

297. 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.

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

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

Individual study. Six units maximum credit.

299. 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.

DRAMA

GENERAL INFORMATION

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

ADMISSION TO THE GRADUATE DIVISION

In addition to the general requirements for admission to the Graduate Division 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.

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 attained classified graduate standing and to have completed Drama 200.

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 24 units from courses listed below as acceptable on master's degree programs in drama of which at least 18 must be in 200-numbered courses. Drama 200, Research and Bibliography, Drama 247, Seminar in History of Theatre and Drama, and Drama 299, Thesis, are required courses.

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 Chairman.

FACULTY

Chairman, Department of Drama: C. E. Stephenson, Ph.D.

Graduate Adviser: G. S. Howard

Credential Adviser: Margaret McKerrow

Professors: Kjell Amble, Ph.D.; D. W. Powell, M.F.A.; C. E. Stephenson, Ph.D.

Associate Professors: M. L. Harvey, Ph.D.; G. S. Howard, Ph.D.; Mack Owen, Ph.D.

Assistant Professors: A. M. Annas, M.F.A.; M. J. Lessley, Ph.D.; Margaret McKerrow, M.A.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN DRAMA

UPPER DIVISION COURSES

- | | |
|---|---|
| 111. Styles in Creative Dramatics (3) | 148. Advanced Dramatic Production (3) |
| 120. Play Analysis (3) | 151. Costume, Movement, and Manners (3) |
| 121. Theatre Criticism (3) | 152A-152B. Costume History and Design for the Theatre (3-3) |
| 122. Playwriting, the One-Act Play (3) | 154. Costume Construction Techniques (3) |
| 123. Playwriting, the Long Play (3) | 157. Stage Direction (3) |
| 126. Theory of Production for the Musical Stage (3) | 158. Stage Direction: Scenes (2) |
| 131. Advanced Acting Theory (3) | 159. Stage Direction: One-act Plays (3) |
| 132. Advanced Acting (3) | 160A-160B. History of the Theatre (3-3) |
| 137. High School Play Directing (2) | 178. Directing the Period Play (3) |
| 140A. Scenic Design (3) | 198. Selected Topics in Drama (1-3)# |
| 140B. Styles in Scenic Design (3) | |
| 145A-145B. Stage Lighting (3-3) | |

Not more than 3 units of Drama 198 are acceptable on master's degree programs in drama.

GRADUATE COURSES

200. 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.

235. Seminar in Children's Theatre (3)

Prerequisites: Drama 110 and 115.

Modern developments and trends in children's theatre in educational, civic, and professional programs in the United States and England.

243. 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 electro-mechanical devices to the scenic arts for theatre and television.

244. Seminar in Stage Direction (3)

Prerequisite: Drama 127A.

Projects in the aesthetic principles and the practices of stage direction with an emphasis on styles and historic periods.

245. Seminar in Lighting for Stage and Television (3)

Prerequisite: Drama 145A or 145B.

Projects concerned with the aesthetic and the technical problems of lighting in stage.

246. 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 152A or 152B.

B. Scenery Design

Prerequisites: Drama 140A, 140B, or 148.

247. Seminar in History of Theatre and Drama (3)

Prerequisites: Drama 120, 160A, and 160B.

A. British and Continental Theatre

B. American Theatre

248. Seminar in Dramatic Theory (3)

Prerequisites: Drama 120, 160A, 160B, and 200.

Problems in producing works of such playwrights as Ibsen, Strindberg, Chekhov, Shaw. May be repeated once with new content for a maximum of six units. Maximum credit six units applicable on a master's degree.

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

Individual study. Six units maximum credit.

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

299. Thesis or Project (3) Cr/NC

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

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

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. For graduate study 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 Economics include the Economics Research Center and the Institute of Labor Economics.

ADMISSION TO THE GRADUATE DIVISION

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, students seeking the Master of Arts degree in Economics must have completed at least 18 units of upper division courses in economics including Economics 107 and either 100A-100B or 104A-104B, or their equivalents, and six units of upper division courses in economics or related fields as approved by the graduate adviser.

A student with a bachelor's degree in a field other than economics who has completed the core courses, Economics 100A-100B or 104A-104B and Economics 107, or their equivalents, may, with the consent of the Department of Economics, offer more than six upper division units in fields other than economics as part of this undergraduate preparation for admission to classified graduate standing.

ADVANCEMENT TO CANDIDACY

In addition to meeting the requirements for advancement to candidacy as described in Part Three of this bulletin, all students must take the Graduate Record Advanced Test in Economics. Reservations for this test must be made at the Test Office.

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 economics, of which at least 21 units must be in 200-numbered courses in economics. Economics 200A, 200B, 141, and either 299, for Plan A, or 297, for Plan B, are required courses; the remaining unit requirements may be selected from courses in economics listed below or by petition to the Department Graduate Study Committee, from 100- or 200-numbered courses offered by other departments of the college. A written comprehensive examination over course work taken for the degree is required.

ASSISTANTSHIPS

Graduate teaching 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.

FACULTY

Chairman, Department of Economics: F. D. Sebold, Ph.D.

Graduate Advisers: I. I. Poroy (Coordinator); G. K. Anderson; George Babilot; M. C. Madhavan; F. D. Sebold; J. P. Venieris

Professors: G. K. Anderson, Ph.D.; George Babilot, Ph.D.; R. E. Barcldey, Ph.D.; D. C. Bridenstine, Ph.D.; D. A. Flagg, Ph.D.; Adam Gifford, Ph.D.; C. E. Jencks, Ph.D.; J. W. Leasure, Ph.D.; J. O. McClintic, Ph.D.; E. J. Neuner, Ph.D.; I. I. Poroy, Ph.D.; Marjorie S. Turner, Ph.D.; J. P. Venieris, Ph.D.

Associate Professors: N. C. Clement, Ph.D.; J. J. Hardesty, Ph.D.; A. E. Kartman, Ph.D.; M. C. Madhavan, Ph.D.; W. H. Nam, Ph.D.; F. D. Sebold, Ph.D.

Assistant Professor: D. B. Stewart, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN ECONOMICS

UPPER DIVISION COURSES

- | | |
|-----------------------------------|---|
| 105. Welfare Economics (3) | 191. International Trade Theory (3) |
| 109. Advanced Economic Theory (3) | 192. International Monetary Theory and Policy (3) |
| 141. Econometrics (3) | 194. Capital and Growth Theory (3) |

GRADUATE COURSES

200A. Seminar in Advanced Economic Theory (3)

Prerequisites: Economics 104A and 104B (or 100A and 100B), and 107.

Theory of consumer and producer behavior. Determination of prices and resource allocation patterns in a market economy; partial and general equilibrium.

200B. Seminar in Advanced Economic Theory (3)

Prerequisites: Economics 104A and 104B (or 100A and 100B), and 107.

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.

201A-201B. Seminar in the Development of Economic Thought (3-3)

Prerequisites: Twelve units in economics.

A critical study of the development of economic thought.

202. Seminar in Comparative Economic Systems (3)

Prerequisites: Economics 102 or 115 or 118.

Topics in comparative economic systems; the Soviet economy, the economy of Communist China, and related subjects.

203. Economic Analysis (3)

Prerequisite: Classified graduate standing.

The theory of the firm in a market economy. Not open to students with credit in Economics 100A-100B; not applicable toward a master's degree in economics.

206. The Public Economy (3)

Prerequisite: Economics 131 or Public Administration 162.

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.

208. Development Planning (3)

Prerequisite: Economics 195.

Role of government in development. Choice of target and policy variables. Planning techniques and their application to national development problems.

210. Seminar in Economic History (3)

Prerequisite: Economics 110 or 111A or 111B.

Individual study and group discussion on selected topics in economic history.

231. Seminar in Public Finance (3)

Prerequisite: Economics 131.

Advanced study of public finance problems and literature; research.

235. Seminar in Monetary Economics

Prerequisite: Economics 135.

Analysis of theoretical issues associated with the money supply and process of money creation. Emphasis upon interaction of monetary and real factors in domestic-international money and financial markets.

238. Seminar in Urban and Regional Economics (3)

Prerequisite: Economics 138.

Urban and regional economics; individual research and reports.

241. Seminar in Econometrics (3)

Prerequisite: Economics 141

The construction of large economic models. Identification, causal ordering and estimation. Simultaneous-equation techniques and other selected topics.

250. Seminar in Labor Economics (3)

Prerequisite: Economics 150 or 152.

Individual study and group discussion of selected topics in labor economics.

253. Comparative Labor Seminar (3)

Prerequisites: Economics 150 or 153.

Research in comparative labor problems, including problems of labor and social legislation, medical economics, poverty problems, labor force structural problems, and international labor movements.

272. Seminar in Utilities and Water Resources (3)

Prerequisite: Economics 172 or Economics 173.

Advanced study and group discussion of selected topics in utility economics and regulation, and the economics of water resource development.

274. Seminar in Economic Concentration and Monopoly Power (3)

Prerequisites: Economics 174 or both Economics 170 and 100A.

Selected topics in the field of economic concentration and monopoly.

290. Bibliography (1)

Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's thesis.

292. Seminar in International Economics (3)

Prerequisite: Economics 190 or 191.

Resource allocation, income distribution, commercial policies, capital movements, balance of payments, and international monetary institutions.

295. Seminar in the Economics of Underdeveloped Countries (3)

Prerequisite: Economics 195.

Theories regarding underdevelopment and policies for development of economically underdeveloped countries.

297. Research (3) Cr/NC

Prerequisites: Classified graduate standing and consent of instructor.

Independent research project in an area of economics.

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

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

Individual study. Six units maximum credit.

299. 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.

EDUCATION

GENERAL INFORMATION

The School 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, secondary curriculum and instruction, administration, supervision, counseling, special education, and educational research. 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 degree, Master of Science in Counseling.

MASTER OF ARTS DEGREE IN EDUCATION

ADMISSION TO THE GRADUATE DIVISION

The student 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 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 will be recommended by the school for classified graduate standing.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE IN EDUCATION

In addition to meeting the requirements for admission to the Graduate Division 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 211 and either Education 299 or Education 295A-295B are required courses. 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.

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, or secondary curriculum and instruction may be advanced to candidacy upon completion of the basic requirements as described in Part Three of this bulletin, section on master's degree, and upon satisfactory completion of the qualifying examination (see above). A student desiring a concentration in administration, supervision, or counseling, 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 School of Education, Office of Graduate Programs, Room 179.)

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 only if he has been advanced 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 reservations, check with the Office of Graduate Programs, School of Education, Room 179.

SELECTION OF PLAN A OR PLAN B

In general, applicants will be programmed 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 for it. Requests for transfer to Plan A must be prepared as an official change in program for the master's degree and countersigned by the faculty adviser and then submitted to the Office of Graduate Programs in the School of Education.

In general, Plan A is designed for students who have a particular research problem they wish to investigate in some detail. It is also recommended for students who plan eventually to secure the doctorate. Plan B, requiring a comprehensive examination in lieu of thesis, provides an 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 his 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 adequate 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 211 (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 school administration and supervision is designed to provide increased knowledge and skill for the prospective administrator or supervisor. The basic program, for those intending to serve in positions requiring an administrative or supervisory credential, is built upon and coordinates with the Standard Supervision Credential. Those students with special interests, such as in private school administration, leadership positions as department chairman or team leader, or in school business management, are invited to seek counsel from the Coordinator of the Department of Educational Administration concerning a program of this type. Some variations in the basic program may be permitted in such cases.

1. Prerequisite: Possession of (1) a valid standard teaching credential, standard designated subjects teaching credential or a standard designated services credential or (2) a basic teaching credential issued or renewed by the State of California prior to September, 1966.

2. Education 211, Procedures of Investigation and Report (3 units)

3. The administrative core program: (12 units)

Education 260, Principles of School Administration

Education 261, Educational Leadership

Education 262, Legal and Financial Aspects of School District Policies

Education 263, (or Education 240 or Education 250), Curriculum Development and Evaluation

4. Advanced Seminars and Field Work: (9 units)

a. Elementary Specialization

Education 264A, 264B, 264C, Seminars in Elementary School Administration and Supervision

Education 266A, 266B, 266C, Field Experience in Elementary School Administration and Supervision

or

b. Secondary Specialization

Education 265A, 265B, 265C, Seminars in Secondary School Administration and Supervision

Education 267A, 267B, 267C, Field Experiences in Secondary School Administration and Supervision

5. Research (3-6 units) Education 295A-295B, Seminars, or Education 299, Thesis.

6. Electives (0-3 units) selected with the approval of the adviser.

Advanced seminars require admission to the program of Administration and Supervision, Department of Administration and Supervision. For further information the student is referred to the Office of Graduate Programs, School of Education, Room 179.

Counseling

The Master of Arts degree in Education with a concentration in counseling is designed for persons with a background in professional education who want to specialize in pupil personnel services and school counseling. Generally the degree program is taken in conjunction with work towards the Standard Designated Services Credential with specialization in pupil personnel services.

Prerequisite is a basic background in education (minimum of 12 units). Required are Education 211 (3 units) and either Education 299 (3 units) or Education 295A-295B (6 units) plus additional units to equal a minimum total of thirty units in counselor education or related areas to be selected with the approval of the graduate adviser. A student who wishes to work towards this degree must be admitted to the Counselor Education Program. For further information, the student is referred to the Office of the Department of Counselor Education, School of Education, Room 179. For admission to this program refer to admission to the Master of Science in Counseling degree below.

(A student who has completed the program leading to the Master of Science in Counseling degree will not be eligible for admission to the program leading to the Master of Arts degree in Education with a concentration in counseling.)

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 211, Procedures of Investigation and Report (3 units).

3. Core program (12 units): Education 221, Seminar in Educational Measurement; Education 153, Quantitative Methods in Education; Education 212, Research Design; Education 213, Advanced Quantitative Methods in Education.

4. Electives (12 units): Selected with adviser's approval.

5. Education 299, Thesis.

Educational Technology and Librarianship

The Master of Arts degree in Education with a concentration in educational technology and librarianship is designed for persons seeking a career in administration of school library media centers; administration of instructional materials design and production; and for the classroom teacher or training director interested in increasing his effectiveness. For those interested in administration of school library media centers, the degree program is generally taken in conjunction with work towards specialized preparation in school librarianship (applicable to the Standard Teaching Credential). Those students who plan to seek employment as school library media specialists must hold a valid teaching credential. 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 211, 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 9 units must be taken in courses at the 200 level.

4. Electives (6-9 units) selected with the approval of the adviser.

5. Research (3-6 units). Education 295A-295B, Seminar (6 units), or Education 299, 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. Course requirements are as follows:

1. Prerequisite: A basic background in education (minimum of 12 units) to include curriculum and methods, child growth and development, tests and measurements, educational psychology, and history and philosophy of education.

2. Education 211, 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, and his needs as evidenced by results on the qualifying examination. A minimum of 9 units of education shall be taken in courses at the 200-level.

4. Electives (6-9 units) selected with the approval of the adviser.

5. Special Study and Research (3-6 units): Education 295A-295B, Seminar (6 units), or Education 299, Thesis (3 units).

Secondary Curriculum and Instruction

The Master of Arts degree in Education with a concentration in secondary curriculum and instruction is designed to assist the applicant in improving performance in his roles as a classroom teacher. Twelve units in basic education courses are prerequisite to the program. Course requirements are as follows:

1. Education 211, Procedures of Investigation and Report (3 units).

2. 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, and his needs as evidenced by results on the qualifying examination. A minimum of 9 units in education must be taken in courses at the 200-level.

3. Electives (6-9 units) selected with the approval of the adviser.

4. Research (3-6 units). Education 295A-295B, Seminar (6 units), or Education 299, Thesis (3 units).

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 211, Procedures of Investigation and Report (3 units).

3. Core program (9 units) to include: Education 220, Advanced Educational Psychology; Education 270, Seminar in Education of Exceptional Children; and a 200 level education course in area of specialty.

4. Electives selected with adviser's approval.

5. Additional required courses (3-6 units): Education 295A-295B, Seminars, or Education 299, Thesis.

MASTER OF SCIENCE IN COUNSELING DEGREE

APPLICATION FOR ADMISSION

In seeking admission to the program leading to the Master of Science in Counseling degree, or work in rehabilitation counseling, the student should write directly to Dr. John D. Chamley, Chairman, Department of Counselor Education, or Dr. Fred R. McFarlane, Director of Rehabilitation Counselor Program 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 AND APPLICATIONS MUST BE RECEIVED BY THE DEPARTMENT OF COUNSELOR EDUCATION NOT LATER THAN MARCH 31.

PART-TIME STUDENTS MAY APPLY BOTH SPRING AND FALL SEMESTERS. THE DEADLINE FOR APPLICATION IS OCTOBER 30 FOR THE SPRING AND MARCH 31 FOR THE FALL SEMESTER.

After the student has received notification of eligibility to the Department of Counselor Education he must file an application for admission to San Diego State University with the Dean of Admissions and an application for admission to the Graduate Division with the Dean of the Graduate Division as indicated below.

ADMISSION TO THE UNIVERSITY AND THE GRADUATE DIVISION

A student seeking admission to the curriculum leading to the Master of Science in Counseling degree, or work in rehabilitation counseling, must:

1. Be admitted to San Diego State University as an unclassified graduate student by the Office of Admissions of the University. (See procedures listed in Part Three of this bulletin on Admission of Graduate Students.)

2. Be admitted to the Department of Counselor Education.

3. Be admitted to the Graduate Division of San Diego State University. Requirements for admission to the Graduate Division (which include the completion of the Graduate Record Examination Aptitude Test and the filing of an official program) are stated in Part Three of this bulletin under Admission of Graduate Students to the Graduate Division.

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 ongoing academic and personal growth.

(A student who has completed the program leading to the Master of Arts degree in Education with a concentration in counseling, will not be eligible for admission to the program leading to the degree, Master of Science in Counseling.)

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 thirty-six 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 211, 239A, and 239B or equivalent.

2. At least nine units of work from each of the following groups of courses:

First Level: Education 115, 167, 211, 225A, 225B, 226, and 230.

Second Level: Education 231, 232, 233, and 234 (or 237 and 238).

Third Level: Education 239A, 239B, 330, 331, 332, 333, Psychology 204, and 205.

3. Successful completion of a program consisting of at least thirty-six units of approved course work.

REHABILITATION PROGRAM

The Rehabilitation Counselor Program has the primary objective of preparing students to enter the field of Vocational Rehabilitation. The program consists of 60 graduate units with 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. Further information regarding the program may be obtained by contacting Dr. Fred R. McFarlane, Director of the Rehabilitation Counselor Program at 286-6105.

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, School of Education, Room 179).

The Comprehensive Examination

A comprehensive examination for Plan B is required. The student must demonstrate satisfactory performance on a comprehensive examination in lieu of a thesis, prepared by the Department of Counseling and Guidance.

Reservations for the examination must be made in advance in the Office of Graduate Programs, School of Education, Room 179.

PROGRAM FOR REHABILITATION COUNSELORS

Students desiring to complete the program for rehabilitation counselors will complete the requirements for the Master of Science in Counseling and additional special requirements arranged by the Director of Rehabilitation Counselor Education. Further information on this program may be obtained from Dr. Fred R. McFarlane, School of Education.

THE COMMUNITY COLLEGE INSTRUCTOR CREDENTIAL

Specific Requirement

The sole requirement for obtaining the Community College Instructor Credential is the obtaining of a Master's degree in a subject matter area designated in Title 5, Section 5, 52210, (subjects usually taught in a Community College). Upon completion of requirements for the Master's degree, the candidate should then apply directly to the Office of the Chancellor, California Community Colleges, 825 15th Street, Sacramento, California 95814.

Suggested Professional Education

No formal courses in education are required under the current interpretation of the Education Code. 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 with the Higher Education Coordinator, Room 128, Education Building.

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 201, The Community College (2)

Education 223, Educational Psychology: Community College (2)

Education 251, Instructional Methods and Materials: Community College

Education 316, Directed Teaching (4)

Note: Directed teaching can be accomplished only in a community college assignment.

SCHOLARSHIPS

The following scholarships are available to graduate students in education.

SAN DIEGO TEACHERS ASSOCIATION. Awarded to two students preparing for teaching. \$100 each per year.

CALIFORNIA CONGRESS OF PARENTS AND TEACHERS, INC. Awarded to a fifth-year student in training for the General Secondary Credential. \$400 per year.

FACULTY

Dean of the School of Education: Tomás A. Arciniega, Ed.D.

Associate Dean for Academic Affairs: R. R. Nardelli, Ph.D.

Associate Dean, Program Planning, Budgeting and Scheduling: S. S. Blanc, Ed.D.

Coordinator of Counselor Education: J. D. Chamley

Coordinator of Educational Administration: H. B. Holt

Coordinator of Educational Technology and Librarianship: P. J. Harrison

Coordinator of Elementary Education: J. M. Kaatz

Coordinator of Secondary Education: Sigurd Stautland

Coordinator of Special Education Studies: Shirley E. Forbing

Coordinator of Higher Education Programs: R. D. Smith, Jr.

Coordinator of Graduate Programs in Education: C. E. Fishburn

Graduate Advisers:

Counseling (Master of Arts): J. D. Chamley

Counseling (Master of Science): J. D. Chamley

Educational Research: L. A. Becklund

Educational Technology and Librarianship: P. J. Harrison

Elementary Administration and Supervision: H. B. Holt

Elementary Curriculum and Instruction: J. E. Inskeep

Secondary Administration and Supervision: H. B. Holt

Secondary Curriculum and Instruction: C. E. Fishburn

Special Education: Shirley E. Forbing

Professors: E. L. Anderson, Ed.D.; P. S. Anderson, Ph.D.; Sally M. Anthony, Ed.D.; T. A. Arciniega, Ed.D.; D. L. Baker, Ed.D.; E. D. Baldwin, Ph.D.; F. A. Ballantine, Ph.D.; S. S. Blanc, Ed.D.; R. M. Briggs, Ed.D.; Paul Bruce, Ph.D.; Marguerite Brydegaard, Ph.D.; C. M. Charles, Ph.D.; C. E. Crum, Ed.D.; E. J. Cummins, Ph.D.; Paul Erickson, Ed.D.; C. E. Fishburn, Ed.D.; J. S. Fisher, Ph.D.; Kurt Freidrich, Ed.D.; E. G. Fulkerson, Ed.D.; D. K. Gast, Ph.D.; G. F. Gates, Ed.D.; P. C. Gega, Ed.D.; R. A. Goodson, Ed.D.; R. T. Gray, Ed.D.; P. J. Groff, Ed.D.; Philip Halfaker, Ed.D.; Peggy J. Hawley, Ph.D.; W. O. Hill, Ed.D.; H. B. Holt, Ed.D.; H. E. Huls, Ph.D.; J. E. Inskeep, Ph.D.; W. L. Kendall, Ph.D.; M. H. La Bray, Ph.D.; Charles Lienert, Ed.D.; O. J. LuPone, Ph.D.; D. D. Malcolm, Ph.D.; Q. D. McClard, Ph.D.; Doris A. Meek, Ed.D.; R. L. Miller, Ph.D.; A. J. Mitchell, Ed.D.; R. R. Nardelli, Ph.D.; G. A. Person, Ph.D.; M. H. Petreys, Ed.D.; M. H. Platz, Ed.D.; Helen L. Prouty, Ph.D.; Eunice E. Rixman, D.M.A.; J. A. Rodney, Ph.D.; R. R. Ross, Ed.D.; M. K. Rowland, Ph.D.; M. H. Schrupp, Ph.D.; R. E. Servey, Ph.D.; Arthur Singer, Jr., Ph.D.; A. C. Smith, Ed.D.; H. R. Smith, Ph.D.; R. D. Smith, Ph.D.; Sigurd Stautland, Ph.D.; M. F. Stough, Ph.D.; Marguerite Strand, Ph.D.; Leila V. Tossas, Ed.D.; R. L. Trimmer, Ph.D.; W. H. Wetherill, Ph.D.; J. H. Wilding, Ed.D.

Associate Professors: G. J. Becker, Ph.D.; L. A. Becklund, Ph.D.; C. P. Bee, Ph.D.; M. J. Berg, Ph.D.; R. J. Burian, Ed.D.; H. M. Burnside, Ph.D.; J. P. Carnevale, Ph.D.; J. D. Chamley, Ed.D.; M. A. Clark, Ed.D.; J. L. Cleveland, Ph.D.; D. H. Doorlag, Ph.D.; J. B. Duckworth, Ed.D.; Rosalie C. Elliot, Ph.D.; Leif Fearn, Ed.D.; Shirley E. Forbing, Ph.D.; D. H. Ford, Ed.D.; P. J. Harrison, Ph.D.; Dorothy J. Holman, Ed.D.; J. M. Kaatz, Ed.D.; R. E. McCabe, Ph.D.; Leone D. McCoy, Ph.D.; J. G. McLevie, Ph.D.; Joseph Melton, Ed.D.; J. D. Mooers, Ed.D.; S. G. Moreno, Ed.D.; W. P. Morris, Ph.D.; Monica A. Murphy, Ph.D.; T. S. Nagel, Ph.D.; R. B. Pehrson, Ph.D.; J. N. Retson, Ed.D.; P. T. Richman, Ed.D.; R. L. Sanner, Ph.D.; L. J. Shaw, Ed.D.; M. J. Steckbauer, Ed.D.; D. W. Strom, Ed.D.; M. Agnes Walsh, M.A.; J. T. Warburton, Ed.D.; Charlotte B. Yesselman, Ph.D.

Assistant Professors: N. C. Altamura, Ph.D.; Aileen J. Birch, M.A.; Patricia Botkin, Ed.D.; W. W. Bradley, M.A.; Alice J. Cochran, M.A.; Joan F. Curry, Ed.D.; Patricia J. Hill, M.A.; Thelma Manjos, Ph.D.; T. W. McAllister, M.A.; F. R. McFarlane, Ph.D.; Joyce Morris, Ph.D.; Jane E. Reel, Ph.D.; G. M. Thompson, M.A.; G. H. Treadway, Ph.D.; M. J. Weir, M.S.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN EDUCATION

UPPER DIVISION COURSES IN EDUCATION

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| <p>114. Interpretation of Early Childhood Behavior (3)</p> <p>115. Guidance in Elementary Education (3)</p> <p>117. Teacher Effectiveness Training (2 or 3)</p> <p>118. Supervision of Child Welfare and Attendance (3)</p> <p>122. Reading in Secondary Education (3)</p> <p>126. Workshop in Secondary Education (3 or 6)</p> <p>128D. Human Relations and Counseling in Adult Education (2)</p> <p>128E. Workshop in Adult Education (1-3)</p> <p>130A. Arithmetic (2 or 3)</p> <p>130B. Language Arts (2 or 3)</p> <p>131A. Reading (2 or 3)</p> <p>131B. Social Studies (2 or 3)</p> <p>132A. Science (2 or 3)</p> <p>132B. Art (2 or 3)</p> <p>132C. Music (2 or 3)</p> <p>133. Children's Literature in Elementary Education (3)</p> <p>135. Workshop in Elementary Education (3 or 6)</p> <p>137. Reading Difficulties (3)</p> <p>138B. Social Studies Unit Construction in Elementary Education (3)</p> <p>140. Educational Technology (3)</p> <p>141. Production of Instructional Materials (3)</p> <p>143S. Workshop in Educational Television (6)</p> <p>144. Instructional Materials Design (3)</p> <p>151. Measurement and Evaluation in Elementary Education (3)</p> | <p>152. Measurement and Evaluation in Secondary Education (3)</p> <p>153. Quantitative Methods in Educational Research (3)</p> <p>158. The Vocational-Technical Student (4)</p> <p>161. Measurement and Evaluation in Special Education (4)</p> <p>162. Emotionally Disturbed Children and Youth (3)</p> <p>163. Curriculum and Methods for Teaching Emotionally Disturbed Children and Youth (3)</p> <p>164. Education of the Neurologically Handicapped (3)</p> <p>167. Exceptional Children (3)</p> <p>168. Curriculum and Methods for Teaching Mentally Retarded Children in the Elementary School (3)</p> <p>169. Curriculum and Methods for Teaching Mentally Retarded Children in the Secondary School (3)</p> <p>170. Workshop in Special Education (3)</p> <p>172. Counseling Exceptional Children (3)</p> <p>173. Education of the Severely Mentally Retarded (3)</p> <p>174. Principles and Methods of Speech Correction (3)</p> <p>176. Stuttering and Neurological Disorders (3)</p> <p>177. Audiometry: Principles (3)</p> <p>178A. Communication Skills for the Deaf (3)</p> <p>190. Conference on the Teaching of Mathematics (1)</p> <p>191. Guidance Conference (1)</p> <p>192. Audiovisual Conference (1)</p> |
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GRADUATE COURSES IN EDUCATION

Students with undergraduate standing are not admitted to 200-numbered courses in Education. For other requirements refer to the statement of prerequisites for graduate courses at the beginning of Part Four of this bulletin.

In addition to these general requirements, 12 units of professional education are prerequisite for enrollment in all graduate courses, except Education 201, 223, and 251, which require special clearance from the Coordinator of Higher Education Programs; and courses in Counselor Education.

Sociological Foundations

201. The Community College (3)

Two lectures and three hours of activity.

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.

202. Social Foundations (2 or 3)

Prerequisite: Education 131C.

Sociological, historical, and philosophical foundations of American Education and their influences on present-day educational practices.

204. Comparative Education (3)

The contemporary educational ideas and practices of various countries of the world and their impact upon our culture and education.

206. Philosophy of Education (3)

Prerequisite: Education 100 or 101.

Advanced study of philosophical backgrounds of educational thought; a study of comparative philosophies, and an analysis of selected current trends and problems.

207. Educational Sociology (3)

Prerequisite: Education 100 or 101.

A study of the social, economic, political and moral setting in which present-day American education functions.

208. Workshop in Community Influences on Learning and Curriculum Planning (3 or 6)

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.

209. Workshop in Community College Education (2-6)

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.

Procedure of Investigation and Research

211. 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. (Formerly Education 290A-290B.)

212. Educational Research Design (3)

Prerequisite: Education 211.

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.

Educational Psychology

220. Advanced Educational Psychology (3)

Prerequisite: Education 110 or 112.

Advanced study of the research and its application to learning and human growth.

221. Seminar in Educational Measurement (3)

Prerequisite, one of the following: Education 120, 151, 152.

Problems in educational testing. Emphasis upon construction, administration, and validation of teacher-made tests.

223. Educational Psychology: Community College (2)

Fieldwork required.

Prerequisite: Credit for or concurrent registration in Education 201.

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.

246. Advanced Diagnosis in Reading (3)

Prerequisites: Psychology 204 and Education 137, or consent of instructor.

Principles and techniques of individual and group diagnosis of reading difficulties. Experience in administration and interpretation of individual and group instruments in diagnosis.

247. Advanced Diagnosis and Treatment of Learning Difficulties (3)

Prerequisites: A teaching credential and Education 151 or 152.
Principles and techniques of diagnosis and treatment of difficulties in learning the school subjects. Supervised experience in working with individual pupils and their parents.

Counselor Education

224. Administration of Pupil Personnel Services (3)

Prerequisite: Education 230.
The organization and administration of school guidance services, including the use of community resources and a study of laws relating to children and child welfare.

225A-225B. Determinants of Human Behavior (3-3)

Implications of theory and research in behavioral sciences for the understanding of human behavior. Education 225A deals with personality theories and psychological determinants of behavior; 225B with social and cultural determinants.

226. Guidance Services in Public Education (3)

Prerequisite: Education 110, or Education 111 and 112.
Historical, philosophical, and legal bases of the pupil personnel services; staff roles and relationships in a variety of organizational patterns.

229. Workshop in Counseling (3)

Prerequisite: Consent of instructor of workshop.
Application of principles and procedures to specific situations for improvement of counseling services. Individual problems emphasized.

231. 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 Education 237. Offered during summer sessions only in combination with Education 232 as Education 237.

232. 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 Education 237. Offered during summer sessions only in combination with Education 231 as Education 237.

233. Theory and Process of Counseling (4)

Prerequisites: Education 225A and 231.
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 Education 238 or Psychology 152 or Psychology 233. Offered during summer sessions only in combination with Education 234 as Education 238.

234. Theory and Process of Group Counseling (4)

Three lectures and three hours of laboratory.
Prerequisites: Education 225B and 233.
Group process and individual growth, theories of group interaction, sensitivity training and group leadership techniques. Not open to students with credit in Education 238. Offered during summer sessions only in combination with Education 233 as Education 238.

235A. Introduction to the Rehabilitation Process (3)

One lecture and three hours of laboratory.
Prerequisite: Admission to Counselor Education.
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.

235B. Medical Aspects of Disability (3)

One lecture and three hours of laboratory.
Prerequisite: Education 235A.
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.

235C. Psychological Aspects of Disability (3)

One lecture and three hours of laboratory.
Prerequisite: Education 235B.
Analysis of the psychological component to illness and disease. Focus on functional disorders and vocational implications. Lecture and clinical seminars. (Formerly numbered Education 235A.)

235D. Placement of the Disabled (3)

One lecture and three hours of laboratory.
Prerequisite: Education 235C.
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. (Formerly numbered Education 235C.)

237. 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 Education 231 or 232. Application to take the course must be made early during the preceding semester. Offered only during summer sessions.

238. 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 Education 233 or 234. Application to take the course must be made early during the preceding semester. Offered only during summer sessions.

239A-239B. Professional Seminar in Guidance (3-3)

Prerequisites: Education 211; six units from Education 231, 232, 233, and 234 or equivalent.
Study of selected areas in counseling and guidance culminating in a written project with emphasis on research and on counseling as a profession.

Elementary Education

240. Curriculum Construction and Evaluation in Elementary Education (3)

Prerequisite: Credit or concurrent registration in Education 211.
Advanced study of the research in curriculum development, construction, and evaluation.

241. Seminar in Arithmetic in Elementary Education (3)

Prerequisites: Credit or concurrent registration in Education 211.
A study of research and practice in the methods of teaching and in the curriculum of elementary and junior high school arithmetic.

242. Seminar in Reading in Elementary Education (3)

Prerequisites: Credit or concurrent registration in Education 211.
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.

243A. Seminar in Social Studies in Elementary Education (3)

Prerequisite: Credit or concurrent registration in Education 211.
Problems in teaching social studies in the elementary school with emphasis on the study of the scientific research in the field. (Formerly numbered Education 243.)

243B. Seminar in Elementary Social Studies Curriculum Development (3)

Prerequisite: Education 131B, and credit or concurrent registration in Education 211.

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.

244. Seminar in Language Arts in Elementary Education (3)

Prerequisites: Credit or concurrent registration in Education 211.

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 scientific research in the field.

248. Seminar in Science in Elementary Education (3)

Prerequisites: Credit or concurrent registration in Education 211.

Advanced study of the problems of teaching science in the elementary school with emphasis on the literature of science education.

Secondary Education

230. Guidance Problems in Secondary Education (3)

Prerequisites: Education 110 or equivalent, and student teaching or teaching experience.

The theory and practice of guidance emphasizing advanced mental hygiene concepts needed by teachers and counselors.

250. Curricular Problems in Secondary Education (3)

Prerequisite: Student teaching or teaching experience.

Present status and development of the secondary school curriculum with emphasis upon curriculum construction and curriculum evaluation. Opportunities provided for study of problems submitted by students.

251. Instructional Methods and Materials: Community College (2)

Prerequisites: Education 223 and concurrent registration in Education 316.

The teaching process at the community college level, including lesson planning, utilization of audiovisual and other instructional materials and procedures of evaluation.

252. Seminar for Student Teachers (3)

Prerequisites: Education 110 and 100. To be taken concurrently with Education 180C.

Advanced study in the application of principles and research related to planning instruction, selecting and using materials, evaluating instruction and pupil progress, maintaining class morale; school law and finance for classroom teachers.

254. Advanced Problems in Secondary School Instruction (3)

Prerequisites: Teaching experience and consent of instructor.

An analysis of the scientific research and philosophical principles in secondary school instruction.

255. Advanced Curriculum and Instruction in Mathematics (3)

Prerequisite: Education 121F and teaching experience.

Factors directing the changing mathematics curriculum; recent trends and current research in the teaching of secondary mathematics.

256. Recent Trends in Secondary Curriculum (3)

Prerequisites: 12 units in secondary education and consent of the instructor.

Current practices and trends in secondary schools. Extensive individual work on related problems of interest to members of the class.

257. Workshop in Intercultural Education (4)

Enrollment only by application to the Chairman of the Department of Education.

A co-operative workshop sponsored by the college and the San Diego City Schools to study trends in intercultural education in American schools, including units, curricular and instructional materials and techniques.

258. Research in Curricular Problems (1-3)

Admission by consent of the Coordinator of Secondary Education and instructor.

Individual study by graduate students who have demonstrated exceptional ability and a need for such work.

259. Seminar in Secondary School Reading (3)

Prerequisites: Education 122 and 211.

Sources of research on reading; reading and criticism of selected studies; identification of research trends and needs.

Educational Administration

260. Principles of School Administration (3)

Federal, state and local school administrative relationships including the financial and legal structure at these three levels.

261. Education Leadership (3)

Prerequisites: Standard Teaching Credential and consent of instructor.

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. (Formerly Education 278.)

262. Legal and Financial Aspects of School District Policies (3)

Prerequisite: Standard 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.

263. Curriculum Development and Evaluation (3)

Prerequisites: Standard Teaching Credential and consent of instructor.

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.

264A-264B-264C. Seminar in Elementary School Administration and Supervision (2-2-2)

Prerequisites: Education 260, 261, 262, 263, consent of instructor, and admission to Program of Educational Administration.

Analysis of theories and practices in the administration and supervision of the elementary school.

265A-265B-265C. Seminar in Secondary School Administration and Supervision (2-2-2)

Prerequisites: Education 260, 261, 262, 263, consent of instructor, and admission to Program of Educational Administration.

Analysis of theories and practices in the administration and supervision of the secondary school.

266A-266B-266C. Field Experience in Elementary School Administration and Supervision (1-1-1)

Prerequisite: Concurrent registration required in Education 264A, 264B, 264C.

Field experience in the elementary schools. Approval of local school district required in the semester prior to registration.

267A-267B-267C. Field Experience in Secondary School Administration and Supervision (1-1-1)

Prerequisite: Concurrent registration required in Education 265A, 265B, 265C.

Field experience in the secondary schools. Approval of local school district required in the semester prior to registration.

268. Seminar in School Administration and Supervision (3)

Prerequisites: Standard Teaching Credential, Education 260, 261, 262, 263, consent of instructor, and admission to Program of Educational Administration.

School administration and supervision in a specialized field, such as the junior college, a subject field, or designated services. Field experience required. May be substituted for Education 264C or 265C.

280. Legal and Financial Aspects of School District Management (3)

Prerequisites: Standard Teaching Credential, Education 260, 261, 262, 263, and consent of instructor.

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.

281. School-Community Relationships (3)

Prerequisites: Standard Teaching Credential, Education 260, 261, 262, 263, and consent of instructor.

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.

282. School District Personnel Management (3)

Prerequisites: Standard Teaching Credential, Education 260, 261, 262, 263, and consent of instructor.

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.

283. District Curriculum Development, Evaluation and Improvement (3)

Prerequisites: Standard Teaching Credential, Education 260, 261, 262, 263, and consent of instructor.

School District Curricular development from kindergarten through junior college, relationships of the superintendent and central administrative staff to regular staff and supervisory staff.

284. Advanced Seminar in School Administration and Supervision (3)

Prerequisites: Standard Teaching Credential, Education 280, 281, 282, 283, and consent of instructor.

An intensive study of a selected area in school administration and supervision. May be repeated with new content for additional credit to a maximum of nine units. Typical courses in this area are School Law, School Finance, School Supervision, Personnel Procedures.

286A-286B. Seminar in School Building Construction and Utilization (3-3)

Prerequisite: Possession of Standard Administration or Supervision Credential, or consent of instructor. Completion of or concurrent registration in Education 286A is prerequisite to 286B.

School building construction and utilization: the development of new facilities from the planning stage to complete utilization; remodeling.

Special Education

222. The Gifted Child (3)

Prerequisites: Education 110, or 111 and 112.

The abilities and characteristics of the intellectually gifted or talented; related problems of curriculum, teaching, administration and guidance.

270. Seminar in Education of Exceptional Children (3)

Prerequisite: Education 167.

Principles, trends and research in the education of exceptional children.

271. Seminar in Emotionally Disturbed Children and Youth (3)

Prerequisites: Education 162 or 163, and 270.

Advanced study of the theories, principles and practices in working with emotionally handicapped.

272. Seminar in Education of the Gifted (3)

Prerequisites: Education 222 and 270.

Review of studies and investigation in learning and adjustment of the gifted, including assessment, classification, curriculum provisions, and social and emotional adjustment.

273. Seminar in Education of the Mentally Retarded (3)

Prerequisites: Education 168 or 169 and 270.

Review of studies and investigation in learning and adjustment of retarded children including etiology, classification, diagnosis, and assessment.

Special Study and Research

295A-295B. Seminar (3-3)

Prerequisites: Education 211 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.

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

Individual Study. Six units maximum credit. Prerequisite: consent of staff; to be arranged with department chairman and instructor.

299. 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.

Student Teaching and Internship

316. Directed Teaching: Community College (4)

Prerequisites: Admission to Teacher Education and approval of the Higher Education program coordinator. Credit in Education 201 and 223 and concurrent registration in Education 251.

Systematic observation, participation, and teaching under supervision in a community college. Any grade below C is unacceptable for a credential. A weekly seminar or conference is required.

330. Internship (2-6)

Supervised internship experience in counseling 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.

331. Field Work in Counseling (2-6)

Application of concepts and procedures of counseling services in appropriate school of agency setting. Daily observation and practice. Weekly seminar sessions with college staff.

Application to take 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.

332. Practicum in Counseling (3)

Supervised experience in group and individual counseling and career planning. Application to take the course must be made early during the preceding semester. Maximum credit six units applicable on a master's degree.

333. Advanced Seminar and Practicum in Counseling (3-6)

Supervised experience in group and individual counseling and study of problems, issues, and research. Application to take the course must be made early during the preceding semester.

360. Internship in School Administration and Supervision (3 to 6)

Prerequisites: Standard Teaching Credential and consent of instructor.

Internship for prospective school administrators in the public schools. Released time, permission of school district, and preregistration with Coordinator of Program of Educational Administration previous semester required.

371. Directed Internship—Mentally Retarded (4)

Application to take the course should 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.

374. Directed Internship—Speech Correction (4)

Application to take the course should 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 speech correction.

375. Directed Internship for the Instructional Media Specialist (2-6)

Supervised internship in an instructional media center (application must be made during preceding semester.)

Educational Technology and Librarianship

274. Seminar in Educational Technology (3)

Prerequisite: Education 140.

Research reviewed and the findings related to current practices. Relationships of educational technology to educational philosophies and current issues. Recent trends evaluated.

275. Seminar in the Administration of Instructional Media Centers (3)

Prerequisites: Education 140 and 145.

The relationship of school, district, and regional media centers to the educational program. Concepts of leadership and management, review of current practices and policies.

276. Seminar in Instructional Design (3)

Prerequisite: Education 141.

Design and production of self-instructional sequences. Instructional materials design will be investigated. Student entry behavior, objectives, media characteristics and learning will be considered.

277. Reference Materials in Subject Areas (3)

Prerequisite: Education 146.

Reference materials in humanities, social sciences, and sciences with emphasis on their use in the school library media center.

278. Literature for Children (3)

Prerequisite: Education 147.

Literature and other library materials suited to the elementary school student. Standard, classic, and current books for children, aids and criteria for selection. (Formerly numbered Educational Technology and Librarianship 231.)

279. Literature for Adolescents (3)

Prerequisite: Education 147.

Literature and other library materials suited to the high school student. Standard, classic, and current books for the adolescent, aids and criteria for selection. (Formerly numbered Educational Technology and Librarianship 232.)

ENGINEERING

GENERAL INFORMATION

The School of Engineering offers graduate study leading to Master of Science degrees in Aerospace, Civil, Electrical, and Mechanical Engineering. These curriculums 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 curriculum in Engineering, with options in aerospace, civil, electrical and electronic, and mechanical engineering, is 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 THE GRADUATE DIVISION

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, "Admission to the Graduate Division." 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 School 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 graduate, are in addition to the minimum of 30 units for the master's degree in engineering.

To be recommended for classified graduate standing and to be eligible to enroll in 200-numbered courses the student must further satisfy the special requirements of the appropriate field of engineering as stated below.

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 DEGREES

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

Classified Graduate Standing: To be recommended for classified graduate standing in the Graduate Division and to be able to enroll in graduate (200-numbered) courses, a student must satisfy the general requirements for admission to the Graduate Division.

Specific requirements for the Degree: The student's program prepared in conference with his graduate adviser, must satisfy the following requirements:

- Fifteen units of 200-numbered courses in aerospace engineering and/or engineering mechanics including at least nine units in one area of concentration (designated as Group A, Group B, and Group C below) and excluding Engineering 290, 298, 299.
- At least nine additional units of 100- or 200-numbered courses in the School of Engineering or in the departments of mathematics, physics, or astronomy, including Engineering 299 (Plan A), if elected.
- Six elective units of 100- or 200-numbered courses approved by the graduate adviser.

Areas of Concentration in Aerospace Engineering

Group A: Fluid Dynamics

- EM 243. Advanced Fluid Mechanics I (3)
- EM 244. Advanced Fluid Mechanics II (3)
- AE 241. Hydrodynamic Stability (3)
- AE 242. Theory and Aerodynamics of Transonic Flight (3)
- AE 243. Supersonic Flow Theory (3)
- AE 244. Hypersonic Flow Theory (3)
- AE 245. Magnetofluidmechanics (3)

Group B: Engineering Mechanics

- AE 222. Aerothermal Structural Analysis (3)
- EM 221. Theory of Elasticity (3)
- EM 222. Theory of Anisotropic Elasticity (3)
- EM 223. Energy Methods in Mechanics (3)
- EM 225. Theory of Plates (3)
- EM 226. Theory of Shells (3)
- EM 227. Elastic Stability (3)
- EM 233. Theory of Plasticity (3)

Group C: Flight Dynamics

- AE 202. Aeroelasticity (3)
- AE 204. Flight Dynamics—Stability and Control (3)
- AE 205. Flight Dynamics—Theory of Flight Paths (3)
- EM 201. Advanced Dynamics (3)
- EM 203. Theory of Vibrations (3)
- EM 204. Non-linear Vibrations (3)
- EM 205. Theory of Random Vibrations (3)

CIVIL ENGINEERING

Classified Graduate Standing: To be recommended for classified graduate standing in the Graduate Division and to be able to enroll in graduate (200-numbered) courses, a student must satisfy the general requirements for admission to the Graduate Division.

Specific Requirements for the Degree: The student's program, prepared in conference with his graduate adviser, must satisfy the following requirements:

- (a) Eighteen units of 200-numbered courses in civil engineering, excluding Engineering 290, 298, and 299.
- (b) At least six additional units of 100- or 200-numbered courses in the School of Engineering or in the College of Sciences, including Engineering 299, (Plan A), if elected.
- (c) Six elective units of 100- or 200-numbered courses approved by the graduate adviser.

ELECTRICAL ENGINEERING

Classified Graduate Standing: To be recommended for classified graduate standing in the Graduate Division and to be able to enroll in graduate (200-numbered) courses, a student must satisfy the general requirements for admission to the Graduate Division.

Specific Requirements for the Degree: The student's program, prepared in conference with his graduate adviser, must satisfy the following requirements:

- (a) Eighteen units of 200-numbered courses in electrical engineering. A maximum of 6 units of 200-numbered courses in Mathematics or Physics may be used in partial fulfillment of this 18 unit requirement.
- (b) At least six additional units of 100- or 200-numbered courses in the School of Engineering or in the Departments of Mathematics or Physics.
- (c) Six elective units of 100- or 200-numbered courses approved by the graduate adviser.

MECHANICAL ENGINEERING

Classified Graduate Standing: To be recommended for classified graduate standing in the Graduate Division and to be able to enroll in graduate (200-numbered) courses, a student must satisfy the general requirements for admission to the Graduate Division.

Specific Requirements for the Degree: The student's program, prepared in conference with his graduate adviser, must satisfy the following requirements:

- (a) Fifteen units of 200-numbered courses in mechanical engineering excluding Engineering 290, 298, 299, and Mechanical Engineering 297.
- (b) At least nine additional units of 100- or 200-numbered courses in the School of Engineering.
- (c) Six elective units of 100- or 200-numbered courses approved by the graduate adviser.

ASSISTANTSHIPS

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

FACULTY

Dean, School of Engineering: M. P. Capp, M.S.
 Associate Dean, School of Engineering: F. T. Quiett, M.S.
 Chairman, Department of Aerospace Engineering and Engineering Mechanics: J. F. Conly
 Chairman, Department of Civil Engineering: F. E. Stratton
 Chairman, Department of Electrical Engineering: Shu-Yun Chan
 Chairman, Department of Mechanical Engineering: R. A. Fitz
 Graduate Advisers: J. F. Conly, Aerospace Engineering; F. E. Stratton, Civil Engineering; Shu-Yun Chan, Electrical Engineering; R. J. Murphy, Mechanical Engineering.
 Professors: E. G. Bauer, M.S.; R. L. Bedore, M.S.M.E.; M. P. Capp, M.S.; Shu-Yun Chan, Ph.D.; H. H. Chang, Ph.D.; J. F. Conly, Ph.D.; Sangiah Dharmarajan, Ph.D.; R. A. Fitz, Ph.D.; Brage Golding, Ph.D.; P. E. Johnson, M.S.C.E.; V. R. Learned, Ph.D.; M-S. Lin, Ph.D.; C. R. Lodge, Ph.D.; R. D. McGhie, Ph.D.; Charles Morgan, M.S.M.E.; R. J. Murphy, Ph.D.; Iraj Noorany, Ph.D.; Basil Ohnysty, M.S.E.; F. T. Quiett, M.S.; M. V. R. Rao, Ph.D.; W. H. Shutts, Ph.D.; D. L. Skaar, M.S.; S. H. Stone, M.S.E.; F. E. Stratton, Ph.D.
 Associate Professors: F. H. Chou, Ph.D.; G. T. Craig, Ph.D.; A. J. Crooker, Ph.D.; D. M. Eggleston, Ph.D.; N. A. L. Hussain, Ph.D.; G. Krishnamoorthy, Ph.D.; R. L. Mann, M.S.; G. A. Mansfield, Jr., M.S.E.E.; B. S. Narang, Ph.D.; Nicholas Panos, Ph.D.
 Assistant Professors: Michael Andrews, Ph.D.; Keshoolal Bakhru, Ph.D.; H. L. Bilterman, M.A.; W. L. Brown, E.E.; K. W. Drake, Ph.D.; F. J. Harris, M.S.E.E.; M. O. L. Khalifa, Ph.D.; L. R. Marino, Ph.D.; S. S. McElmury, Ph.D.; R. J. Stuart, Ph.D.; D. D. Treadwell, M.S.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS

UPPER DIVISION COURSES IN ENGINEERING

In order to provide the individual graduate student with a maximum of flexibility in pursuing his advanced studies, a maximum of six units in engineering courses other than those listed below may be elected by the student subject to the approval of his graduate adviser and the department chairman.

Aerospace Engineering Programs

- 109. Nonmetallic Materials (3)
- 112. Advanced Network Analysis (3)
- 114. Analysis and Design of Electronic Circuits (3)
- 114L. Electronic Circuits Laboratory (1)
- 134. Communication Principles and Circuits (3)
- 134L. Communication Circuits Laboratory (1)
- 137. Communication Networks (3)
- 140. Principles of Heat Transfer (3)
- 142. Elements of Energy Conversion (3)
- 144. Thermal Environmental Engineering (3)

- 146B. Advanced Machine Design (3)
- 147B. Experimental Vibrations (3)
- 152. Aircraft Propulsion Systems (3)
- 153B. Intermediate Aerospace Flight Mechanics (3)
- 155. Matrix Methods in Aerospace Structures (3)
- 156. Intermediate Dynamics (3)
- 157. Intermediate Fluid Mechanics (3)
- 158. Aircraft Design and Performance (3)
- 167. Control Systems Components (3)
- 167L. Control Systems Components Laboratory (1)
- 168. Feedback Control Systems (3)
- 169L. Feedback Control Systems Laboratory (1)
- 181. Hydrodynamics (3)
- 187B. Methods of Analysis (3)
- 188. Digital Solutions of Engineering Problems (3)
- 189. Automatic Control Systems (3)
- 196B. Advanced Engineering Topics (1-3)

Civil Engineering Programs

- 120B. Structural Analysis II (3)
- 125. Sanitary Engineering (3)
- 128B. Advanced Surveying and Photogrammetry (3)
- 129. Highway Materials (2)
- 155. Matrix Methods in Aerospace Structures (3)
- 156. Intermediate Dynamics (3)
- 196B. Advanced Engineering Topics (1-3)

Electrical Engineering Programs

- 133. Stochastic Signals (3)
- 134. Communication Principles and Circuits (3)
- 134L. Communication Circuits Laboratory (1)
- 135. Modulation Theory (3)
- 139. Microwave Communications (3)
- 139L. Microwave Measurements Laboratory (1)
- 162. Transistor Circuit Analysis (3)
- 164. Solid State Devices (3)
- 168. Feedback Control Systems (3)
- 169. Advanced Feedback Control Systems (3)
- 169L. Feedback Control Systems Laboratory (1)
- 173. Electronic Analog Systems (3)
- 175. Advanced Pulse and Digital Circuits (3)
- 177. Advanced Logic Design and Switching Circuits (3)
- 178. Computer Organization (3)
- 187B. Methods of Analysis (3)
- 188. Digital Solutions of Engineering Problems (3)
- 191. Microwave Devices (3)
- 193. Modern Power Systems I (3)
- 194. Modern Power Systems II (3)
- 196B. Advanced Engineering Topics (3)

Mechanical Engineering Programs

- 109. Nonmetallic Materials (3)
- 142. Elements of Energy Conversion (3)
- 143. Gas Dynamics (3)
- 144. Thermal Environmental Engineering (3)
- 146B. Advanced Machine Design (3)
- 147A. Introduction to Mechanical Vibrations (3)
- 147B. Experimental Vibrations (3)
- 149. Advanced Thermodynamics (3)
- 160A-160B. Principles of Chemical Engineering (3-3)
- 183. Simulation of Engineering Systems (3)
- 187B. Methods of Analysis (3)
- 188. Digital Solutions of Engineering Problems (3)
- 189. Automatic Control Systems (3)
- 196B. Advanced Engineering Topics (3)

GRADUATE COURSES IN AEROSPACE ENGINEERING

200. Seminar (1-3)

Prerequisite: Consent of the graduate adviser and instructor.
Intensive study of selected topics in aerospace engineering, topic to be announced in class schedule. Maximum credit 6 units applicable on a master's degree.

202. Aeroelasticity (3)

Prerequisites: Engineering Mechanics 201 and credit or concurrent registration in Engineering 187B or Mathematics 118B.

Aircraft and missile structures deformed under static and dynamic loads; aeroelastic instability, vibration modes, divergence, loss of control and alteration of lift distribution; introduction to flutter analysis.

204. Flight Dynamics—Stability and Control (3)

Prerequisite: Credit or concurrent registration in Engineering Mechanics 201.
Dynamic stability and control of aerospace vehicles. Stability derivatives, stability of uncontrolled motion, response to actuation of controls, automatic stability and control.

205. Flight Dynamics—Theory of Flight Paths (3)

Prerequisite: Engineering 150B.
Analysis of trajectories of aircraft, missiles, satellites, and spacecraft subjected to uniform or central gravitational forces, aerodynamic forces, and thrust.

211. Aerodynamic Noise (3)

Prerequisite: EM 243.
Jet noise, sonic boom, boundary layer noise, and methods of suppression.

222. Aerothermal Structural Analysis (3)

Prerequisite: Engineering Mechanics 221.
Stress analysis of structures at elevated temperatures.

241. Hydrodynamic Stability (3)

Prerequisite: Engineering Mechanics 243.
Stability of boundary layers, superposed fluids, fluids with thermal gradients, hydromagnetic flow.

242. Theory and Aerodynamics of Transonic Flight (3)

Prerequisite: Aerospace Engineering 243.
Application of engineering principles to the analysis of transonic flight.

243. Supersonic Flow Theory (3)

Prerequisite: Engineering 150B.
Theory of flow at supersonic speeds. Linearized theory, three-dimensional wings in steady flight, slender-body theory, methods of characteristics.

244. Hypersonic Flow Theory (3)

Prerequisite: AE 243.
Two- and three-dimensional hypersonic flows. Hypersonic similarity parameter, hypersonic small-disturbance theory; Newtonian flow, shock-layer, and other methods for blunt bodies.

245. Magnetofluidmechanics (3)

Prerequisite: EM 243.
Study of the effects of interaction of an electromagnetic field with an electrically conducting fluid. Stability, boundary layers, shock waves, and other applications.

250. Principles of Electromagnetic Propulsion (3)

Prerequisite: Engineering 187B.
Basic concepts of plasmas and magnetogasdynamics; developing magnetogasdynamic power plants.

253. Seminar on Boundary Layer Topics (3)

Prerequisite: EM 244.
Boundary layer control, dissociation in boundary layers, ablation in boundary layers.

296. **Advanced Topics in Aerospace Engineering** (2 or 3)
Advanced study in the field of aerospace engineering, topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

297. **Research** (1-3) Cr/NC
Prerequisite: Consent of graduate adviser.
Research in engineering. Maximum credit six units applicable on a master's degree.

GRADUATE COURSES IN CIVIL ENGINEERING

200. **Seminar** (2 or 3)
Prerequisite: Consent of the graduate adviser and instructor.
An intensive study in advanced civil engineering, topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

201. **Advanced Theory of Structures** (3)
Prerequisites: Engineering 120B and Mathematics 118A.
Analysis of statically indeterminate structures based on principles of deflected structures. Approximate analysis of structures under lateral loads for rigid and shear wall structures.

202. **Design of Thin Shell Structures** (3)
Prerequisite: Engineering 120B.
Analysis and design of typical civil engineering thin shell structures.

203. **Plastic Design in Steel** (3)
Prerequisite: Engineering 120B.
Analysis and design of steel framed structures for ultimate load. Connections, secondary design problems, column stability, and repeated loading.

205. **Prestressed Concrete Structures** (3)
Prerequisite: Engineering 120A.
Fundamental concepts of prestressed concrete theory. Design applications to various types of structures.

206. **Matrix Analysis of Structures** (3)
Prerequisite: Engineering 120A.
Development of matrix methods for the analysis of structural systems. Force methods, displacement methods. Application of the digital computer to structural analysis.

207. **Dynamics of Structures** (3)
Prerequisite: Engineering 120A.
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.

208. **Numerical Methods in Structural Engineering** (3)
Prerequisite: Engineering 120B.
Moments and deflections in beam systems; elastic and inelastic stability, columns and beams on elastic supports, vibration of structural systems.

209. **Computer Analysis of Structures** (3)
Prerequisites: Engineering 40 and 120B.
Fundamentals of matrix notation, equilibrium equations, compatibility relations, constitutive equations, joint releases. General algorithm for writing computer programs for space structures, trusses and frames. Use of existing programs such as ICES/STRUDL, NASTRAN, etc., for solving actual problems.

210. **Finite Element Analysis of Structures** (3)
Prerequisites: Engineering 40 and 120A.
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.

220. **Traffic Engineering** (3)
Prerequisite: Engineering 127.
Traffic characteristics and studies. Control and regulation of street and highway traffic. Parking facilities, mass transportation, traffic engineering administration.

222. **Mass Transit Engineering** (3)
Prerequisite: Engineering 126.
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.

230. **Open Channel Hydraulics** (3)
Prerequisite: Engineering 123.
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.

231. **Engineering Hydrology** (3)
Prerequisite: Engineering 123.
Measurement and interpretation of precipitation, evapotranspiration, stream flow and groundwater flow; hydrologic methodology and applications.

232. **Fluvial Hydraulics** (3)
Prerequisite: Engineering 123.
Characteristics of rivers; mechanics of sediment transport; hydraulics and design of alluvial channels; channel stability; model studies.

235. **Water Quality Engineering** (3)
Prerequisites: Engineering 123 and 125.
Development of water quality criteria. Survey of current methods of water treatment, wastewater treatment and water renovation. Economic considerations of water quality management.

236. **Water Quality Processes I** (3)
Two lectures and three hours of laboratory.
Prerequisite: Engineering 125.
Theoretical and laboratory study of the chemical and microbiological processes which govern modern water and wastewater treatment.

240. **Advanced Soil Mechanics** (3)
Prerequisite: Engineering 122.
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.

241. **Advanced Foundation Engineering** (3)
Prerequisite: Engineering 124.
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.

242. **Seepage and Earth Dams** (3)
Prerequisite: Engineering 122.
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.

243. **Experimental Soil Mechanics** (2)
One lecture and three hours of laboratory.
Prerequisite: Credit or concurrent registration in CE 240.
Techniques of laboratory testing for the determination of the engineering properties of soils. Applications in foundation engineering, earth dams, highways, airports and underwater soil engineering.

244. Soil Structure Interaction (3)

Prerequisite: Credit or concurrent registration in CE 240.
Analysis of stresses and deformations of structural elements supported by soil. Analysis of pile foundations subject to lateral, vertical and combined loads by numerical and finite element methods. Solutions of slabs and mat foundations.

280. 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.

281. 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.

282. 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.

285. 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.

296. Advanced Topics in Civil Engineering (2 or 3)

Advanced study in the field of civil engineering, topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

297. Research (1-3) Cr/NC

Prerequisite: Consent of graduate adviser.
Research in engineering. Maximum credit six units applicable on a master's degree.

GRADUATE COURSES IN ELECTRICAL ENGINEERING

200. Seminar (1-3)

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

201. Seminar in Electromagnetic Systems (1-3)

An intensive study in electromagnetic systems. Maximum credit six units applicable on a master's degree.

202. Seminar in Electronic Design (1-3)

An intensive study in electronic design. Maximum credit six units applicable on a master's degree.

203. Seminar in Digital Systems (1-3)

An intensive study in digital systems. Maximum credit six units applicable on a master's degree.

204. Seminar in Feedback Control Systems (1-3)

An intensive study in feedback control systems. Maximum credit six units applicable on a master's degree.

205. Seminar in Communications Systems (1-3)

An intensive study in communication theory and systems. Maximum credit six units applicable on a master's degree.

206. Seminar in Computer Engineering (1-3)

Intensive study in computer engineering topics. Maximum credit six units applicable on a master's degree.

210. Linear System Analysis (3)

Prerequisites: Engineering 111 and credit or concurrent registration in Engineering 187B or Mathematics 118B.

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.

211. Synthesis of Active and Passive Networks (3)

Prerequisite: EE 210.

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.

214. Computer-aided Network Analysis and Design (3)

Prerequisites: Engineering 112 or equivalent Computer-aided Circuit Design, Electrical Engineering 210, and Fortran Programming.

Approximation theory, device modeling, topological analysis of networks, applications of general purpose, computer programs, passive and active filter design, circuit optimization.

216. Noise in Electrical Devices (3)

Prerequisite: Engineering 162.

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.

220. Feedback Control Systems (3)

Prerequisite: Engineering 168.

Analysis and synthesis of feedback control systems using feedback compensation. Multiple-loop control systems; a-c feedback control systems; optimization.

222. Sampled-Data Systems (3)

Prerequisite: Engineering 168.

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. (Formerly entitled: Non-Linear Systems.)

225. State Space Analysis of Control Systems (3)

Prerequisite: Engineering 168.

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.

231. Integrated Circuits (3)

Prerequisite: Engineering 174.

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.

232. Linear Semiconductor Circuit Design (3)

Prerequisite: Engineering 162.

Field effect transistors and circuits; quantitative variable nature of transistor parameters; differential and chopper stabilized dc amplifiers; high efficiency switching mode power amplifiers, converters and inverters; noise, reliability considerations and high speed switching.

234. Semiconductor RF Circuit Design (3)

Prerequisite: Engineering 134.

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.

240. Antennas and Propagation (3)

Prerequisite: Engineering 139.

Impedance characteristics and radiation patterns of thin linear antenna elements; field intensity calculations. Tropospheric and ionospheric propagation: propagation anomalies.

242. Microwave Networks (3)

Prerequisite: Engineering 139.

Equivalent circuits for waveguide discontinuities developed on the basis of mode theory, linearity, reciprocity, and symmetry. Application of general network theory to wave guides, cavity resonators and antennas.

246. Radar Systems (3)

Prerequisite: Engineering 139.

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.

250. Quantum Electronics (3)

Prerequisite: Engineering 164.

Quantum mechanics for engineers concerned with its application to solid-state devices. Basic principles and engineering applications of lasers.

252. Optical Communications (3)

Prerequisite: EE 250.

Fundamentals of electro-optical technology from ultraviolet through infrared. Characteristics of thermal and laser radiation including generation, transmission, detection, data processing and display.

260. Modern Communication Theory I (3)

Prerequisite: Engineering 133 or Mathematics 134.

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 (Formerly offered under Electrical Engineering 200, Seminar in Modern Communication Theory I.)

261. Modern Communication Theory II (3)

Prerequisite: Electrical Engineering 260.

Estimation of signal parameters in noise. Estimation of spectral densities and correlation functions. Intersymbol interference. Adaptive and feedback systems.

263. Coding Theory (3)

Prerequisite: Engineering 133.

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.

264. Digital Processing of Signals (3)

Prerequisite: Engineering 135.

Theory of digital signal processing. Emphasis on digital filters, discrete spectrum analysis, and windows. Fast Fourier transforms. Generalized linear filtering; Cepstral analysis and deltic loops.

270. Microprogramming (3)

Prerequisite: Engineering 178.

Fundamentals of microprogramming and read only storage technology as related to the design of digital computers.

271. Computer Input/Output Devices and Systems (3)

Prerequisite: Engineering 178.

Control programs, interrupt procedures, I/O programming techniques, interfaces, channels, magnetic recording techniques, I/O devices.

272. Minicomputer Design and Applications (3)

Prerequisite: Engineering 178.

Current minicomputer architectures. CPU-oriented and universal bus-oriented machines. (Formerly offered under Electrical Engineering 203, Seminar in Digital Computing Systems (Minicomputers).)

276. Fault Tolerant Computing (3)

Prerequisite: Engineering 178.

Triple modular redundancy, standby sparing, quadded logic, parity and residue checking of computer systems and subsystems. Diagnostic programming and fault testing fundamentals.

277. Topics in Logic Design (3)

Prerequisite: Engineering 177.

Review of current technical periodic literature in logic design and digital systems. Stress on specialized synthesis techniques and recent theoretical developments.

278. Electronic Digital Systems (3)

Prerequisite: Engineering 178.

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. (Formerly numbered Electrical Engineering 236.)

296. Advanced Topics in Electrical Engineering (2 or 3)

Advanced study in the field of electrical engineering, topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

297. Research (1-3) Cr/NC

Prerequisite: Consent of graduate adviser.

Research in engineering. Maximum credit six units applicable on a master's degree.

GRADUATE COURSES IN ENGINEERING MECHANICS

200. Seminar (2 or 3)

Advanced study of, or within, one phase of engineering mechanics, such as elasticity, plasticity, rheology, and micromeritics; buckling, vibration, and stability phenomena; hydrodynamics and magnetohydrodynamics; incompressible, compressible, and non-newtonian flow. May be repeated with new content. Maximum credit six units applicable on a master's degree.

201. Advanced Dynamics (3)

Prerequisites: Engineering 50B and 187A or Mathematics 118A.

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.

203. Theory of Vibrations (3)

Prerequisites: Engineering Mechanics 201 and credit or concurrent registration in Engineering 187B or Mathematics 118B.

Linear and non-linear periodic phenomena as applied to discrete systems and continuous media with application to physical problems.

204. Theory of Nonlinear Vibrations (3)

Prerequisite: EM 201.

Analysis of discrete systems with one or more degrees of freedom. Phase plane, harmonic balance, and other methods. Stability.

205. Theory of Random Vibrations (3)

Prerequisite: EM 203.

Random processes with applications to vibration of discrete and continuous systems.

210. Continuum Mechanics (3)

Prerequisite: Engineering 187B or Mathematics 118B.

Equations for the stress, deformation, and motion in a continuous medium; application in fluid and solid mechanics.

221. Theory of Elasticity (3)

Prerequisites: Engineering 116 and credit or concurrent registration in Engineering 187B or Mathematics 118B. Engineering 186 is recommended.

Analysis of stress and strain: Stress-strain relations; the equations of elasticity; uniqueness theorem; compatibility conditions; flexure and torsion. Vector and tensor notation will be used.

222. Theory of Anisotropic Elasticity (3)

Prerequisite: EM 221.

Generalized Hooke's law, transformation of elastic constants, laminated constitutive equations, laminated plates and shells, torsion of anisotropic bodies, design criteria for combined loading.

223. Energy Methods in Mechanics (3)

Prerequisite: EM 221.

Variational energy principles applied to the dynamics of rigid bodies, analysis of elastic frames; theories of plates and shells, buckling, and vibrations.

225. Theory of Plates (3)

Prerequisite: Engineering Mechanics 221.

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.

226. Theory of Shells (3)

Prerequisite: Engineering Mechanics 221.

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.

227. Theory of Elastic Stability (3)

Prerequisite: EM 221.

Stability of elastic systems. Differential equations of stability by summation of forces and movements, and by the variational method. Applications.

233. Theory of Plasticity (3)

Prerequisite: Engineering Mechanics 221.

Inelastic stress-strain relations. Solutions to engineering problems with ideally plastic, strain-hardening, and visco-elastic materials.

243. Advanced Fluid Mechanics I (3)

Prerequisites: Engineering 115 and credit or concurrent registration in Engineering 187B or Mathematics 118B.

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.

244. Advanced Fluid Mechanics II (3)

Prerequisite: Engineering Mechanics 243.

A continuation of Engineering Mechanics 243. Further work in laminar and turbulent flow, and boundary layer theory. Diffusion. Applications to engineering problems.

296. Advanced Topics in Engineering Mechanics (2 or 3)

Advanced study in the field of engineering mechanics, topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

297. Research (1-3) Cr/NC

Prerequisite: Consent of graduate adviser.

Research in engineering. Maximum credit six units applicable on a master's degree.

GRADUATE COURSES IN MECHANICAL ENGINEERING

200. Seminar (2 or 3)

Prerequisite: Consent of the graduate adviser and instructor.

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

220A-220B. Mechanical Vibrations (3-3)

Prerequisites: Engineering 147B, 183, and 187B.

Topics in vibration relating to mechanical design such as non-linear vibrations, distributed mass systems, random vibrations, mobility analysis, isolator design.

221. Stress Analysis (3)

Prerequisites: Engineering 146B and 187B.

Topics in applied elasticity, advanced study of the resistance of materials and experimental stress analysis. Failure theories, energy methods, limit design, theory of plates and shells. Photoelasticity, brittle lacquers, strain gages, and analogs in determining static, dynamic and residual stress distributions.

222A-222B. Synthesis of Machines (3-3)

Prerequisites: Engineering 183 and 187B.

Problems in mechanical design involving synthesis of mechanisms wherein displacement, velocity, acceleration and jerk are paramount considerations.

224. Fluid Power and Control Systems (3)

Prerequisite: Engineering 189.

Analysis of dynamic performance of physical systems such as pneumatic, hydraulic and hot-gas. Transient forces and valve instability. Servo characteristics.

231. Advanced Science of Materials (3)

Prerequisite: Engineering 107.

Structure and physical properties of solids. Imperfections in materials and their effect on various properties. Elasticity, plasticity, and fracture of metals related to atomic and crystal structure.

232. Physical Metallurgy for Engineers (3)

Prerequisites: Engineering 107 and 108.

Fundamentals of crystallography, imperfections, alloying and deformation. Composition, temperature, prior thermal and mechanical treatment on structure of metal; relationship of structure to mechanical properties.

233. Mechanical Metallurgy for Engineers (3)

Prerequisites: Engineering 107 and 108.

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.

234. High Temperature Materials (3)

Prerequisite: Engineering 107.

Behavior of metals, cermets, and nonmetallic materials at high temperatures. Effect of environment and service conditions on composition, structure, and physical properties.

246. Advanced Topics in Automatic Controls (3)

Prerequisites: Engineering 187A and 189.

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.

250. Analytical Thermodynamics (3)

Prerequisite: Engineering 187A.

Advanced concepts of macroscopic thermodynamics. Application of thermodynamics to special systems.

260. Conduction Heat Transfer (3)

Prerequisites: Engineering 140 and 187B.

Conduction heat transfer, multidimensional conduction processes, transient analysis.

262. Convection Heat Transfer (3)

Prerequisite: ME 274.

Convection heat transfer. Advanced theories of forced and free convection.

264. Radiation Heat Transfer (3)

Prerequisites: Engineering 140 and 187B.

Radiation heat transfer. Solid body and gaseous radiation.

267. Cryogenic Engineering (3)

Prerequisite: Engineering 148.

Analysis of low-temperature processes and equipment. Physical properties of structural and other materials used in producing, maintaining, and using low temperatures.

270. Gas Dynamics (3)

Prerequisites: Engineering 143 and 187B.

Further consideration of the flow of compressible fluids in conduits. Shock fronts, unsteady flow and real gases.

274. Boundary Layers in Internal Flows (3)

Prerequisites: Engineering 140 and 187B.

Conservation laws applied to boundary layers in viscous, heat conducting fluids; analysis of the boundary layer equations; applications to internal flows.

276. Bearing Design and Lubrication (3)

Prerequisite: Engineering 187B.

Friction and wear of materials. Boundary and thick film lubrication. Design of incompressible and compressible fluid bearings; rolling-element bearings.

280. Aircraft and Missile Propulsion (3)

Prerequisites: Engineering 142, 143, and 187B.

Analysis of ideal gas turbine cycles. Principles of regeneration, reheat and inter-cooling. Thermodynamic analysis and performance of turbojet engines, ramjet engines and rocket motors. Rocket jet propellant systems. Dynamics of rocket propulsion free of gravity and air resistance.

281. Propulsion Systems for Spacecraft (3)

Prerequisites: Engineering 148 and 187B.

The physical and chemical laws that govern the performance, selection and design of non air-breathing propulsion systems for space applications.

284. Theory of Turbomachines (3)

Prerequisites: Engineering 143 or 150A.

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.

285. Direct Energy Conversion (3)

Prerequisites: Engineering 149 or ME 250; and Engineering 187A.

Application of physical and chemical laws to the analysis, design, and evaluation of various direct energy conversion systems.

296. Advanced Topics in Mechanical Engineering (2 or 3)

Advanced study in the field of mechanical engineering, topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

297. Research (1-3) Cr/NC

Prerequisite: Consent of graduate adviser.

Research in engineering. Maximum credit six units applicable on a master's degree.

GRADUATE COURSES IN ENGINEERING

290. Problem Analysis (3)

Prerequisite: Consent of graduate adviser.

Review of methods for investigation and reporting of data. Consideration of problems in preparation of project or thesis.

295. Seminar in Environmental Engineering (3)

Prerequisite: Engineering 192A, 192B, or 192C.

Environmental problems including an intensive investigation of selected topics.

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

Individual study. Three units maximum credit.

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

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.

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 THE GRADUATE DIVISION

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 student must have a bachelor's degree in home economics, or a related field, and meet the prerequisites of the courses selected. If a student's undergraduate preparation is deemed insufficient, he will be required to complete specified courses in addition to the minimum of 30 units required for the master's degree in Home Economics.

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 which includes at least 24 units from courses listed below as acceptable on master's degree programs in home economics, of which at least 15 units must be in 200-numbered courses in home economics, including Family Studies and Consumer Sciences 290, Bibliography and Methods of Research, and Family Studies and Consumer Sciences 299, Thesis.

ASSISTANTSHIPS

Graduate teaching assistantships and graduate non-teaching 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.

FACULTY

Director, Family Studies and Consumer Sciences: D. M. Fulcomer, Ph.D.
Graduate Adviser: D. M. Fulcomer.
Credential Adviser: Kathleen J. Martin
Professors: Nona H. Cannon, Ed.D.; Helen L. Dorris, M.S.; D. M. Fulcomer, Ph.D.; Rose M. Somerville, Ed.D.; Alice E. Thomas, M.A.
Associate Professors: Zoe E. Anderson, Ph.D.; Barbara E. Gunning, Ph.D.; Quenton Lee Price, Ph.D.
Assistant Professors: Wilma T. Boggs, M.S.; Shirley O. Breeden, M.S.; Mary E. Dickerson, M.S.; Kaye Hambleton, M.A.; Nancy B. Kwallek, M.S.; Kathleen J. Martin, M.S.; Mary F. Martin, M.S.; Thair S. Milne, M.S.; Theresa A. Pernich, Ph.D.; Cherie Schupp, Ph.D.; Rebecca A. Wertz, M.S.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN HOME ECONOMICS

UPPER DIVISION COURSES

- | | |
|--|---|
| 118. Clothing Design: Flat Patterns (3) | 153. Supervised Field Work in Home Management (3) |
| 119. Textile Analysis and Testing (3) | 170. Human Development: Infancy (3) |
| 120. Clothing and Human Behavior (3) | 175. The Nursery School Program (3) |
| 121. Clothing Design: Draping (3) | 175L. Laboratory Experiences in Nursery School (1) |
| 122. Clothing Design: Historical Influences (3) | 177. Administration and Supervision in Nursery Schools (3) |
| 136. Family Study (3) | 179. Advanced Child Study (3) |
| 140. Family Financial Problems and Practices (3) | 190. Advanced Studies in Family Studies and Consumer Sciences (2-6) |
| 145. Family Housing (3) | |

GRADUATE COURSES

Foods and Nutrition

200. Seminar: Foods and Nutrition (3)

Prerequisites: Family Studies and Consumer Sciences 100 and 102.

An intensive study of research in technological advances in the fields of foods and nutrition, with emphasis on professional organizations and ethical procedures.

203. Advanced Readings in Food Technology (3)

Prerequisite: Family Studies and Consumer Sciences 100.

Reading and analysis of selected research in food technology.

204. Advanced Readings in Nutrition (3)

Prerequisite: Family Studies and Consumer Sciences 102.

Reading and analysis of selected research in nutrition.

205. Assay for Nutrients in Foodstuffs and Tissues (3)

Two lectures and three hours of laboratory.

Prerequisites: Family Studies and Consumer Sciences 100 and 102.

Determinations of energy values, organic nutrients, and minerals in foodstuffs and tissues by chemical, biological, and microbiological methods.

206. Physiological Bases of Diet Therapy (3)

Prerequisite: Family Studies and Consumer Sciences 106. Chemistry 115B or 116B 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.

207. Child Nutrition (3)

Two lectures and three hours of laboratory.

Prerequisite: Family Studies and Consumer Sciences 102.

Nutrition, health and biochemical growth in children. Conditions leading to malnutrition, the prevention and correction of same.

General Home Economics

215. Seminar: Clothing (3)

Prerequisites: Nine units in the area of clothing.

Selected problems in the field of clothing.

281. Seminar: Home Economics Education (3)

Prerequisites: 18 units in Family Studies and Consumer Sciences and consent of instructor.

The study and evaluation of home economics research and philosophical principles which have implications for the secondary homemaking teacher.

282. Current Development in Home Economics Education (3)

Prerequisites: Education 121C 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 and post high school programs.

Family Studies and Child Development

231. Family Life Education (3)

Prerequisite: Three units in Family Relations.
Methods and materials in family life education for schools, colleges, churches, and social agencies.

234. Seminar: Marriage Adjustment (3)

Prerequisite: Family Studies and Consumer Sciences 135.
Individual study, seminar reports, and group discussion of selected topics in marriage adjustment.

240. Seminar in Family Economics (3)

Prerequisite: Upper division course in family finance.
Personal financial practices under changing conditions. Review of literature in family financial management.

270. Seminar: Child Development and Guidance (3)

Prerequisite: Consent of instructor.
Emphasis on personality theories and on research and clinical findings relevant to a systematic study of human development and the guidance of children.

271. Advanced Readings in Human Development (3)

Prerequisites: Family Studies and Consumer Sciences 70 and 179.
Analysis of selected research in human development.

290. Bibliography and Methods of Research (3)

Prerequisite: 12 upper division or graduate units in Family Studies and Consumer Sciences.

Reference materials, bibliography, investigation of current research in home economics, processes of thesis topic selection, and techniques of scholarly writing.

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

Prerequisite: Consent of staff; to be arranged with the Director and instructor.
Individual study. Six units of maximum credit.

299. 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.

FRENCH

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 THE GRADUATE DIVISION

The student must satisfy the general requirements for admission to the Graduate Division with classified graduate standing, as described in Part Three of this bulletin. An undergraduate major in French including 24 upper division units must have been completed, at least six units of which must have been in a survey course in French 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 French given by the Department of French and Italian.

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 17 units must be in 200-numbered courses in French, including French 299, Thesis, for those following Plan A.

Students, with the consent of the graduate staff, may elect Plan A, which includes French 299, Thesis; or Plan B, which includes a comprehensive examination in lieu of the thesis.

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 Chairman of the Department.

FACULTY

Chairman, Department of French and Italian Languages and Literatures: N. F. Norman, Ph.D.

Credential Adviser: Hilda Nelson

Graduate Adviser: Elizabeth R. Hanchett

Professors: S. L. Max, Ph.D.; L. N. Messier, Ph.D.; Hilda B. Nelson, Ph.D.; Guerard Piffard, Ph.D.; Gian-Angelo Vergani, Dottorato in Lettere

Associate Professors: Janis M. Glasgow, Ph.D.; Elizabeth R. Hanchett, doctorat d'Université de Paris; Luisa Vergani, Dottorato in Lettere

Assistant Professors: A. G. Branan, Ph.D.; Jeanne S. Ghilbert, M.A.; Dennis Palmer, A.B.; G. L. Woodle, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN FRENCH

UPPER DIVISION COURSES

- | | |
|--|---|
| 105. Nineteenth Century French Theatre (3) | 114. Twentieth Century French Novel (3) |
| 107A-107B. Eighteenth Century French Literature (3-3) | 115. Twentieth Century French Theatre (3) |
| 110A-110B. Nineteenth Century French Novel (3-3) | 117. Renaissance and Baroque Literature (3) |
| 111A-111B. Seventeenth Century French Literature (3-3) | 148. Introduction to French Philology (3) |
| 112A-112B. French Poetry (3-3) | 150. Advanced Phonetics and Diction (3) |

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

201. History of the French Language (3)
Prerequisite: 18 units of upper division French.
The history of the French language from the beginnings through the sixteenth century.
202. Medieval French Literature (3)
Prerequisite: 18 units of upper division French and French 201.
Readings in the principal monuments, trends and genres of medieval French literature from the beginnings through Francois Villon.
203. Literature of the French Renaissance (3)
Prerequisites: 18 units of upper division French and French 201.
Literature and thought of the 16th century as represented in the works of Rabelais, Montaigne, Ronsard, Du Bellay, etc.
230. Methods of Literary Criticism (3)
Prerequisite: 18 units of upper division French.
Theory and practice of various traditional and modern critical approaches to specific literary texts.
250. Seminar in Seventeenth-Century Literature (3)
Prerequisite: 18 units of upper division French.
Directed research in the works of a representative author, or in a genre or movement.
Maximum credit six units applicable on a master's degree.
260. Seminar in Eighteenth-Century Literature (3)
Prerequisite: 18 units of upper division French.
Directed research in the works of a representative author, or in a genre or movement.
Maximum credit of six units applicable on a master's degree.
270. Seminar in Nineteenth-Century Literature (3)
Prerequisite: 18 units of upper division French.
Directed research in the works of a representative author, or in a genre or movement.
Maximum credit six units applicable on a master's degree.
280. Seminar in Twentieth Century French Literature (3)
Prerequisite: 18 units of upper division French.
Directed research in the works of a representative author, genre or movement.
Maximum credit six units applicable on a master's degree.

284. Topics in French Literature (3)

Prerequisite: 18 units of upper division French.
Study of a movement, genre, theme, myth or individual author. May be repeated with new content. Maximum credit six units applicable on a master's degree.

290. Research and Bibliography (3)

Prerequisite: 18 units of upper division 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.

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

Prerequisite: 18 units of upper division French and consent of staff; to be arranged with department chairman and instructor.
Individual study. Maximum credit three units applicable on a master's degree.

299. 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.

GEOGRAPHY

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. An emphasis in conservation of environmental quality within the geography degree program is also available. 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 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.

ADMISSION TO THE GRADUATE DIVISION

All students must satisfy the general requirements for admission to the Graduate Division with classified standing as described in Part Three of this bulletin under Admission to the Graduate Division. In addition, candidates whose preparation is deemed insufficient by the 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 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.

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 200-numbered courses, including Geography 205 and 210.

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 299 as part of the outlined course program. If Plan B is elected, the student must complete two research papers, a minimum of 3 units in Geography 297, 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 24 units of 200-numbered courses.
- (2) Geography 205, Geographic Research and Techniques of Presentation (3).
- (3) At least twelve units to be taken from the courses listed below:
 Geography 200A, Seminar in Advanced Physical Climatology (3)
 Geography 250, Seminar in Systematic Geography (3)
 (May be taken only if topical offering is approved by the student's adviser.)
 Geography 255, Seminar in Urban and Settlement Geography (3)
 Geography 270, Seminar in Theory of Resource Use (3)

Geography 272, Seminar in Environmental Quality (3)
 Geography 275, Seminar in Recreational Geography (3)
 Geography 288, Seminar in Remote Sensing of the Environment (3)

- (4) At least nine units to be taken from one of the following sequences:

- (a) Biology 240, Seminar in Terrestrial Ecology (2)
 Biology 241, Seminar in Aquatic Ecology (2)
 Biology 242, Population and Community Ecology (3)
 Biology 243, Physiological Ecology (3)
 Biology 244, Physical Aspects of Ecology (3)
 Biology 245, Aquatic Ecology (3)
 Biology 246, Behavioral Ecology (3)
 Biology 250, Biogeography (3)
 Biology 261, Seminar in Environmental Radiation (2)
- (b) Economics 105, Welfare Economics (3)
 Economics 208, Development Planning (3)
 Economics 231, Seminar in Public Finance (3)
 Economics 238, Seminar in Urban and Regional Economics (3)
 Economics 272, Seminar in Utilities and Water Resources (3)
- (c) Public Administration 201, Scope and Method of Public Administration (3)
 Public Administration 243, Science Technology and Public Policy (3)
 Public Administration 250, Management of Urban Governments (3)
 Public Administration 255, The Metropolitan Area (3)
 Public Administration 260, Administration and Public Policy Development (3)
- (d) Sociology 151, Research Methods in Demography (3)
 Sociology 157, Urban Sociology (3)
 Sociology 250, Seminar in the Community (3)
 Sociology 270, Seminar in Population and Demography (3)
 Sociology 275, Directed Readings in Population and Demography (3)

- (5) Three units to be selected from:

Geography 296, Geographic Internship (3)
 Geography 298, Special Study (3)
 Biology 298, Special Study (3)
 Economics 298, Special Study (3)
 Public Administration 298, Special Study (3)
 Sociology 298, Special Study (3)

- (6) Three units in Geography 299, Thesis (Plan A), or Geography 297, Research (Plan B)

ASSISTANTSHIPS

Graduate teaching assistantships and graduate non-teaching assistantships in geography are available to a limited number of qualified students. Application blanks and additional information may be secured from the Chairman of the Department.

FACULTY

Chairman, Department of Geography: E. A. Keen, Ph.D.
 Graduate Adviser: E. J. C. Kiewiet de Jonge
 Professors: D. I. Eidemiller, Ph.D.; W. A. Finch, Jr., Ph.D.; N. H. Greenwood, Ph.D.; E. A. Keen, Ph.D.; E. J. C. Kiewiet de Jonge, Ph.D.; B. R. O'Brien, Ph.D.; J. W. Taylor, Ph.D.; R. D. Wright, Ph.D.; C. C. Yahr, Ph.D.
 Associate Professors: J. D. Blick, Ph.D.; H. E. Heiges, Ph.D.; W. A. Johnson, Ph.D.; P. R. Pryde, Ph.D.; I. E. Quastler, Ph.D.; F. P. Stutz, Ph.D.
 Assistant Professors: A. A. Colombo, M.A.; L. R. Ford, Ph.D.; B. E. Fredrich, M.A.; E. C. Griffin, Ph.D.; D. S. McArthur, Ph.D.

**COURSES ACCEPTABLE ON MASTER OF ARTS DEGREE
PROGRAMS IN GEOGRAPHY**

UPPER DIVISION COURSES

- | | |
|--|---|
| 100A. Physical Climatology (3) | 155. Urban Location and Settlement Geography (3) |
| 100B. Regional Climatology (3) | 156. Internal Spatial Structure of Cities (3) |
| 101. Climatic Physiography (3) | 157. Quantitative Methods of Urban Analysis (3) |
| 102. Structural Physiography (3) | 158. Transportation Geography (3) |
| 103. Fluvial and Eolian Physiography (3) | 159. Urban Transportation Geography (3) |
| 104. Coastal and Submarine Physiography (3) | 160. Advanced Transportation Geography (3) |
| 105. Geography of Soils (3) | 171. Conservation of Natural Resources (3) |
| 106. Geography of Soils Laboratory (1) | 173. Geography as Human Ecology (3) |
| 107. Geography of Natural Vegetation (3) | 174. Water Resources (3) |
| 110. Historical Geography (3) | 175. Geography of Recreational Land Use (3) |
| 119. Geography of San Diego County (3) | 176. Geography of Marine Resources (3) |
| 120. California (3) | 180. Field Geography (3) |
| 121. United States (3) | 181A. Maps and Graphic Methods (3) |
| 122. Canada and Alaska (3) | 181B. Advanced Cartography (3) |
| 123. Middle America (3) | 181C. Automated Cartography (3) |
| 124. South America (3) | 182. Use and Interpretation of Aerial Photographs (3) |
| 125. North Africa and the Near East (3) | 183. Map Investigation (3) |
| 126. Europe (3) | 184. Field Geography of the Arid Southwestern United States (3) |
| 127. Soviet Union (3) | 185. Quantitative Methods in Geographic Research (3) |
| 129. Oceania (3) | 187. Remote Sensing of the Environment (3) |
| 130. Central and Southern Africa (3) | 188. Advanced Remote Sensing of the Environment (3) |
| 131. Eastern Asia (3) | |
| 133. Southeastern Asia (3) | |
| 134. Southern Asia (3) | |
| 150. Political Geography (3) | |
| 151. Economic Geography: Primary Production (3) | |
| 152. Industrial Geography (3) | |
| 153. Location Analysis and Geographic Theory (3) | |

GRADUATE COURSES

- 200A. Seminar in Advanced Physical Climatology (3)**
Prerequisites: Geography 100A and approval of the departmental advisory committee.
Characteristics of climatic elements for a selected area or climatic type, and a statistical analysis of the elements studied. Maximum credit six units applicable on a master's degree.
- 200B. Seminar in Advanced Regional Climatology (3)**
Prerequisites: Geography 100B and approval of the departmental advisory committee.
Selected regions. An interpretation of regional variations of world climatic patterns. Maximum credit six units applicable on a master's degree.
- 205. 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. (Formerly numbered Geography 295.)

210. History of Geography (3)

Prerequisite: Approval of graduate adviser.
The evolution of concepts concerning the nature, scope, and methodology of geography.

220. 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. Maximum credit six units applicable on a master's degree.

250. 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. Maximum credit six units applicable on a master's degree.

251. Seminar in Physiography (3)

Prerequisite: One course in physiography and consent of instructor.
Directed study and research on selected topics in physiography.

255. Seminar in Urban and Settlement Geography (3)

Prerequisite: Geography 155 or 156 and approval of the departmental advisory committee.
Selected topics in urban geography. Field reconnaissance in the local urban "laboratory" is essential part of the research undertaken.

256. Seminar in Location of Urban Activities (3)

Prerequisites: Geography 156 and approval of the departmental advisory committee.
Systematic analysis of the locations and linkages of activities in urban areas.

258. Seminar in Geography of Transportation (3)

Prerequisite: Geography 158.
Directed study and research on selected topics in transportation geography.

259. Seminar in Urban Transportation (3)

Prerequisite: Geography 159 and approval of the departmental advisory committee.
Intensive study and research on topics in urban transportation geography. Emphasis on transport innovations and their impact on urban spatial patterns.

260. Seminar in Spatial Structure of Transport Systems (3)

Prerequisites: Geography 158 and approval of the departmental advisory committee.
Transportation systems and networks, optimum route patterns and commodity flows.

270. Seminar in Theory of Resource Use (3)

Prerequisites: Geography 7 and three units of upper division geography, or 170, or 171, and the approval of the departmental advisory committee.
Selected theories in resources use. Emphasis on conflicts between resource systems and conservation philosophy.

272. Seminar in Environmental Quality (3)

Prerequisites: Geography 7 and three units of upper division geography, or 170, and the approval of the departmental advisory committee.
Geographic factors affecting environmental quality, such as congestion, crowding, and pollution.

275. Seminar in Recreational Geography (3)

Prerequisites: Geography 175 and consent of departmental advisory committee.
Geography 7 or 170 and 171 are recommended.
Design and management of recreational areas. Emphasis on man-land relationship in natural parks of San Diego County.

280. Techniques of Field Research (3)

Three lectures and three hours of laboratory.

Prerequisites: Geography 180 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.

281. Seminar in Cartography (3)

Prerequisites: One course in cartography and approval of departmental advisory committee.

Use of the map in geographic analysis. Problems and recent trends in cartography. Maximum credit six units applicable on a master's degree.

288. Seminar in Remote Sensing of the Environment (3)

Prerequisite: Geography 187.

The use of remote sensing techniques in the study of man's cultural and biophysical environment.

296. Geographic Internship (3)

Prerequisite: Approval of the departmental graduate advisory committee, and consent of the 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.

297. Research (1-3) Cr/NC

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

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

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

Individual study. Six units maximum credit.

299. 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.

GEOLOGY

GENERAL INFORMATION

The Department of Geology, in the College of Sciences, offers graduate study leading to the Master of Science degree in Geology. The curriculum provides a wide variety of advanced 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-around field work, place San Diego State University in a highly favorable location for graduate work in the geological sciences.

ADMISSION TO THE GRADUATE DIVISION

All students must satisfy the general requirements for admission to classified graduate standing as described in Part Three of this bulletin under Admission to the Graduate Division. In addition, the student must have an over-all grade point average of at least 2.75 in the last 60 units of his undergraduate work and must have a preparation in geology, mathematics, chemistry, and physics at least equivalent to the minimum required for the bachelor's degree in geology at San Diego State University.

ADVANCEMENT TO CANDIDACY

In addition to meeting the requirements for advancement to candidacy as described in Part Three of this bulletin, students must pass the Graduate Record Examination in Geology (Advanced Test) and have completed in undergraduate or graduate work at least one course in each of the following: field geology, paleontology, stratigraphy, structural geology, petrography, and either geochemistry or geophysics.

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. 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 200-numbered courses in geology to include 297 (3 units), and 299, Thesis, and six units of upper division or graduate electives approved by his departmental adviser or, if Plan B is elected, 18 units of 200-numbered courses and 12 units of upper division or graduate electives. Geology 108A, 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.

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 Chairman of the Department.

FACULTY

Chairman, Department of Geology: G. L. Peterson, Ph.D.

Graduate Adviser: A. D. Ptacek

Professors: R. W. Berry, Ph.D.; R. G. Gastil, Ph.D.; Daniel Krummenacher, Ph.D.; R. B. McEuen, Ph.D.; G. L. Peterson, Ph.D.; E. E. Roberts, Ph.D.; B. E. Thomas, Ph.D.; R. L. Threet, Ph.D.

Associate Professors: N. O. Frederiksen, Ph.D.; J. P. Kern, Ph.D.; A. D. Ptacek, Ph.D.

Assistant Professors: P. L. Abbott, Ph.D.; Kathe K. Bertine, Ph.D.; W. J. Ganus, Ph.D.; M. J. Walawender, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN GEOLOGY

UPPER DIVISION COURSES

- | | |
|---|---|
| 102. Geology of North America (3)
105. Photogeology (3)
106. Paleontology (4)
107. Stratigraphy (3)
108B. Field Geology (4)
110. Petroleum Geophysics (3)
112. Mining Geophysics (3)
116. Micropaleontology (3)
120. Ore Deposits (3)
121. Petroleum Geology (3) | 124. Optical Mineralogy (3)
125. Petrography (4)
126. Sedimentology (3)
130. Geochemistry (3)
131. Advanced Geochemistry (3)
140. Marine Geology (3)
150. Engineering Geology (3)
151. Groundwater Geology (3)
160. X-ray Diffraction (2)
173. Advanced Palynology (3) |
|---|---|

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

200. Seminar (1-3)

Prerequisite: Consent of instructor.

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

208. Graduate Field Geology (3)

One lecture and nine Saturday field sessions.

Prerequisite: Geology 108B.

Experience in one or more specialized aspects of field mapping.

209. Igneous Petrology (3)

Two lectures and three hours of laboratory.

Prerequisite: Geology 125.

Investigation of problems in igneous petrology, using petrography, geochemistry, and experimental methods.

211. Metamorphic Petrology (3)

Two lectures and three hours of laboratory.

Prerequisite: Geology 125.

Investigation of problems in metamorphic petrology using petrography, geochemistry, and experimental methods.

212. Petrology of Carbonates (3)

Two lectures and three hours of laboratory.

Prerequisites: Geology 124 and 126.

Thin-section and hand-specimen description and classification of carbonate rocks and other chemical sediments. Additional emphasis on recent depositional processes, diagenesis, and geochemistry.

220. Biostratigraphy (3)

Two lectures and three hours of laboratory.

Prerequisite: Geology 107.

Development of concepts and practices in stratigraphic and geochronologic synthesis critically reviewed in context of current knowledge of the fossil record.

225. Paleogeology (3)

Two lectures and three hours of laboratory.

Prerequisites: Geology 106 and Biology 110.

Problems and methods in the study of relationships between fossil organisms and their environment; interpretation of paleoenvironment, paleoclimate, and biologic relationships among fossil organisms.

229. Seminar: Advanced Studies in Stratigraphy (3)

Two seminars and three hours of laboratory.

Prerequisite: Geology 107.

Regional stratigraphic patterns in North America and their historical implications.

235. Petrology of Terrigenous Rocks (3)

Two lectures and three hours of laboratory.

Prerequisites: Geology 124 and 126.

Thin-section and hand-specimen description and classification of sandstones and mudrocks. Additional emphasis on mineralogy, modern depositional processes, environmental interpretation, and paleogeographic reconstruction.

240. Geotectonics (3)

Prerequisite: Geology 100.

A consideration of topics on continental genesis and evolution, orogeny, geosynclinal theory, and a survey of classic geologic provinces.

245. Advanced Structural Geology (3)

Prerequisite: Geology 100.

Topics in advanced structural geology in the light of petrographic, geophysical, and experimental data, combined with classic field observations.

250. Seminar: Physical Properties of Earth Materials (3)

Prerequisite: Geology 110 or 112.

Theoretical principles and instrumental techniques used to remotely determine the physical properties of earth materials.

260. Isotope Geology (3)

Two lectures and three hours of laboratory.

A survey of isotopic and geochronologic topics with individual projects in isotopic analysis.

270. Pleistocene Geology (3)

Three lectures and field trips.

Topics in Pleistocene geology; glaciation, Pleistocene lakes and drainage, relation of geology to early man, including field investigations.

280. Sedimentary Geochemistry (3)

Two lectures and three hours of laboratory.

Prerequisite: Geology 130.

Problems in low temperature geochemistry, including clay mineralogy and diagenesis.

285. Genesis of Ore Deposits (3)

Two lectures and three hours of laboratory.

Prerequisites: Geology 120, 125, and Geology 130 or four units of physical chemistry.

Application of mineralogy, petrography, and chemistry to an understanding of the origin of ore deposits.

297. 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.

299. Thesis (3) Cr/NC

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

Preparation of a thesis for the master's degree.

GERMAN

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 staff in charge of the graduate program in German is composed of professors whose native tongue is German, or who are familiar with Germany through travel or intensive studies, enabling them to present authoritatively the German language and culture. Library facilities include resources in German literature and linguistics, consisting of books, periodicals and newspapers. A foreign language laboratory with modern equipment is available to both graduate and undergraduate students.

ADMISSION TO THE GRADUATE DIVISION

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. 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 Literature.

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 German of which at least 15 units must be in 200-numbered courses including German 201, 290, and 299, and six units selected from German 202, 203, 204, 205, 206, 207, 208, and 210. If Plan B is followed, the student must pass a comprehensive examination in lieu of German 299.

ASSISTANTSHIPS

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

FACULTY

Chairman, Department of Germanic and Slavic Languages and Literatures: L. A. Kozlik, Ph.D.

Graduate Adviser: Christa M. Cross

Credential Adviser: J. H. Wulbern

Professors: Vytautas Dukas, Ph.D.; R. H. Lawson, Ph.D.; H. W. Paulin, Ph.D.; S. C. Schaber, Ph.D.; Yoshio Tanaka, Ph.D.; W. O. Westervelt, Ph.D.; E. M. Wolf, Ph.D.; J. H. Wulbern, Ph.D.

Associate Professors: Elaine E. Boney, Ph.D.; H. I. Dunkle, Ph.D.

Assistant Professor: Christa M. Cross, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN GERMAN

UPPER DIVISION COURSES

- 103A-103B. German Literature of the Eighteenth Century (3-3)
- 105A-105B. German Literature of the Nineteenth Century (3-3)
- 107. German Literature from its Beginning to the Reformation (3)
- 110A-110B. Contemporary German Literature (3-3)
- 111. Contemporary German Drama (3)
- 115. Goethe's *Faust* (3)
- 148. Applied German Linguistics (3)
- 150. German Phonology (3)
- 152. Middle High German (3)

GRADUATE COURSES IN GERMAN

- 201. History of the German Language (3)

Prerequisite: 12 units of upper division German.

The historical development of the German language, with source readings from the Gothic Bible to Luther's translation of the Bible.

- 202. Middle High German Literature (3)

Prerequisite: German 152.

Reading and analysis of Middle High German literature.

- 203. The German Novelle (3)

Prerequisite: 12 units of upper division German.

The development of the Novelle as a literary form from Goethe to the present.

- 204. The German Novel in the Twentieth Century (3)

Prerequisite: 12 units of upper division German.

Selected German novels of the 20th century.

- 205. German Lyric Poetry From Hölderlin to Rilke (3)

Prerequisite: 12 units of upper division German.

The major German lyric poets from the beginnings of Romanticism to Rilke.

- 206. The German Drama of the 19th Century (3)

Prerequisite: 12 units of upper division German.

Representative works of German dramatic literature from Kleist to Hauptmann.

- 207. Renaissance and Baroque Literature (3)

Prerequisite: 12 units of upper division German.

German literature of the 16th and 17th centuries.

- 208. Goethe (3)

Prerequisite: 12 units of upper division German.

Goethe's lyric, epic, and dramatic poetry excluding *Faust*.

- 210. Schiller (3)

Prerequisite: 12 units of upper division German.

Schiller as poet, dramatist, critic and philosopher, with emphasis on his classical period.

- 251. Seminar in Eighteenth-Century Literature (3)

Prerequisite: 18 units of upper division 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.

255. Seminar in Nineteenth-Century Literature (3)

Prerequisite: 18 units of upper division 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.

260. Seminar in Twentieth-Century Literature (3)

Prerequisite: 18 units of upper division 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 six units applicable on a master's degree.

265. Seminar in Germanic Linguistics (3)

Prerequisite: 18 units of upper division or graduate German.

Directed research in a specialized area of Germanic linguistics or philology. Maximum credit six units applicable to a master's degree.

290. Research and Criticism (3)

Prerequisite: 12 units of upper division 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.

297. Research (3) Cr/NC

Prerequisite: Advancement to candidacy.

Individual research in a specialized subject in German literature or linguistics.

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

Individual study. Six units maximum credit.

Prerequisites: 18 units of upper division German and consent of staff; to be arranged with department chairman and instructor.

299. 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.

HEALTH SCIENCE AND SAFETY

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 THE GRADUATE DIVISION

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.

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, 18 of which must be in 200-numbered courses. Students electing Plan A must include Health Science and Safety 291, 292, and 299. Those electing Plan B must include Health Science and Safety 291, 292, and 297. Students electing Plan B will be required to pass a final comprehensive examination in lieu of thesis. This examination may be repeated only once.

ASSISTANTSHIPS

Graduate teaching assistantships and graduate non-teaching 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 Chairman of the Department.

FACULTY

Chairman, Department of Health Science and Safety: W. C. Burgess, Ed.D.

Credential Adviser: L. P. Kessler

Graduate Adviser: A. C. McTaggart

Professors: W. C. Burgess, Ed.D.; R. M. Grawunder, Ed.D.; L. A. Harper, Ed.D.; A. C. McTaggart, Ph.D.

Associate Professors: A. C. Barnes, Jr., H.S.D.; S. J. Bender, H.S.D.; W. D. Boskin, Ed.D.; Stanford Fellers, Ed.D.; V. J. Noto, H.S.D.; W. D. Sorochan, Ed.D.

Assistant Professors: J. M. Beasley, M.S.; L. P. Kessler, M.A.; C. S. Lake, M.P.H.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN HEALTH SCIENCE

UPPER DIVISION COURSES

- 145. Safety Education and Accident Prevention (3)
- 153. Administration of the School Health Program (3)
- 154. Workshop in Health Science and Safety (1-3)
- 155. Sex Education (3)

- 160. Introduction to Public Health (3)
- 169. World Health (3)
- 172. Habit Forming Substances (3)
- 175. Health in Later Maturity (3)
- 176. Health and Medical Care (3)
- 197. Supervised Field Experience (1-3)

GRADUATE COURSES

200. Seminar (3)

Prerequisite: Fifteen units completed in Health Science and Safety. An intensive study of advanced problems in health education. Maximum credit six units applicable on a master's degree.

201. Interdisciplinary Factors in Health Education (3)

Prerequisite: Fifteen units completed in Health Science and Safety.
Synthesis of basic scientific and cultural principles which contribute to an understanding of human well-being and how it is deliberately influenced.

203. Evaluation Instruments (3)

Prerequisite: Health Science and Safety 196.
Construction, selection and analysis of evaluation instruments in health science and safety.

204. Program Planning and Evaluation in Community Health Education (3)

Prerequisite: Health Science and Safety 160.
Program planning and evaluation theories, systems and techniques in community health education.

240. Administration of Traffic Safety (3)

Prerequisites: Health Science and Safety 145 and 147.
Research and trends in traffic safety with emphasis on the problems of administration.

245. School Safety Programs and Procedures (3)

Prerequisite: Health Science and Safety 145.
Advanced consideration of school safety programs including legal bases and requirements, personnel responsibilities, liability, instruction, maintenance, and school transportation.

252. Health Science Curriculum Development (3)

Prerequisite: Health Science and Safety 150 or 151.
Structuring educational experiences in the health sciences; developing curriculum materials, performance standards and ways of incorporating health education in open learning environments.

270. Problems in Disease Control (3)

Prerequisite: Health Science and Safety 165.
New concepts in the community management of disease. Individual investigation and discussion.

271. Drug Abuse Education (3)

Prerequisite: Health Science and Safety 172.
Drug abuse education in the school and community.

291. Health Science and Safety Research (3)

Prerequisite: Health Science and Safety 196.
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.

292. Analysis of Professional Literature (3)

Prerequisite: Health Science and Safety 196.
Investigation and study of literature in the fields which have an important bearing on health science and safety programs in the school and community. (Formerly numbered Health Science and Safety 192.)

297. Research (3) Cr/NC

Prerequisites: Health Science and Safety 291, 292, 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.

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

Prerequisite: Consent of staff; to be arranged with department special study adviser and instructor.
Individual study. Six units maximum credit.

299. 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.

HISTORY

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.

ADMISSION TO THE GRADUATE DIVISION

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. As an additional requirement, the student must have completed a bachelor's degree with an undergraduate major in history. Applicants who have an undergraduate major in social studies with a concentration of 18 or more upper division units in history will, with the advice of the departmental representative and the recommendation of the department, be acceptable, but will be held responsible for completing the minimum requirements for an undergraduate major in history.

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 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 of which must be in 200-numbered courses. Students may elect either Plan A or Plan B with the consent of the Graduate Adviser. Required courses are History 201, six units in the History 240 series, three units in the History 250 series, History 297, and History 299 for those students electing Plan A. Students electing Plan B must enroll in History 296 (six units) in lieu of History 297 and History 299 and pass a comprehensive examination in both a major and minor field of history chosen in consultation with the Graduate Adviser.

Three additional units in the History 250 series may be substituted for History 201 (in either Plan A or Plan B) with the consent of the Graduate Adviser. Students are required to demonstrate a reading knowledge of a relevant foreign language.

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 of which must be in 200-numbered courses. Students may elect either Plan A or Plan B with the consent of the Graduate Adviser. Required courses are History 201, six units in the History 240 series, three units in the History 250 series, History 297, and History 299. Students electing Plan B must enroll in History 296 (six units) in lieu of History 297 and History 299 and pass a comprehensive examination in both a major and minor field of history chosen in consultation with the Graduate Adviser.

Three additional units in the History 250 series may be substituted for History 201 (in either Plan A or Plan B) with the consent of the Graduate Adviser.

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.

FACULTY

Chairman, Department of History: D. E. Berge, Ph.D.
 Graduate Adviser: D. J. Weber (Coordinator); A. P. Nasatir; R. T. Smith, Jr.; J. L. Stoddart
 Credential Adviser: Jessie Flemion, H. C. McDean
 Professors: Joyce O. Appleby, Ph.D.; D. E. Berge, Ph.D.; A. D. Coox, Ph.D.; W. F. Hanchett, Ph.D.; J. E. Merrill, Ph.D.; R. L. Munter, Ph.D.; A. P. Nasatir, Ph.D.; N. F. Norman, Ph.D.; S. J. Pincetl, Jr., Ph.D.; D. L. Rader, Ph.D.; L. U. Ridout, Ph.D.; R. T. Ruetten, Ph.D.; A. W. Schatz, Ph.D.; R. T. Smith, Ph.D.; D. H. Strong, D.S.S.; D. J. Weber, Ph.D.
 Associate Professors: W. F. Cheek, Ph.D.; Paochin Chu, Ph.D.; T. R. Cox, Ph.D.; R. L. Cuniff, Ph.D.; T. M. Davies, Ph.D.; R. C. Detweiler, Ph.D.; D. V. DuFault, Ph.D.; R. E. Dunn, Ph.D.; Jessie L. S. Flemion, Ph.D.; O. K. Hoidal, Ph.D.; A. C. O'Brien, Ph.D.; C. D. Smith, Ph.D.; R. C. Starr, Ph.D.; R. W. Steele, Ph.D.; F. N. Stites, Ph.D.; J. N. Sutherland, Ph.D.; P. J. Vanderwood, Ph.D.
 Assistant Professors: A. B. Appleby, Ph.D.; F. M. Bartholomew, Ph.D.; R. F. Filner, Ph.D.; P. F. Flemion, Ph.D.; N. M. Heyman, Ph.D.; H. C. McDean, Ph.D.; W. D. Phillips, Ph.D.; Pershing Vartanian, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN HISTORY

UPPER DIVISION COURSES

- 101A-101B. The Contemporary World in Historical Perspective (3-3)
 102. Great Historians and Historical Literature (3)
 105A-105B. War and Civilization (3-3)
 106A-106B. The Quest for Peace (3-3)
 107A-107B. Science in Western Civilization (3-3)
 111A-111B. Ancient History (3-3)
 121A-121B. Europe in the Middle Ages (3-3)
 122. The Holy Roman Empire to the Great Interregnum (3)
 123. The Byzantine Empire (3)
 131. The Renaissance (3)
 132A-132B. Early Modern Europe (3-3)
 133A-133B. Europe in the 18th Century (3-3)
 135A-135B. Europe in the 19th Century (3-3)
 136A-136B. Intellectual History of Modern Europe (3-3)
 137A-137B. Europe in the 20th Century (3-3)
 138A-138B. Diplomatic History of Modern Europe (3-3)
 141A-141B. History of Scandinavia (3-3)
 142A. The French Revolution and Napoleonic Era (3)
 142B. Modern France (3)
 143A-143B. The Iberian Peninsula (3-3)
 145A-145B. Central and Eastern Europe (3-3)
 146A-146B. Germany and Central Europe (3-3)
 147A-147B. Russia and the Soviet Union (3-3)
 149. Modern Italy (3)
 151A-151B. England (3-3)
 152A-152B. Constitutional History of England (3-3)
 153A-153B. Tudor and Stuart England (3-3)
 154A-154B. Modern Britain (3-3)
 156A-156B. History of the Near East from the 7th Century to World War I (3-3)
 157. The Near East in the Twentieth Century (1914-Present) (3)
 158A-158B. Africa (3-3)
 160A-160B. Latin America (3-3)
 161A-161B. Mexico (3-3)
 162A-162B. History of Brazil (3-3)
 163A-163B. The Caribbean Area (3-3)
 164. The Pacific Coast Nations of South America (3)
 165A-165B. Economic, Social, and Intellectual Development of Latin America (3-3)
 167A-167B. Diplomatic History of Latin America (3-3)
 171A-171B. Rise of the American Nation (3-3)

- 172A-172B. Development of the Federal Union (3-3)
 173A-173B. The U.S. from Jackson to Grant, 1828-1877 (3-3)
 174. The Rise of Modern America, 1868-1900 (3)
 175A-175B. The United States, 1901-1945 (3-3)
 175C. The United States in the Nuclear Age (3)
 176A-176B. American Foreign Policy (3-3)
 177A-177B. Constitutional History of the United States (3-3)
 178A-178B. The Development of American Capitalism (3-3)
 179A-179B. Intellectual History of the American People (3-3)
 180. Selected Studies in History (3)

- 181A-181B. The Westward Movement (3-3)
 182A-182B. The Spanish Borderlands and the American Southwest (3-3)
 183A-183B. Black American Civilization (3-3)
 185. Conservation History of the United States (3)
 189A-189B. California (3-3)
 190A-190B. Southeast Asia (3-3)
 191A-191B. The Far East (3-3)
 192. Chinese Civilization (3)
 193. China in Modern Times (3)
 194. Japanese Civilization (3)
 195. Rise of Japan as a Modern State (3)
 196A-196B. The Indian Sub-Continent (3-3)
 197A-197B. Intellectual History of Modern Asia (3-3)

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.

201. Seminar in Historical Method (3)
 General historical bibliography. The use of libraries and archives. Methods of critical historical investigation. The interpretations of history.
 240. Directed Reading in Selected Topics (3)
 Prerequisite: Permission 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. Maximum of six units applicable to the master's degree.
 241. 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. Maximum credit six units applicable on a master's degree.
 242. 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. Maximum credit six units applicable on a master's degree.
 243. 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. Maximum credit six units applicable on a master's degree.
 244. 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. Maximum credit six units applicable on a master's degree.
 245. Directed Reading in African and Middle Eastern History (3)
 Prerequisite: Six upper division units in African or Middle Eastern history.
 Selected readings in source materials and historical literature in a designated area of African or Middle Eastern history. Maximum of six units applicable on a master's degree. (Formerly titled Directed Reading in African History.)

246. 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. Maximum of six units applicable to a master's degree.

250. Seminar in the Philosophy of History (3)

The major philosophies of history and directed research on topics selected from various philosophers of history such as Bury, Collingwood, Croce, Freud, Hegel, Marx, Pareto, Sorokin, Spengler, and Toynbee.

251. 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.

252. 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.

253. 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.

254. 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.

255. Seminar in African and Middle Eastern History (3)

Prerequisite: Six upper division units in African or Middle Eastern history.
Directed research of topics selected from a designated area of African or Middle Eastern history. Maximum of six units applicable to a master's degree. (Formerly titled Seminar in African History.)

256. 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 of six units applicable to a master's degree.

296. 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.

297. 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.

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

Individual study. Six units maximum credit.
Prerequisite: Consent of staff; to be arranged with department chairman and instructor.

299. 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.

INDUSTRIAL STUDIES

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, comprehensive industrial arts and industrial crafts.

ADMISSION TO THE GRADUATE DIVISION

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.

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 200-numbered courses, including Industrial Arts 221, 222, 223, and 224, and 220 and 290, nine units selected from Industrial Arts 221, 222, 223, and 224, and either Industrial Arts 299 (Plan A) or 295 (Plan B). Students electing Plan B must pass a comprehensive examination upon completion of Industrial Arts 295 and in lieu of the thesis.

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 Chairman of the Department.

FACULTY

Chairman, Department of Industrial Studies: H. L. Marsters, M.A.
Graduate Adviser: F. J. Irgang
Credential Adviser: F. J. Irgang
Professors: W. C. Anderson, Ph.D.; G. D. Bailey, Ed.D.; G. K. Hammer, Ed.D.; F. J. Irgang, Ph.D.; W. L. McLoney, Ed.D.; J. D. McMullen, Ed.D.; D. W. Thiel, Ph.D.
Associate Professors: D. A. Dirksen, Ed.D.; H. L. Marsters, M.A.; R. H. McEwen, Ed.D.
Assistant Professors: R. B. Blackmun, M.A.; R. J. Ferree, M.A.; W. D. Guentzler, Ph.D.; A. E. Lybarger, Ed.D.; A. P. Rasmussen, Ed.D.; R. E. Sorenson, M.S.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN INDUSTRIAL ARTS

UPPER DIVISION COURSES

- | | |
|---|---|
| 103. Advanced Industrial Crafts (3) | 164. Basic Digital Computers (3) |
| 117. Thermoset Plastics (3) | 173. Accessory Power Systems (3) |
| 123. Industrial Arts Drawing (3) | 183. Industrial Arts Graphic Arts (3) |
| 133. Applied Metal Forming Operations (3) | 190. Experimental Industrial Arts (1 or 2) |
| 140. Photography for Teachers (3) | 194. Recent Trends in Industrial Arts Education (2) |
| 142. Advanced Photography (3) | |
| 153. Woodworking for Teachers (3) | |

GRADUATE COURSES

200. Seminar (3)

An intensive study in industrial arts, topic to be announced in the class schedule.

201. Advanced Teaching Problems (3)

Prerequisites: Teaching experience in area selected and consent of instructor.

Materials and advanced techniques of teaching specific activity areas, such as (a) industrial drawing; (b) general metalworking; (c) general woodworking; (d) electricity-radio; (e) transportation; (f) graphic arts; (g) photography; (h) comprehensive industrial arts. Stress on project design and visual materials. Maximum credit six units applicable on a master's degree.

202. Industrial Arts Problems in Graphics and Design (3)

One lecture and six hours laboratory.

Prerequisite: Industrial Arts 123.

The theories and procedures of industrial drafting, including nomographs, descriptive geometry, and graphic solutions. Emphasis on special applications to industrial arts.

203. Industrial Arts Problems in Metalworking (3)

One lecture and six hours laboratory.

Prerequisite: Industrial Arts 133.

Problems involved in industrial arts metalworking. Individual research project dealing with instructional materials or processes.

204. Problems in Photography (3)

One lecture and six hours laboratory.

Prerequisite: Industrial Arts 142, 143, or 144.

Advanced problems in photography in industry and photography in education. Individual research project dealing with instructional materials or industrial processes.

205. Industrial Arts Problems in Woodworking (3)

One lecture and six hours laboratory.

Prerequisite: Industrial Arts 153.

Intensive study in selected areas of the woodworking industry as it relates to materials, production, and construction. Presentation of research findings.

206. Problems in Electronics (3)

One lecture and six hours laboratory.

Prerequisite: Industrial Arts 163.

Recent developments in the electronics areas. Special research projects and resource materials.

207. Research in Vehicular Power Systems for Industrial Arts (3)

Prerequisite: Industrial Arts 173.

Research in selected areas of the vehicular power systems and effective presentation of findings in oral and written form.

208. Industrial Arts Problems in Graphic Arts (3)

One lecture and six hours laboratory.

Prerequisite: Industrial Arts 183.

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.

210. Problems in Industrial Crafts (3)

Prerequisite: Industrial Arts 103.

Research in selected areas of industrial crafts with emphasis on instructional materials and techniques. Specifically designed for teachers, recreation workers, and therapists.

215. Problems in Plastics (3)

One lecture and six hours laboratory.

Prerequisite: Industrial Arts 117.

Research with selected plastics processes and materials. Development of projects, aids, resource materials, oral and written presentations.

220. 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.

221. 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.

222. 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.

223. 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.

224. 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 industrial education.

267. 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.

290. Research Procedures in Industrial Arts (3)

Location, selection, and analysis of scientific and professional literature, research data and specialized bibliographies.

295. Selected Topics in Industrial Arts (3)

Prerequisites: Industrial Arts 290 and advancement to candidacy for the Master of Arts degree.

Study in selected topics of Industrial Arts culminating in a research paper.

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

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

Individual study. Six units maximum credit.

299. 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.

LATIN AMERICAN STUDIES

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, 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 THE GRADUATE DIVISION

In addition to meeting the 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, the student must present the Bachelor of Arts degree with not less than 18 units of courses of Latin American content in three areas. The student must demonstrate an adequate reading knowledge of Spanish for admission to the program, through either course work or examination, as determined by the Latin American Studies Committee. A reading knowledge of Portuguese is recommended. 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, the student must demonstrate an oral and reading proficiency in either Spanish or Portuguese, through either course work or examination as determined by the Department of Spanish and Portuguese Languages and Literatures. He is 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:

	200-numbered Courses	200-numbered or Upper Division 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 200-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 299 (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.

COMMITTEE ON LATIN AMERICAN STUDIES

P. F. Flemion, *Chairman*
E. M. Barrera
J. D. Blick
T. E. Case
C. B. Christensen
N. C. Clement
R. L. Cuniff
T. M. Davies, Jr.
Deborah M. Dexter
W. A. Finch, Jr.

E. C. Griffin
G. L. Head
Arturo Jiménez-Vera
W. C. Kennedy
J. B. Kelley
J. D. Kitchen
B. E. Loveman
R. R. Nardelli
A. P. Nasatir
L. V. Padgett

W. D. Phillips
G. V. Segade
P. S. Staniford
P. J. Vanderwood
L. C. Watson
R. D. Weeter
D. J. Weber
H. H. Windsor, III
R. C. Young

FACULTY

Graduate Coordinator: P. F. Flemion

Graduate Advisers:

Anthropology: L. C. Watson
Economics: N. C. Clement
Geography: J. D. Blick

History: A. P. Nasatir
Political Science: L. V. Padgett
Spanish: R. D. Weeter

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

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN LATIN AMERICAN STUDIES

UPPER DIVISION COURSES

- Anthropology*
- 147. Prehistory of South America (3)
 - 157. Meso-American Ethnohistory (3)
 - 162. Cultures of South America (3)
 - 163. Contemporary Latin America Cultures (3)
 - 169-S. Backgrounds of Mexican Civilization (3)
 - 180. Preclassic Cultures of Meso-America (3)
 - 181. Classic Pre-Columbian Civilizations of Middle America (3)
 - 182. Post-Conquest Cultures of Middle America (3)

- Economics*
- 114. Economic Problems of Latin America (3)
 - 153. Comparative Labor Problems (3)
 - 195. Economics of Underdeveloped Areas (3)

- Geography*
- 123. Middle America (3)
 - 124. South America (3)
 - 198. Directed Readings in Geographic Literature (1)

- History*
- 160A-160B. Latin America (3-3)
 - 161A-161B. Mexico (3-3)
 - 162A-162B. History of Brazil (3-3)
 - 163A-163B. The Caribbean Area (3-3)
 - 164. The Pacific Coast Nations of South America (3)

- 165A-165B. Economic, Social, and Intellectual Development of Latin America (3-3)
- 167A-167B. Diplomatic History of Latin America (3-3)
- 180. Selected Studies in History (3)

- Political Science*
- 175. International Relations of the Latin American States (3)
 - 184. The Mexican Political System (3)
 - 194. Political Change in Latin America (3)
 - 195. Political Systems of Latin America (3)

- Portuguese*
- 135. Brazilian Literature (3)
 - 185. Selected Studies (3)

- Spanish*
- 104A-104B. Spanish-American Literature (3-3)
 - 106A-106B. Mexican Literature (3-3)
 - 107. Caribbean Area Countries Literature (3)
 - 108. Andean Countries Literature (3)
 - 109. River Plate Literature (3)
 - 170. Spanish-American Poetry (3)
 - 171. Spanish-American Short Story (3)
 - 172. Spanish-American Theatre (3)
 - 185. Selected Studies in Spanish (3)

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Assistant-

Ph.D.;
R. C.
Kaplan,
J. W.
Ph.D.;
C. E.
Ph.D.;
Stevens,

Ph.D.;
T. T.
Smith,

wnik,
Mol-
Ph.D.

APPLICABLE GRADUATE COURSES

Refer to graduate course descriptions in the sections of this Bulletin under the Departments of Anthropology, Economics, Geography, History, Political Science, and Spanish and Portuguese Languages and Literatures.

Anthropology

- 200. Seminar (3)*
- 255. Culture and Society in the Nahua Area (3)
- 256. Cultures and Societies in Southern Meso-America and Central America (3)
- 257. Classical Nahuatl (3)
- 297. Research (3)
- 298. Special Study (1-3)
- 299. Thesis (3)

Economics

- 292. Seminar in International Economics (3)*
- 295. Seminar in the Economics of Underdeveloped Countries (3)
- 297. Research (3)
- 298. Special Study (1-3)
- 299. Thesis (3)

Geography

- 220. Seminar in Regional Geography (3)*
- 297. Research (1-3)
- 298. Special Study (1-3)
- 299. Thesis (3)

History

- 244. Directed Reading in Latin American History (3)
- 254. Seminar in Latin American History (3)
- 297. Research (3)
- 298. Special Study (1-3)
- 299. Thesis (3)

Political Science

- 280. Seminar in Comparative Government (3)*
- 282. Seminar in the Political Systems of the Developing Nations (3)*
- 283. Seminar in Latin American Political Systems (3)
- 297. Research in Political Science (3)
- 298. Special Study (1-3)
- 299. Thesis (3)

Spanish

- 204. The Spanish-American Novel (3)
- 205. The Gaucho Epic (3)
- 206. Modernism (3)
- 209. The Spanish-American Essay (3)
- 210. Contemporary Spanish-American Prose Fiction (3)
- 250. Seminar in Spanish-American Literature (3)
- 255. Seminar in Spanish-American Culture and Thought (3)
- 298. Special Study (1-3)
- 299. Thesis (3)

* Acceptable when of relevant content.

LINGUISTICS

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. It is not intended as a complete vocational preparation.

ADMISSION TO THE GRADUATE DIVISION

In addition to meeting the requirements for admission to the Graduate Division 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. 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 and speaking 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:

a. Required courses:

- Three units chosen from Anthropology 104, Principles of Anthropological Linguistics, Anthropology 124, Descriptive Linguistics, Linguistics 184, Phonemics and Morphemics;
- Three units chosen from Linguistics 182, American English, Linguistics 180, The English Language, Linguistics 196, General Linguistics, Philosophy 131, Philosophy of Language;
- Linguistics 183, English Linguistics, three units;
- Three units of graduate seminar, Linguistics 295, Seminar in Linguistics; plus three more units chosen from Linguistics 295, Linguistics 220, Indo-European, or German 265, Seminar in Germanic Linguistics;
- Six units chosen from Linguistics 220, Indo-European, Linguistics 223, Old English, Anthropology 222, Historical Linguistics, French 201, History of the French Language, German 201, History of the German Language, Russian 201, History of the Russian Language, Russian 202, Old Church Slavonic, Spanish 201, History of the Spanish Language;
- Linguistics 299, Thesis, three units.
- b. Six units of electives, three units of which must be in 200-numbered courses approved by the student's adviser.

All programs will be approved by the graduate adviser.

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 Chairman of the Department.

FACULTY

Chairman, Department of Linguistics: O. D. Seright, Ph.D.

Graduate Adviser: O. D. Seright

Professors: L. H. Frey, Ph.D.; J. N. Tidwell, Ph.D.

Associate Professors: T. A. Donahue, Ph.D.; O. D. Seright, Ph.D.

Assistant Professors: R. L. Cooper, Ph.D.; G. F. Drake, Ph.D.; Robert Underhill, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN LINGUISTICS

UPPER DIVISION COURSES

Linguistics

- 180. The English Language (3)
- 181. The Structure of English (3)
- 182. American English (3)
- 183. English Linguistics (3)
- 184. Phonemics and Morphemics (3)
- 185. Theory and Practice of English as a Second Language (3)
- 186. Sociolinguistics (3)
- 187. Psycholinguistics (3)
- 188. Field Methods in Linguistics (3)
- 190. Selected Topics in Linguistics

Anthropology

- 104. Principles of Anthropological Linguistics (3)
- 122. Language in Culture (3)
- 126. Field Methods in Linguistics (3)

French

- 150. Advanced Phonetics and Diction (3)

German

- 148. Applied German Linguistics (3)
- 150. German Phonology (3)
- 152. Middle High German (3)

Philosophy

- 131. Philosophy of Language (3)

Russian

- 130. Russian Syntax and Stylistics (3)
- 131. Russian Phonology and Morphology (3)

Spanish

- 149. Spanish Linguistics (3)
- 150. Phonetics and Phonemics (3)
- 190. Advanced Grammar (3)

GRADUATE COURSES

Linguistics

- 220. Indo-European (3)
Prerequisite: Anthropology 104 or Linguistics 183.
Phonology, morphology, and syntax of the Indo-European language community, with special attention to "Centum" and "Satem" relationships. (Formerly English 220.)

- 221. 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.

- 223. Old English (3)
Study of Old English phonology, morphology and syntax. (Formerly English 223.)

- 224. Middle English (3)
Modern linguistic analyses of the Middle English language; emphasis on the development of historical English dialects. (Formerly English 224.)

- 290. Bibliography and Methods of Linguistic Research (3)
Prerequisite: twelve units of upper division 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.

- 295. Seminar in Linguistics (3)
Prerequisite: Completion of three units of 200-numbered courses in the master's program for Linguistics.
Research in Linguistics, course content varying according to instructor. Maximum credit six units applicable on a master's degree. (Formerly English 295.)

- 298. Special Study (1-3) Cr/NC
Prerequisite: Consent of staff; to be arranged with department chairman and instructor.
Individual study. Six units maximum credit.

- 299. 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.

Anthropology

- 204. Seminar in Linguistics (3)
- 222. Historical Linguistics (3)

French

- 201. History of the French Language (3)

German

- 201. History of the German Language (3)
- 202. Middle High German Literature (3)
- 265. Seminar in Germanic Linguistics (3)

Philosophy

- 231. Semantics and Logical Theory (3)

Russian

- 201. History of the Russian Language (3)
- 202A-202B. Old Church Slavonic (3-3)
- 203. Slavic Linguistics (3)

Spanish

- 201. History of the Spanish Language (3)
- 270. Applied Spanish Linguistics for Teachers (3)

LITERATURE

GENERAL INFORMATION

The Literature faculty, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in English.

ADMISSION TO THE GRADUATE DIVISION

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. Graduates from San Diego State University must have completed a minimum of 24 units of upper division English courses in a well-rounded program. Graduates from other colleges must complete an English major equivalent to the one at San Diego University before admission to classified graduate standing can be recommended. If, in the opinion of the graduate adviser, an equivalent major is not offered, the student will be required to complete such courses as may be necessary to satisfy the department's requirements before the student may enter upon the master's degree curriculum. The Literature faculty recommends that undergraduate students study extensively some foreign language as preparation for graduate work in English.

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 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 English from courses listed below as acceptable on master's degree programs, of which at least 18 units must be in 200-numbered courses, exclusive of thesis.

In addition to the above requirements, the candidate must enroll in English 299 and write a thesis under departmental supervision, must pass an oral examination on his general knowledge of literature, and must demonstrate a reading knowledge of a relevant foreign language. A student may meet the foreign language requirement by passing the Graduate School Foreign Language Test, by passing a local examination if the language is not served by the above test, or by achieving a grade of "C" or better in three units of upper division work in a foreign language accepted as relevant by his graduate adviser. The Literature faculty recommends French, German, or Latin for students planning to go on to advanced graduate study. Details concerning the oral examination are available from the graduate advisers. The student may take this oral examination at any time after being granted classified graduate standing, but ordinarily will take it before enrollment in English 299, Thesis. The Literature faculty assumes no responsibility for scheduling oral examinations between the end of Term II of the summer session and the beginning of the fall semester.

American Literature

English 290, Bibliography and Methods of Literary Research (American topics)	3
At least one seminar (American topic)	3
Any two courses in early English language and literature (English 103, 234, Linguistics 180, 223, 224), if not previously taken	6
English 299, Thesis (American topic)	3
English electives up to 24 unit minimum	9
Other electives (which may be in English) to make up 30 unit Master of Arts requirement	6
Total	30

Not more than three units from among English 140, 142A-142B, 144, 149, 170, 171, 172, and 260 may count in the above.

British Literature

English 290, Bibliography and Methods of Literary Research (British topics)	3
At least one seminar (British topic)	3
Any two courses in early English language and literature (English 103, 234, Linguistics 180, 223, 224), if not previously taken	6
English 299, Thesis (British topic)	3
English electives up to 24 unit minimum	9
Other electives (which may be in English) to make up 30 unit Master of Arts requirement	6
Total	30

Not more than three units from among English 140, 142A-142B, 144, 149, 170, 171, 172, 179, and 260 may count in the above.

Comparative Literature

English 290, Bibliography and Methods of Literary Research (Comparative Literature topics)	3
One English seminar	3
A minimum of four 200-numbered English courses	12
One additional 100- or 200-numbered course in English or Comparative Literature	3
English 299, Thesis (Comparative Literature topic)	3
Electives (which may be in English or Comparative Literature) to make up 30 unit Master of Arts requirement	6
Total	30

Not more than three units from among English 140, 142A-142B, 144, 149, 170, 171, 172, and 260 may count in the above.

To be advanced to candidacy in the comparative literature program, a student must demonstrate proficiency in reading and comprehension of at least one foreign literature in the original by satisfying one of the following:

1. Having on his undergraduate or graduate transcript at least 6 semester units of upper division or graduate courses in a foreign literature in the original, with grades of C or better.
2. Completion of 6 units of upper division or graduate courses in a foreign literature in the original. These courses may be chosen from a foreign language department or from Comparative Literature. If Comparative Literature courses are chosen, the instructor must certify that the works were read in the original.
3. Directed readings in a foreign literature in the original, at a level commensurate with 1 or 2 above. With approval of the graduate adviser, an instructor of Comparative Literature will assist the student in planning a list of readings, supervise and aid the student in the work, and finally certify that the student has demonstrated proficiency in reading and comprehension through a written translation of a work of foreign literature.

(The final oral examination on the student's general knowledge of literature is required.)

Creative Writing

English 290, Bibliography and Methods of Literary Research	3
One English seminar	3
One course in early English language and literature (English 103, 234, Linguistics 180, 223, 224), if not previously taken	3
A minimum of two creative writing courses from English 140, 142A-142B, 144, 149, 153, 170, 172, and 260 (not more than nine units from among these eight courses may count as part of the basic 24-unit requirement)	6-9
English 299, Thesis	3
English electives to make up the 24 unit-requirement in English	3-6
Other electives (which may be in English) to make up 30 unit Master of Arts requirement	6
Total	30

To be advanced to candidacy in the creative writing program, a student must submit a sample of his writing or work in progress for approval as thesis level achievement by a committee of three of the faculty in the creative writing area.

ASSISTANTSHIPS AND SCHOLARSHIPS

Graduate teaching assistantships and graduate non-teaching assistantships in English are available to a limited number of qualified students. Application blanks and additional information may be secured from the Director.

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 towards a higher degree or credential.

FACULTY

Director, Literature: Lowell Tozer, Ph.D.

Graduate Advisers: R. R. Rush (Coordinator), J. J. Benson, Elizabeth E. Chater, Muriel B. Ingham, G. A. Sandstrom.

Professors: J. R. Baker, Ph.D.; J. J. Benson, Ph.D.; J. W. Dickinson, Ph.D.; J. H. Gellens, Ph.D.; G. C. Gross, Ph.D.; Suzanne Henig, Ph.D.; Muriel B. Ingham, Ph.D.; Karl Keller, Ph.D.; J. P. Monteverde, Ph.D.; W. A. Perkins, Ph.D.; G. W. Sanderlin, Ph.D.; G. A. Sandstrom, Ph.D.; G. A. Santangelo, Ph.D.; Lowell Tozer, Ph.D.; Kermit Vanderbilt, Ph.D.; Dorothy C. Wanlass, Ph.D.; Kingsley Widmer, Ph.D.

Associate Professors: H. C. Brashers, Ph.D.; Elizabeth E. Chater, M.A.; G. T. Davis, M.F.A.; J. C. Hinkle, M.A.; H. F. Kehler, Ph.D.; R. C. Kohler, Ph.D.; C. R. McCoy, M.A.; D. D. McLeod, Ph.D.; F. S. Moramarco, Ph.D.; T. A. Nelson, Ph.D.; P. S. Nichols, Ph.D.; Emily H. Patterson, Ph.D.; Mary E. Redding, Ph.D.; R. W. Redding, Ph.D.; James Rother, Ph.D.; Minas Savvas, Ph.D.; H. C. Stiehl, Ph.D.; H. C. Taylor, Ph.D.

Assistant Professors: Elsie B. Adams, Ph.D.; Thomas Aninger, Ph.D.; J. J. Barry, M.A.; A. F. Boe, Ph.D.; Ruth M. C. Brown, Ph.D.; J. D. Bumpus, M.F.A.; G. J. Butler, Ph.D.; Nathalia Crane, F. M. DeMarinis, M.A.; G. H. Farber, Ph.D.; R. J. Forrey, Ph.D.; R. J. Gervais, Ph.D.; D. L. Karnath, Ph.D.; Dorothea F. Kehler, Ph.D.; Lonna M. Malmshemer, Ph.D.; W. N. Rogers, Ph.D.; R. R. Rush, Ph.D.; Roberta F. Sarfatt, Ph.D.; D. A. Shojai, Ph.D.; E. D. S. Sullivan, Ph.D.; J. R. Thrane, Ph.D.; Jacqueline D. Tunberg, Ph.D.; Carey Wall, Ph.D.; J. L. Wheeler, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN ENGLISH

UPPER DIVISION COURSES

- | | |
|--|---|
| 101. Shakespeare (3) | 135. Modern American Poetry (3) |
| 102. Study of Shakespeare (3) | 136. American Drama (3) |
| 103. Chaucer (3) | 138. Topics in American Studies (3) |
| 104. Milton (3) | 139. Topics in American Literature (3) |
| 105. The Bible as Literature (3) | 140. Techniques of Poetry (3) |
| 111. Renaissance Literature (3) | 142A-142B. Techniques of Fiction (3-3) |
| 112. Seventeenth Century Literature (3) | 144. Techniques of Drama (3) |
| 113A-113B. Restoration and Eighteenth Century Literature (3-3) | 149. Topics in Techniques of Writing (3) |
| 114A-114B. Nineteenth Century British Poetry (3-3) | 140. Poetry (3) |
| 115. Nineteenth Century British Prose (3) | 142. Fiction (3) |
| 116. Modern British Poetry (3) | 144. Drama (3) |
| 117. Modern British Fiction (3) | 149. Topics in the Study of Literary Genres (3) |
| 118. Modern British Drama (3) | 150. The History of Literary Criticism (3) |
| 121A-121B. English Fiction (3-3) | 153. Modern Criticism (3) |
| 122A-122B. English Drama (3-3) | 170. The Writing of Poetry (3) |
| 129. Topics in English Literature (3) | 171. The Writing of Fiction (3) |
| 130. Early American Literature (3) | 172. The Writing of Non-Fiction (3) |
| 131. The American Renaissance (3) | 175. Advanced Composition (3) |
| 133. American Realism and Naturalism (3) | 190. Selected Topics in English (2-3) |
| 134. Modern American Fiction (3) | 198. Comprehensive Reading and Survey (3) |

GRADUATE COURSES

233. **American Literature (3)**
Prerequisite: Twelve units of upper division work in English, with courses in American literature strongly recommended.
Selected works of an author, period, or subject in American literature. Maximum credit six units applicable on a Master's degree.
234. **Literature of the Middle Ages (3)**
Prerequisite: Twelve units of upper division work in English.
Selected works in the literature of the Middle Ages with emphasis on Middle English prose and poetry exclusive of Chaucer.
235. **Renaissance Literature (3)**
Prerequisite: Twelve units of upper division work in English.
Selected works in the literature of the Renaissance.
236. **Restoration and Eighteenth Century Literature (3)**
Prerequisite: Twelve units of upper division work in English.
Selected works in the literature of the late seventeenth and the eighteenth centuries.
237. **Earlier Nineteenth Century Literature (3)**
Prerequisite: Twelve units of upper division work in English.
Selected works in the literature of the early nineteenth century.
238. **Later Nineteenth Century Literature (3)**
Prerequisite: Twelve units of upper division work in English.
Selected works in the literature of the later nineteenth century.
239. **Twentieth Century Literature (3)**
Prerequisite: Twelve units of upper division work in English.
Selected works in the literature of the twentieth century.

243. Poetry (3)

Prerequisite: Twelve units of upper division work in English.
Poetry as a literary form.

244. Fiction (3)

Prerequisite: Twelve units of upper division work in English.
Fiction as a literary form.

245. Drama (3)

Prerequisite: Twelve units of upper division work in English.
The drama as a literary form.

260. Workshop in Creative Writing (3)

Prerequisite: Consent of instructor and departmental adviser.
Criticism and coaching in the larger forms. Maximum credit six units applicable on a master's degree.

279. Tutorial in Creative Writing (3)

Prerequisites: Twelve upper division units in English, including at least 6 units in creative writing.
Individual guidance for advanced writers who wish to work on special projects in creative writing.

290. Bibliography and Methods of Literary Research (3)

Prerequisite: Twelve units of upper division English.
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. Prerequisite to graduate seminars.

291. Seminar: A Major Author (3)

Prerequisite: An appropriate upper division or graduate level background course, and English 290.

The critical study of a major author, such as Shakespeare, Dickens, Mark Twain. May be repeated with new content; maximum credit six units applicable on a master's degree.

292. Seminar: A Cultural Period (3)

Prerequisite: An appropriate upper division or graduate level background course, and English 290.

Advanced study, through its literature, of a cultural period such as the Renaissance, the Enlightenment, the Romantic Revolution. May be repeated with new content; maximum credit six units applicable on a master's degree.

293. Seminar: A Literary Problem (3)

Prerequisite: English 290.
Advanced study of a literary problem, such as Regionalism in America, or European influences on American literature. May be repeated with new content; maximum credit six units applicable on a master's degree.

294. Seminar: A Literary Type (3)

Prerequisite: English 290.
Advanced study of a literary type, such as the Personal Essay, Epic, Tragedy. May be repeated with new content; maximum credit six units applicable on a master's degree.

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

Prerequisite: Consent of staff; to be arranged with department chairman and instructor.
Individual study. Six units maximum credit.

299. 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.

MASS COMMUNICATIONS

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 junior college teaching; or (3) who seek a broad background for careers in the mass media, business, or government service.

ADMISSION TO THE GRADUATE DIVISION

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 student must present a bachelor's degree in journalism, radio-television, advertising, communications, sociology, or psychology. A student whose preparation is deemed insufficient by his graduate adviser or by the Mass Communications 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.

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, of which at least 18 units must be in 200-numbered courses, distributed among three departments cooperating in the degree program as follows:

	200-numbered Courses	Upper Division Courses or 200-numbered Courses
Department A	12 units	6 units
Department B	3 units	3 units
Department C	3 units	3 units
	18 units	12 units

Candidates may elect to follow Plan A, which requires a thesis, or Plan B, which requires a comprehensive examination agreed on by the Mass Communications Committee in lieu of a thesis.

All programs will be approved by the Mass Communications Committee.

MASS COMMUNICATIONS COMMITTEE

H. L. Anderson, <i>Chairman</i>	M. M. El-Assal	J. P. Sheposh
R. L. Benjamin	F. W. Hornbeck	F. C. Whitney
J. K. Buckalew		D. G. Wylie

FACULTY

Coordinator of Graduate Programs in Mass Communications:
H. L. Anderson

Department of Journalism

Professors: F. S. Holowach, M.A.; J. L. Julian, Ph.D.; E. M. Odendahl, Ph.D.; G. W. Sorensen, Ph.D.

Associate Professors: J. K. Buckalew, Ph.D.; Jack Haberstroh, Ph.D.

Assistant Professor: F. C. Whitney, Ph.D.

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

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN MASS COMMUNICATIONS

UPPER DIVISION COURSES

Journalism

- 102. Law of Mass Communication (3)
- 117. History of Mass Communications (3)
- 118. The Foreign Press (3)
- 121. Current Problems in Mass Communications (3)
- 122. Public Opinion Measurement (3)
- 144. Reporting of Public Affairs (3)
- 153. Newspaper Advertising (3)
- 155. Advanced Editing Techniques (3)
- 162. Mass Communication and Society (3)
- 177. Research Methods in Mass Communications (3)
- 183. Problems in Public Relations (3)
- 197. Investigation and Report (3)

Speech Communication

- 130. Semantics (3)
- 135. Theories of Human Communication (3)
- 198. Selected Topics in Speech Communication (3)

Telecommunications and Film

- 101. Broadcast Management (3)
- 103. Broadcast Advertising (3)
- 104. Broadcast Commercial Practices (3)
- 105. Regulation of Broadcasting (3)

- 108. International Broadcasting (3)
- 110. Script Writing for Broadcasting and Film (3)
- 130. Radio Programming (3)
- 163. International Cinema (3)
- 170. Educational Broadcasting (3)
- 183. Advanced Programming and Development for Television (4)

Sociology

- 124. Social Stratification (3)
- 137. Political Sociology (3)
- 140. Social-Psychology: Sociological Approaches (3)
- 145. Sociology of Mass Communication (3)

Psychology

- 100. Selected Topics in Psychology (1-3)
- 112. Experimental Psychology: Social (4)
- 120. Consumer Psychology (3)
- 121. Personnel and Industrial Psychology (3)
- 122. Public Opinion Measurement (3)
- 123. Organizational Psychology (3)
- 145. Social Psychology (3)
- 146. Advanced Topics in Social Psychology (3)
- 147. Psychology of Contemporary Social Problems (3)

APPLICABLE GRADUATE COURSES

Journalism

- 200. Scope and Method of Mass Communications (3)
Intensive preparation in methodology applicable to the various fields related to mass media study.
- 202. Seminar: Mass Media and the Law (3)
Prerequisite: Journalism 102 or Telecommunications and Film 105.
Case studies of legal restrictions and guarantees affecting radio, television, motion pictures, advertising, and printed media.
- 217. Seminar: History of Journalism (3)
Prerequisite: Journalism 117.
Directed research on topics of history of American journalism.
- 218. Seminar in International Journalism (3)
Prerequisite: Journalism 118.
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.
- 221. 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.

222. Mass Communications and Public Opinion (3)

Prerequisite: Journalism 122 or 177.
Analysis of media and their opinion-shaping role; methods and effects of pressure groups; propaganda analysis; creation and perpetuation of images and stereotypes.

240. Major Projects in Mass Communications (1-6)

Prerequisite: Journalism 121 or Telecommunications and Film 183.
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. Maximum credit six units.

253. Seminar in Print Advertising Problems (3)

Prerequisites: Journalism 156 or 157.
Investigation of the practice, responsibility, and philosophy of advertising in print media with individual projects, cases, and current literature.

262. Seminar: Mass Communications and Society (3)

Prerequisite: Journalism 162.
Rights, responsibilities, and characteristics of mass media and mass communications practitioners; characteristics and responsibilities of audiences and society.

283. Seminar in Public Relations (3)

Prerequisite: Journalism 180.
Analysis and critique of contemporary public relations programs and theory. Development of a comprehensive public relations project involving original research.

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

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

299. 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.
Refer to graduate course descriptions in the sections of this bulletin under the Departments of Psychology, Sociology, Speech Communication, and Telecommunications and Film, for courses listed below.

Psychology

- 200. Seminar (3)
- 219. Seminar in Personnel Psychology (3)
- 220. Seminar in Organizational Psychology (3)
- 221. Seminar in Problems in Social Psychology (3)
- 226. Seminar in Political Psychology (3)
- 298. Special Study (1-3)
- 299. Thesis (3)

Sociology

- 210. Seminar in Social Disorganization (3)
- 220. Seminar in Social Organization (3)
- 240. Seminar in Social Psychology: Sociological Approaches (3)
- 260. Seminar in Research Methods (3)
- 297. Research (3)
- 298. Special Study (1-3)
- 299. Thesis (3)

Speech Communication

235. Seminar in Communication Theory (3)

Telecommunications and Film

- 200. Research and Bibliography (3)
- 201. Seminar in Broadcast Management (3)
- 202. Seminar in Broadcast Advertising Problems (3)
- 203. Seminar in History of Broadcasting (3)
- 205. Mass Communications Research (3)
- 210. Seminar in Writing for Broadcast and Film (3)
- 212. Criticism of Broadcasting and Cinema (3)
- 270. Seminar in Educational Telecommunications (3)
- 272. Seminar in Mass Communication Theory (3)
- 273. Mass Communications Message Design (3)
- 284. Seminar in Programming and Production (3)
- 298. Special Study (1-3)
- 299. Thesis (3)

MATHEMATICS

GENERAL INFORMATION

The Department of Mathematics, 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 THE GRADUATE DIVISION

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.

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 200-numbered courses in mathematics, exclusive of Mathematics 202, 203, 204A, 204B, and 299.

To satisfy the foreign language requirement either the student may present evidence that he has completed French 3, German 3, Russian 3, or Spanish 3 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.

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 200-numbered courses of which at least 12 units must be in 200-numbered courses in mathematics. The student is required to pass the departmental comprehensive examinations in mathematics. With the approval of the department, the student may select Plan A. In other cases, Plan B will be followed.

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 200-numbered mathematics courses exclusive of Mathematics 202, 203, 204A, 204B, and 299. 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.

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:

- Complete 15 units of 200-numbered courses, including:
 - Twelve units from any two of the following year-course sequences:
 - Mathematics 260A and 260B
 - Mathematics 265A and 265B
 - Mathematics 268A and 268B
 - Mathematics 270A and 270B
 - Three units of Mathematics 297
- Complete 9 additional units of graduate level or approved upper division mathematics courses, not including Mathematics 299.
- Complete 6 units of approved electives.
- Pass two written examinations as determined by the department.
- 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.

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:

- Complete 18 units of 200-numbered mathematics courses including:
 - Mathematics 240A and 240B.
 - Six units selected from Mathematics 241, 242, 243, 244, 245, 246, and 247;
 - Six units of other 200-numbered mathematics courses, except that Mathematics 202, 204A, 204B, and 299 may not be used to fulfill these units required.
- Complete 6 additional units of graduate level or approved upper division mathematics courses, not including Mathematics 299.
- Complete 6 units of approved electives.
- 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.

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 Chairman of the Department.

FACULTY

Chairman, Department of Mathematics: P. W. Shaw, Ph.D.
 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, D. W. Macky; Master of Science in Computer Science, C. F. Eckberg.
 Credential Adviser: T. P. Carpenter
 Professors: G. A. Becker, Ph.D.; R. D. Branstetter, Ph.D.; H. G. Bray, Ph.D.; C. B. Burton, Ph.D.; E. I. Deaton, Ph.D.; S. I. Drobnies, Ph.D.; J. E. Eagle, Ed.D.; L. D. Fountain, Ph.D.; Betty Garrison, Ph.D.; H. A. Gindler, Ph.D.; V. C. Harris, Ph.D.; A. R. Harvey, Ph.D.; H-T. Ho, Ph.D.; C. V. Holmes, Ph.D.; J. M. Moser, Ph.D.; L. G. Riggs, Ph.D.; Daniel Saltz, Ph.D.; P. W. Shaw, Ph.D.; N. B. Smith, Ph.D.; R. L. Van de Wetering, Ph.D.; L. J. Warren, Ph.D.; Margaret F. Willerding, Ph.D.
 Associate Professors: S. J. Bryant, Ph.D.; R. W. Davis, Ph.D.; R. A. Hager, Ph.D.; E. J. Howard, Ph.D.; R. G. Khazanie, Ph.D.; R. P. Kopp, Ph.D.; G. C. Lopez, Ph.D.; D. W. Macky, Ph.D.; Bernard Marcus, Ph.D.; Leon Nower, Ph.D.; Albert Romano, Ph.D.; D. R. Short, Ph.D.; A. L. Villone, Ph.D.; D. G. Whitman, Ph.D.
 Assistant Professors: Sara Baase, Ph.D.; D. L. Burdick, Ph.D.; T. P. Carpenter, Ph.D.; C. F. Eckberg, Ph.D.; J. D. Elwin, Ph.D.; F. J. Flanagan, Ph.D.; M. A. Herndon, Ph.D.; W. R. Hintzman, Ph.D.; Pia Korevaar, Ph.D.; Wanda A. Marosz, M.A.; D. B. McLeod, Ph.D.; J. E. Ross, Ph.D.; W. M. Self, Ph.D.; Vernor Vinge, Ph.D.

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**COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS
IN COMPUTER SCIENCE, MATHEMATICS, AND STATISTICS**

UPPER DIVISION COURSES

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|---|---|
| 105. Introduction to the Foundations of Geometry (3) | 150A-150B. Modern Algebra (3-3) |
| 106. Projective Geometry (3) | 152. Number Theory (3) |
| 107. Non-Euclidean Geometry (3) | 155. Mathematical Logic (3) |
| 108. Differential Geometry (3) | 156. Logical Foundations of Mathematics (3) |
| 119. Differential Equations (3) | 157. Turing Machines and Recursive Functions (3) |
| 121A-121B. Advanced Calculus (3-3) | 158. Automata Theory (3) |
| 124. Vector Analysis (3) | 160. Introduction to Topology (3) |
| 134. Probability (3) | 170. Partial Differential Equations (3) |
| 135A-135B. Numerical Analysis and Computation (3-3) | 175. Functions of a Complex Variable (3) |
| 136. Data Structures (3) | 176. Compiler Construction (3) |
| 137. Finite Mathematics, with Computer Applications (3) | 177. Artificial Intelligence (3) |
| 139. Programming Languages (3) | * 181. Selected Topics of Secondary Mathematics (3) |
| 140A-140B. Mathematical Statistics (3-3) | * 187A-187B. Probability and Statistics for Secondary School Teachers (3-3) |
| 141. Statistics, Theory and Applications (3) | 196. Advanced Topics in Mathematics (1-3) |
| 143. Stochastic Processes (3) | |
| 149. Linear Algebra (3) | |

* For National Science Foundation students only except with consent of instructor.

GRADUATE COURSES

200. Seminar (1-3)
Prerequisite: Consent of instructor.
An intensive study in advanced mathematics, topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.
202. Geometrical Systems (3)
Prerequisites: Mathematics 150A and an upper division course in geometry.
Ordered and affine geometries, decompositions, dilations. Projectivities and projective space. Absolute geometry, isometries, groups generated by inversions.
203. Topics in Algebra (3)
Prerequisites: Mathematics 121A and 150A.
Unique factorization domains, rings and ideals, groups, algebraic field extensions. A course designed for secondary school teachers.
- 204A-204B. Topics in Analysis (3-3)
Prerequisites: Mathematics 121A and 150A. 204A is prerequisite to 204B.
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.
205. Advanced Mathematical Logic (3)
Prerequisite: Mathematics 150A or 155.
First-order theories, completeness theorems, arithmetization, Gödel's incompleteness theorem.
206. 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. Maximum credit six units applicable on a master's degree.
212. Advanced Ordinary Differential Equations (3)
Prerequisites: Mathematics 119 and 121A.
Existence and uniqueness theorems, Wronskians, adjoint systems, Sturm-Liouville boundary value problems, equations of Fuchsian type.

214. Advanced Partial Differential Equations (3)

Prerequisite: Mathematics 170.
Theory and application of the solution of boundary value problems in the partial differential equations of engineering and physics by various methods; orthogonal functions, the Laplace transformation, other transformation methods, Green's functions.

220A-220B. Topology (3-3)

Prerequisite: Mathematics 160. Mathematics 220A is prerequisite to 220B.
Metric spaces, regular spaces, Hausdorff spaces, general topological spaces, arcs and curves, and the Jordan Curve Theorem.

222A-222B. Functional Analysis (3-3)

Prerequisites: Mathematics 149 and 160. Mathematics 222A is prerequisite to 222B.
Banach spaces, Hilbert spaces, spectral theory and Banach algebras.

224A-224B. Functions of a Complex Variable (3-3)

Prerequisites: Mathematics 121B and 175. Mathematics 224A is prerequisite to Mathematics 224B.

Analytic continuation, elliptic functions, conformal mapping, Riemann surfaces.

226A-226B. Functions of a Real Variable (3-3)

Prerequisite: Mathematics 121B. Mathematics 226A is prerequisite to Mathematics 226B.

Point sets, functions and limits, continuity, differentiations, Riemann and Lebesgue integration.

230. Rings and Ideals (3)

Prerequisite: Mathematics 150B.
A development of the theory of rings.

231. Theory of Groups (3)

Prerequisite: Mathematics 150B.
A development of the theory of groups.

232. Theory of Fields (3)

Prerequisite: Mathematics 150B.
A study of both finite and infinite fields, and field extensions.

233. Linear Algebra and Matrix Theory (3)

Prerequisite: Mathematics 149.
A study of matrices, determinants, and vector spaces.

240A-240B. Advanced Mathematical Statistics (3-3)

Prerequisites: Mathematics 121A and 134. 240A is prerequisite to 240B.
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.

241. Advanced Probability (3)

Prerequisites: Mathematics 121A and 134.
Probability spaces, integration of random variables, convergence in probability, product spaces and product measures; conditional measures and independent measures.

242. Non-parametric Statistics (3)

Prerequisite: Mathematics 140B.
Tolerance regions, randomness problems, most powerful rank tests, the invariance method, consistency and efficiency of tests.

243. Sample Surveys (3)

Prerequisite: Mathematics 140A.
The methods and applications of sample surveys, stratification and sampling, subsamples of clusters.

244. Multivariate Analysis (3)

Prerequisites: Mathematics 140B and 149.

Multivariate normal distributions, multivariate analysis of variance, factor analysis, canonical correlation.

245. Linear Statistical Hypothesis Testing (3)

Prerequisites: Mathematics 140A and 149.

The Multivariate Normal distribution; distribution of quadratic forms; linear and curvilinear models; general linear hypotheses of full rank, regression models.

246. Statistical Decision Theory and Applications (3)

Prerequisites: Mathematics 121A and 140B.

Sequential and nonsequential decision methods, complete classes of decision functions, admissible decision functions, adaptive control systems, stochastic stability and control.

247. Design of Experiments (3)

Prerequisites: Mathematics 140A and 149.

Experimental design models, a basic approach as well as a matrix algebra approach.

260A-260B. Theory of Computability (3-3)

Prerequisites: Mathematics 137, 155 and 157.

Turing machines and their variants, Gödel numbering and unsolvability results. Models of computation.

265A-265B. Formal Languages and Syntactic Analysis (3-3)

Prerequisites: Mathematics 136, 139, 157 or 158.

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.

268A-268B. Computer Architecture and Programming Systems (3-3)

Prerequisites: Mathematics 136 and 139.

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.

270A. Advanced Numerical Analysis (3)

Prerequisites: Mathematics 135B and 149.

Numerical methods in linear algebra (solving linear systems, inverting matrices, eigenvalue problems). Elimination and Iteration methods. Ill-conditioned systems. Detailed Error analysis.

270B. Advanced Numerical Analysis (3)

Prerequisite: Mathematics 270A.

Polynomial approximation (Least Squares approximation, orthogonal polynomials, Chebyshev polynomials, trigonometric approximation), Numerical solution of partial differential equations.

297. 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.

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

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

Individual study. Six units maximum credit.

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.

MICROBIOLOGY

GENERAL INFORMATION

The Department of Microbiology, in the College of Sciences, offers graduate study leading to the Master of Science degree in Microbiology. Facilities are available for research in all areas of microbiology including ecology, electron microscopy, genetics, immunology, marine microbiology, pathogenic bacteria and fungi, physiology, and virology.

After completing his course of study, the student may continue further academic study or obtain employment as a bioanalyst, research technician, community college teacher, or supervisory medical technologist.

ADMISSION TO THE GRADUATE DIVISION

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. To qualify for admission to classified graduate standing in the Department of Microbiology the student must also:

- have completed the minimum requirements equivalent to baccalaureate degree in microbiology at San Diego State University.
- have an undergraduate grade point average of 2.75 or demonstrate the ability to do superior graduate work.
- have a score of 1100 or better for the combined verbal and quantitative portions of the Graduate Record Examination Aptitude Test.
- pass a comprehensive departmental oral examination.
- submit two references from science faculty members attesting to capability to do graduate work in microbiology.
- have been accepted by a research adviser in the Department of Microbiology who can supply the necessary space and guidance.

ADVANCEMENT TO CANDIDACY

In addition to satisfying the general requirements for advancement to candidacy as stated in Part Three of this bulletin, the student must also pass a comprehensive oral qualifying examination in the Department of Microbiology before the end of the first semester as a classified graduate student.

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 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 200-numbered courses. Among the 200-numbered courses selected, the student's program must include courses in Microbiology 290, Bibliography; 291, Research Techniques; 299, 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.

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 Chairman of the Department of Microbiology.

FACULTY

Chairman, Department of Microbiology: H. A. Walch, Ph.D.

Graduate Adviser: Beatrice L. Kelly

Professors: W. L. Baxter, Ph.D.; Beatrice L. Kelly, Ph.D.; H. B. Moore, Ph.D.; H. A. Walch, Ph.D.

Associate Professors: E. A. Anderes, Ph.D.; L. N. Phelps, Ph.D.

Assistant Professor: J. F. Steenbergen, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN MICROBIOLOGY

UPPER DIVISION COURSES

Biology

- 101. Cellular Physiology (4)
- 103. General Cytology (4)
- 110. Ecology (4)
- 111. Aquatic Biology (3)
- 113. Biological Oceanography (4)
- 121. Systems Ecology (5)
- 148. Photophysiology (3)
- 148L. Photophysiology Laboratory (1)
- 150. Radiation Biology (3)
- 150L. Radiation Biology Laboratory (1)
- 151. Radioisotope Techniques in Biology (3)
- 155. Genetics (4)
- 157. Cytogenetics (4)
- 163. Microbial Genetics (4)
- 171. Mutagenesis (3)
- 175. Statistical Methods in Biology (3)
- 181. Advanced Cellular Physiology (3)
- 182. Immunochemistry (3)
- 182L. Immunochemistry Laboratory (1)

Botany

- 101. Phycology (4)
- 102. Mycology (4)

Chemistry

- 109A-109B. Fundamentals of Physical Chemistry (3-3)

Biology

- 262. Cytoplasmic Inheritance (3)
- 265. Molecular Biophysics (3)
- 270. Seminar in Genetics (2)
- 276. Physiological Genetics (3)

Botany

- 201. Seminar in Phycology (2)
- 202. Seminar in Mycology (2)

Microbiology

- 200. Seminar (2 or 3)
- 205. Seminar in Microbial Physiology (2)
- 210. Seminar in Pathogenic Bacteriology (2)
- 215. Seminar in Bacterial and Viral

- 109C. Fundamentals of Physical Chemistry Laboratory (2)
- 110A-110B. Physical Chemistry (3-3)
- 111. Physical Chemistry Laboratory (3)
- 155. Advanced Instrumental Methods (4)
- 170. Radiochemistry (3)
- 180. Chemical Oceanography (3)

Microbiology

- 102. Pathogenic Bacteriology (4)
- 104. Medical Mycology (4)
- 107. General Virology (2)
- 107L. General Virology Laboratory (2)
- 109. Hematology (4)
- 111A-111B. Epidemiology (2-2)
- 114. Bacterial and Viral Genetics (2)
- 114L. Bacterial and Viral Genetics Laboratory (2)
- 115. Advanced General Microbiology (4)
- 116. Marine Microbiology (4)
- 120. Animal Viruses (4)
- 130. Experimental Immunology (4)
- 180. Electron Microscopy (4)

Zoology

- 108. Histology (4)
- 121. General Entomology (4)
- 122. Advanced Entomology (4)
- 126. Medical Entomology (3)
- 128. Parasitology (4)

GRADUATE COURSES

Genetics (2)

- 230. Seminar in Medical Mycology (2)
- 240. Seminar in General Microbiology (2)
- 245. Seminar in Aquatic Microbiology (2)

- 250. Seminar in Virology (2)
- 260. Seminar in Immunology and Serology (2)

- 271. Bacterial Viruses (Bacteriophages) (4)

- 272. Advanced Pathogenic Bacteriology (4)

- 290. Bibliography (1)
- 291. Research Techniques (3)
- 297. Research (1-3)
- 298. Special Study (1-3)
- 299. Thesis or Project (3)

Refer to the Biological Sciences section of this Bulletin for the descriptions of the 200-numbered courses applicable to the Master of Science degree program in Microbiology.

MUSIC

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
- Theory

ADMISSION TO THE GRADUATE DIVISION

In addition to the general requirements for admission to the Graduate Division 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 classified graduate standing:

- (a) Have completed a bachelor's degree with a major in music including full preparation in theory, literature, and performance.
- (b) Satisfactorily complete placement examinations in theory, music history and literature, and performance. Details may be obtained from the Department of Music.
- (c) Be accepted in the emphasis of his 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.

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 200-numbered courses including Music 290.

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 299, Thesis, and to pass a final oral examination on the thesis. Students electing the composition emphasis will be required to enroll in Music 299 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.

SCHOLARSHIPS

Information on music scholarships may be obtained by writing to the Chairman, Music Scholarship Committee, Music Department, San Diego State University.

FACULTY

Chairman, Department of Music: J. D. Smith, M.M.
 Graduate Adviser: Master of Arts, J. D. Smith
 Credential Advisers: Edith Savage; J. D. Smith
 Professors: P. V. Anderson, M.M.; M. R. Biggs, Ph.D.; J. D. Blyth, Ed.D.; Conrad Bruderer, D.M.; R. G. Estes, Ed.D.; R. B. Forman, Ed.D.; C. K. Genzlinger, M.M.; M. E. Hogg, Ph.D.; L. C. Hurd, M.M.; A. A. Lambert, Ph.D.; J. J. S. Mracek, Ph.D.; Norman Rost, M.M.; Edith J. Savage, Ed.D.; J. M. Sheldon, Ed.D.; J. D. Smith, M.M.; M. S. Snider, M.A.; David Ward-Steinman, D.M.A.
 Associate Professors: F. W. Almond, Ph.D.; T. R. Brunson, D.M.A.; Marjorie Rohlfleisch, M.A.
 Assistant Professors: Howard Hill, M.A.; J. D. Logan, M.M.; D. M. Loomis, M.M.; Danlee Mitchell, M.S.; Jean Moe, M.A.; Ophelia L. Murphy, M.M.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN MUSIC

UPPER DIVISION COURSES

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|--|--|
| 107. Composition Laboratory (1) | 153. Opera Theatre (2) |
| 141A-141B-141C. Performance Studies Pedagogy (3-3-3) | 154A. Chamber Music Literature-Strings (2) |
| 142A-142B-142C. Performance Studies Laboratory (3-3-3) | 154C. Symphonic Literature (2) |
| 152A-152B. History of Music (3-3) | 154D. Keyboard Literature (2) |
| | 154E. Song Literature (2) |

GRADUATE COURSES

200. 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
201. Foundations of Music Education (3)
 History and philosophy of music education in relation to current trends in the teaching of music.
202. Administration and Supervision of Music Education (3)
 Curriculum, scheduling, finance, human relations, organizational aspects, and the role of the supervisor-consultant.
204. Comparative Music Education (3)
 Various international philosophical and technical approaches to teaching music to include the Orff, Kodaly, Suzuki and other systems.
207. Composition (2 to 3)
 Prerequisite: Music 107.
 Advanced composition for various media, development of original idiom, intensive study of modern music. Public performance of an extended original work as a project.
208. History and Development of Music Theory (3)
 Prerequisites: Music 108 and 152B.
 A survey of important theoretical approaches to music, from pre-Socratic writers to the present.
209. Advanced Orchestration (2)
 Prerequisite: Music 109B.
 Intensive work in the practical scoring for ensemble, full orchestra, and symphonic band. Score analysis. Selected works of the class members will be performed.

210. Electronic Music (3)

Prerequisite: Undergraduate concentration in composition.
 Theory, techniques, and composition of various kinds of electronic music.

211. Analytical Studies of Music (3)

Prerequisite: Music 108.
 Melodic, formal, contrapuntal, and harmonic analysis of music.

212. Advanced Contrapuntal Techniques (3)

Prerequisites: Music 59B and 106.
 Traditional and contemporary contrapuntal styles. The development of contrapuntal skills through writing.

213. Seminar: Music Theory (3)

Prerequisites: Music 59B and 106.
 Principles of traditional harmony and ear-training.

246A. Advanced Choral Conducting (2)

Prerequisite: Music 146B.
 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.

246B. Advanced Instrumental Conducting (2)

Prerequisite: Music 146B.
 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.

250. 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.

A. Piano	G. Clarinet	N. Baritone Horn	T. Contrabass
B. Harpsichord	H. Saxophone	O. Tuba	U. Harp.
C. Organ	J. Bassoon	P. Percussion	V. Classical Guitar
D. Voice	K. French Horn	Q. Violin	X. Classical Accordion
E. Flute	L. Trumpet	R. Viola	Y. Composition
F. Oboe	M. Trombone	S. Cello	

252. Seminar in Music History (3)

Prerequisites: Music 152B 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

253. Musicology (3)

Prerequisite: Music 152B.
 Problems and research in musicology. Projects in bibliography, source materials, music history, criticism, aesthetics, and related fields. Writing and presentation of a scholarly paper.

255. Seminar: A Major Composer (3)

Prerequisite: Music 152B. Completion of a seminar in Music 252 is recommended.
 The life, milieu and works of a major composer, such as Bach, Mozart, or Schubert will be studied. Maximum credit six units applicable on a master's degree.

260. Seminar in the Notation of Polyphonic Music (3)

Prerequisite: Music 152B. Completion of Music 252A is recommended.

Problems related to the notation of Medieval, Renaissance and Baroque music. Examples will be transcribed into modern notation.

A. Notation of Ensemble Music: White Mensural Notation.

B. Notation of Ensemble Music: Black Notation to the End of Franconian Notation.

270. Seminar: Interpretation of Early Music (3)

Prerequisites: Completion of Music 252A and 252B 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.

290. Research Procedures in Music (3)

Reference materials, bibliography, investigation of current research in music, processes of thesis topic selection, and techniques of scholarly writing.

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

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

Individual study. Six units maximum credit.

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.

PHILOSOPHY

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 THE GRADUATE DIVISION

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, they must have completed an undergraduate major with a minimum of 24 upper division units in philosophy including courses in Ancient, Medieval, and Modern History of Philosophy. A grade point average of 3.0 (B) is required in all upper division work 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 graduate program to include a minimum of 24 units in philosophy from courses listed below as acceptable on master's degree programs. At least 15 of these units must be in 200-numbered courses, including Philosophy 299, Thesis. Philosophy 298 may not be used to fulfill this 15-unit requirement. The remaining electives (6 units) must be selected with the approval of the adviser from courses in philosophy, in related disciplines, or in courses required for the community college credential.

FACULTY

Chairman, Department of Philosophy: W. H. Koppelman, Ph.D.

Graduate Adviser: Peter O'Reilly

Professors: Patricia A. Crawford, Ph.D.; R. J. Howard, Ph.D.; Jack McClurg, Ph.D.; S. M. Nelson, Ph.D.; Peter O'Reilly, Ph.D.; Harry Ruja, Ph.D.; A. E. Shields, Ph.D.; W. S. Snyder, Ph.D.; E. W. Warren, Ph.D.; S. N. Weissman, Ph.D.

Associate Professors: M. J. Carella, Ph.D.; W. H. Koppelman, Ph.D.; Rosemary Z. Lauer, Ph.D.; E. A. Troxell, Ph.D.

Assistant Professors: A. L. Feenberg, Ph.D.; Leon Rosenstein, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN PHILOSOPHY

UPPER DIVISION COURSES

- | | |
|--|----------------------------------|
| 102. History of Philosophy II (3) | 128. Theory of Ethics (3) |
| 104. History of Philosophy IV (3) | 131. Philosophy of Language (3) |
| 105A-105B. Twentieth Century
Philosophy (3-3) | 132. Philosophy of History (3) |
| 108. Existentialism (3) | 133. Philosophy of Education (3) |
| 109. Ordinary Language Analysis (3) | 135. Philosophy of Religion (3) |
| 110. Philosophy of Law (3) | 137. Philosophy of Science (3) |
| 121. Deductive Logic (3) | 141. History of Aesthetics (3) |
| 122. Inductive Logic (3) | 142. Philosophy of Art (3) |
| 123. Theory of Knowledge (3) | 164. American Philosophy (3) |
| 125. Metaphysics (3) | 175. A Major Philosopher (3) |
| 127. Values and Social Sciences (3) | 195. Selected Topics (3) |
| | 196. Topics in Asian Thought (3) |

GRADUATE COURSES

201. **Seminar in Ancient Philosophy (3)**
Prerequisite: 12 upper division units in philosophy including Philosophy 101.
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.
202. **Seminar in Medieval Philosophy (3)**
Prerequisite: 12 upper division units in philosophy including Philosophy 102.
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.
203. **Seminar in Modern Philosophy (3)**
Prerequisite: 12 upper division units in philosophy including Philosophy 103.
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.
205. **Seminar in Contemporary Philosophy (3)**
Prerequisite: 12 upper division units in philosophy including Philosophy 105.
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.
211. **Seminar in Legal Philosophy (3)**
Prerequisite: 12 upper division units in philosophy.
Directed research in recurrent themes of philosophical significance in jurisprudential literature.
212. **Seminar in Political Philosophy (3)**
Prerequisite: Twelve units of upper division work in philosophy.
Directed research in a major problem in political philosophy or the work of a major political philosopher.
221. **Seminar in Deductive Logic (3)**
Prerequisites: 12 upper division units in philosophy including Philosophy 121.
A comparison of deductive systems in logic. Problems of definability, consistency, and completeness. The role of logic in the foundations of mathematics.
223. **Seminar in Epistemology (3)**
Prerequisite: 12 units of upper division work in philosophy.
Basic problems concerning meaning, perception and knowledge.
225. **Seminar in Metaphysics (3)**
Prerequisite: 12 units of upper division work in philosophy.
An inquiry into the search for significant qualities of reality.
228. **Seminar in Ethics (3)**
Prerequisite: 12 units of upper division work in philosophy.
Contemporary ethical issues. Critical analysis of the works of some leading theorists, such as Moore, Dewey, Stevenson, and Toulmin.
231. **Seminar in Semantics and Logical Theory (3)**
Prerequisites: 12 upper division units in philosophy including Philosophy 121 and 131.
Contemporary issues in the foundations of logic and theories of language.
235. **Seminar in Philosophy of Religion (3)**
Prerequisite: 12 upper division units in philosophy including Philosophy 135.
A philosophical investigation of the nature of religious thought: its structure, growth, and significance.

236. Seminar in Philosophy of Art (3)

Prerequisite: 12 units of upper division work in philosophy.
An analysis, criticism, and comparative study of selected philosophies of art.

237. Seminar in Philosophy of Science (3)

Prerequisites: 12 upper division units in philosophy including Philosophy 122 and 137.
The methodology of the empirical sciences. The logical structure of science.

295. Seminar in Selected Topics (3)

Prerequisite: 12 units of upper division work in philosophy.
Directed research in a major problem or movement in philosophy. Maximum credit six units applicable on a master's degree.

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

Individual study. Maximum credit six units.
Prerequisites: 12 units of upper division work in philosophy and consent of staff; to be arranged with department chairman and instructor.

299. 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.

220. Principles of Neuromuscular Tension (3)

Prerequisite: Physical Education 160.

Theories underlying the causes of muscular hypertension and the application of hypokinetic principles in daily living.

221. Exercise Electrocardiography (3)

Principles of resting and exercise electrocardiography with emphasis on ergometric methods and application to exercise physiology.

223. Advanced Exercise Physiology Laboratory (3)

Nine hours of laboratory.

Prerequisite: Physical Education 167.

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.

227. Fitness of Adults (3)

One lecture and six hours of laboratory.

Prerequisite: Physical Education 167.

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.

261. Seminar in Motor Learning and Motor Performance (3)

Prerequisite: Physical Education 170.

A review of research in physical education and related fields plus experimental laboratory experiences in motor learning.

291. Research Techniques (3)

Prerequisites: Major in Physical Education, and Physical Education 185.

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.)

295. Seminar in Physical Education (3)

Prerequisites: Physical Education 291 and advancement to candidacy for the master's degree in physical education.

Selected subjects in physical education culminating in written projects. Limited to students following Plan B for the Master of Arts degree in Physical Education.

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

Prerequisite: Consent of Department Chairman.

Individual study. Six units maximum credit.

299. 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.

PHYSICAL SCIENCES

GENERAL INFORMATION

The Department of Physical Science, in the College of Sciences, offers graduate study leading to the Master of Arts degree for teaching service in the Physical Sciences with a concentration in astronomy, chemistry, geology, and physics. This curriculum is designed specifically for prospective teachers in the fields of the physical sciences.

ADMISSION TO THE GRADUATE DIVISION

All applicants for the degree 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 undergraduate preparation in the physical sciences must have substantially satisfied the undergraduate requirements for the sciences with a bachelor's degree in the physical sciences. (Refer to the general catalog for a description of this major.) 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.

Attention is called to the status of an unclassified graduate as described in Part Three of this Bulletin under Unclassified Graduate Student Enrollment. "An unclassified graduate student is not eligible to enroll in 200-numbered courses, except with permission of the instructor and concurrence of the Dean of the Graduate Division. All credit earned by an unclassified graduate student is subject to evaluation as to its acceptance for graduate credit in a master's degree curriculum."

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 FOR TEACHING SERVICE

In addition to meeting the requirements for admission to the Graduate Division with 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 program of 30 units, of which at least 15 must be in 200-numbered courses. A minimum of 18 units must be in the physical sciences, (astronomy, chemistry, geology, physical science, or physics), with at least 6 units in each of two fields. Of the 18 units, 6 units must be 200-numbered courses. The program must be approved by the Coordinator of Science Education. With the approval of the adviser, the student may select Plan A or Plan B. If Plan B is selected, the department will require a comprehensive examination in lieu of the thesis.

ASSISTANTSHIPS

Graduate teaching assistantships in physical science are available to a limited number of qualified students. Application blanks and additional information may be secured from the Chairman of the Department.

FACULTY

Chairman, Department of Physical Science: C. M. Shull, Ph.D.

Graduate Adviser: N. F. Dessel

Coordinator of Science Education: N. F. Dessel

Professors: N. F. Dessel, Ph.D.; C. F. Merzbacher, Ed.D.; C. M. Shull, Ph.D.

Associate Professors: Elsa Feher, Ph.D.; D. E. Ingmanson, Ed.D.; R. P. Metzger, Ph.D.

Assistant Professors: M. J. Dowler, Ph.D.; Maxine S. Jackson, Ph.D.; T. L. May, Ph.D.; C. F. Phleger, Ph.D.; J. H. Shideler, Jr., M.S.; Arthur Springer, Ph.D.; W. H. Thompson, M.S.; W. J. Wallace, Jr., Ph.D.

Faculty members in the Departments of Astronomy, Chemistry, Geology, and Physics are listed in the appropriate sections of this bulletin.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN THE PHYSICAL SCIENCES

With the approval of the department Graduate Committee, 100- or 200-numbered courses offered in the College of Sciences and in the School of Engineering may be used to satisfy the requirements for the degree.

GRADUATE COURSES

200. Seminar (2 or 3)

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

210. Advanced Topics in Physical Science (3)

Prerequisite: Undergraduate major or minor in one of the physical sciences. Selected topics in classical and modern physical science. Topics covered in a particular semester to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

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

Individual study. Six units maximum credit.

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

299. 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.

PHYSICS

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 an additional fifth year of more advanced studies and is best suited for those students who plan to terminate their graduate work at the fifth year level. Experimental facilities are available for studies in such fields as acoustics, nuclear physics, optics and spectroscopy, physical electronics, 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 as required in areas where radioactive materials and other ionizing-radiation-producing devices are used, such as, hospitals and related medical facilities, colleges and universities, industrial concerns, public health services, organizations operating nuclear power reactors, military installations, and the Atomic Energy Commission.

MASTER OF ARTS AND MASTER OF SCIENCE DEGREES IN PHYSICS

ADMISSION TO THE GRADUATE DIVISION

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 and pass the qualifying examination in physics. 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.

Attention is called to the status of an unclassified graduate student as described in Part Three of this bulletin under Unclassified Graduate Student Enrollment. "An unclassified graduate student is not eligible to enroll in 200-numbered courses, except with permission of the instructor and concurrence of the Dean of the Graduate Division. All credit earned by an unclassified graduate student is subject to evaluation as to its acceptance for graduate credit in a master's degree curriculum."

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 210A, 205, 219, 270A, 275A, 297 (3 units), and 299. 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 210A, 270A, 297 (3 units), 299, and three additional units chosen from Physics 205, 219, 260, and 275A. The remaining fifteen 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 THE GRADUATE DIVISION

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 towards 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 140, Principles of Human Physiology	3
Biology 150, Radiation Biology	3
Biology 150L, Radiation Biology Laboratory	2
Physics 220, Radiation Physics	2
Physics 221, Radiological Physics	2
Physics 222, Health Physics	2
Physics 297, Research	3
Physics 299, Thesis	3
Approved 200-numbered courses	3
Total units	23

The remaining 7 units of the minimum 30 units required for the degree must be selected from upper division or 200-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.

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 Chairman of the Department.

FACULTY

Chairman, Department of Physics: J. D. Templin, Ph.D.

Graduate Adviser: J. G. Teasdale

Credential Adviser: L. E. Smith, Jr.

Professors: J. D. Garrison, Ph.D.; R. H. Morris, Ph.D.; P. F. Nichols, Ph.D.; R. J. Piserchio, Ph.D.; L. L. Skolil, Ph.D.; L. E. Smith, Jr. Ph.D.; H. R. Snodgrass, Ph.D.; J. G. Teasdale, Ph.D.; J. D. Templin, Ph.D.; F. A. Wolf, Ph.D.

Associate Professors: L. J. Burnett, Ph.D.; D. M. Cottrell, Ph.D.; R. A. Lilly, Ph.D.; D. E. Rehfuess, Ph.D.; S. B. W. Roeder, Ph.D.; J. E. Solomon, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN PHYSICS

UPPER DIVISION COURSES

- | | |
|-------------------------------------|---|
| 114. Acoustics (3) | 180. Solid State Physics (3) |
| 122. Senior Physics Laboratory (2) | 186. Modern Optics (3) |
| 148. Nuclear Physics Laboratory (3) | 187. Modern Optics Laboratory (2) |
| 151. Nuclear Physics (3) | 190. Introductory Quantum Mechanics (3) |
| 156. Digital Computers (3) | 196. Advanced Physics (1-3) |
| 175. Advanced Mechanics (3) | |

GRADUATE COURSES

200. Seminar (1-3)

Prerequisite: Consent of instructor.

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

205. Theoretical Mechanics (3)

Prerequisite: Physics 175.

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.

210A-210B. Mathematics of Physics (3-3)

Prerequisites: Mathematics 118B; Physics 210A is prerequisite to Physics 210B.

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.

214. Advanced Acoustics (2)

Prerequisite: Physics 114.

The acoustic wave equation in two and three dimensions. Propagation of sound in bounded media and enclosures. Radiation and scattering. Electrical-mechanical-acoustical elements and circuits.

219. Statistical Mechanics (3)

Prerequisites: Physics 175 and 190.

Classical and quantum statistics, kinetic theory, low pressure phenomena, Boltzmann transport equation, irreversible processes.

220. Radiation Physics (2)

Prerequisites: Physics 148.

Topics in nuclear radiation phenomena, including interaction of radiation with matter; radiation detectors.

221. Radiological Physics (2)

One lecture and three hours of laboratory.

Prerequisites: Physics 148.

Topics and problems in radiological physics.

222. Health Physics (2)

One lecture and three hours of laboratory.

Prerequisites: Physics 148.

Topics and problems in health physics.

231. History of Physics (2)

Prerequisite: Bachelor's degree in physics or chemistry.

Lectures and readings in the history of physics with particular emphasis on the history of classical physics and the subsequent development of the quantum theory.

232. Concepts in Relativity (2)

Prerequisites: Physics 135A and credit or concurrent registration in Physics 135B.

The development of the concepts of relative motion from Einstein's assumptions and from experimental results. Designed for physics teachers.

248. Advanced Nuclear Physics Laboratory (3)

One lecture and six hours of laboratory.

Prerequisite: Physics 148.

Experimental work involving sub-critical reactor assembly, neutron generator, whole-body counter, etc.

251. Nuclear Physics (3)

Prerequisites: Physics 151 and 175.

Theory of nuclear forces, nuclear reactions, interaction of radiation with matter, radioactivity, nuclear structure and high energy physics.

270A-270B. Electromagnetic Theory (3-3)

Prerequisite: Physics 170. 270A is prerequisite to 270B.

Boundary value problems; time varying electric and magnetic fields; propagation of radiation; antennas, wave guides.

275A-275B. Quantum Mechanics (3-3)

Prerequisites: Physics 151, 175. 275A is prerequisite to 275B.

Quantum theory of radiation, molecular and nuclear systems. Approximation methods.

280. Theory of the Solid State (3)

Prerequisites: Physics 175, 180, and 190.

The band theory of solids, with applications to the electrical and optical properties of dielectrics, semi-conductors, and metals.

286. Advanced Optics (3)

Prerequisite: Physics 186.

Selected topics in advanced optics such as rigorous diffraction theory, optical spectra, lasers, non-linear optics, and applications of Fourier analysis to optical systems and information processing.

297. Research (1-3) Cr/NC

Prerequisite: Consent of department chairman.

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

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

Individual study. Six units maximum credit.

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

299. Thesis (3) Cr/NC

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

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

POLITICAL SCIENCE

GENERAL INFORMATION

The Department of Political Science, in the School 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 Public Affairs Institute, the Methodology Laboratory, and the International Relations Center. The Department of Political Science is an associate member of the Inter-University Consortium for Political Research.

ADMISSION TO THE GRADUATE DIVISION

All students must satisfy the general requirements for admission to San Diego State University with unclassified graduate standing, and to the Graduate Division 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 an undergraduate grade point average of not less than 3.0 in the major field.

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 college 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 which includes 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 200-numbered courses including Political Science 200 (The Scope and Method of Political Science), five other graduate seminars in political science, and Political Science 299 (Thesis). A final oral examination on the general field of the thesis is also required.

ASSISTANTSHIPS

Graduate teaching assistantships and graduate non-teaching assistantships in Political Science are available to a limited number of qualified students. Application blanks and further information may be obtained from the Chairman of the Department of Political Science.

FACULTY

Chairman, Department of Political Science: C. F. Andrain, Ph.D.

Graduate Adviser: C. F. Andrain

Professors: C. F. Andrain, Ph.D.; Melvin Crain, Ph.D.; I. K. Feierabend, Ph.D.; M. D. Generales, Degree in Law and Political Science, University of Athens; R. C. Gripp, Ph.D.; H. L. Janssen, Ph.D.; D. H. Johns, Ph.D.; T. J. Kahng, Ph.D.; N. V. Joy, Ph.D.; E. W. Miles, Ph.D.; Betty A. Nesvold, Ph.D.; L. V. Padgett, Ph.D.

Associate Professors: J. J. Conniff, Ph.D.; C. H. Cutter, Ph.D.; R. Y. Funston, Ph.D.; J. A. Hobbs, Ph.D.; H. J. Lewin, Ph.D.; W. A. Schultze, Ph.D.; L. M. Terrell, Ph.D.

Assistant Professors: D. G. Anderson, Ph.D.; L. D. Fairlie, Ph.D.; K. R. Keiser, Ph.D.; B. E. Loveman, Ph.D.; J. W. Soule, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN POLITICAL SCIENCE

UPPER DIVISION COURSES

- | | |
|--|---|
| 100A-100B. Research Methods in Political Science (3-3) | 173. Principles of International Law (3) |
| 105. American Political Thought (3) | 174. National Security Policy (3) |
| 106B. Socialist Political Thought (3) | 175. International Relations of the Latin American States (3) |
| 111A-111B. Theory of the State (3-3) | 176. International Relations of the Developing Nations (3) |
| 113. The Theory of Political Inquiry (3) | 177. Comparative Foreign Policies (3) |
| 114. Problems in Political Theory (3) | 180. Government of England (3) |
| 116. American National Government (3) | 181. Government of the Soviet Union (3) |
| 118. Urban Politics (3) | 184. The Mexican Political System (3) |
| 119. Community Political Behavior (3) | 185. Governments of Continental Europe (3) |
| 120. Political Parties (3) | 186. Comparative Communist Governments (3) |
| 123S. Contemporary American Politics (3) | 187. Governments and Politics of the Far East (3) |
| 124. The American Presidency (3) | 188. Governments and Politics of the African States (3) |
| 126. Political Groups and Movements (3) | 189. Government and Politics of the Middle East (3) |
| 129. The Politics of Bureaucracy (3) | 190. Comparative Political Systems (3) |
| 138. Law and the Political System (3) | 191. Government and Politics of the Developing Areas (3) |
| 139A-139B. American Constitutional Law (3-3) | 192. Political Change in Contemporary Africa (3) |
| 165. Dynamics of Modern International Crises (3) | 193. Proseminar in Cross-National Studies (3) |
| 170A-170B. International Relations (3-3) | 194. Political Change in Latin America (3) |
| 171. The Conduct of American Foreign Relations (3) | 195. Political Systems of Latin America (3) |
| 172. International Organization (3) | |

GRADUATE COURSES

200. 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.
210. Seminar in Political Theory (3)
Maximum credit six units applicable on a master's degree.
215. Seminar in American National Government (3)
Maximum credit six units applicable on a master's degree.
220. Seminar in Politics (3)
Prerequisite: Six units of upper division political science, three units of which must come from Political Science courses 115 through 134.
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.
221. Seminar in Political Participation (3)
Prerequisite: Six units of upper division political science, three of which must be from Political Science courses 115 through 134.
American political culture and subculture groupings as related to various dimensions of political behavior.

225. Seminar in the Legislative Process (3)
Prerequisite: Six units of upper division political science.
Legislative institutions and processes. Emphasis on U.S., national, state, and local legislatures.
226. Seminar in Political Psychology (3)
(Same course as Psychology 226.)
Prerequisites: Six units selected from Psychology 110, 112, 145; Political Science 100A-100B, 121, 122, 190.
Psychological factors on the individual's political behavior; psychological theory as it applies to political variables such as: ideology, conflict, consensus, and participation.
230. Seminar in Public Law (3)
Maximum credit six units applicable on a master's degree.
250. Seminar in Local Government (3)
Selected problems of state and local government and inter-governmental relations. Maximum credit six units applicable on a master's degree.
255. Seminar in Metropolitan Government and Politics (3)
Prerequisite: Political Science 117 or 118 or 119.
Government and politics in the world's major metropolitan areas. Maximum credit six units applicable on a master's degree.
270. Seminar in International Relations (3)
Maximum credit six units applicable on a master's degree.
272. Seminar in International Organization (3)
Prerequisite: Political Science 172.
Analysis of selected problems of international organization with special reference to those of the United Nations. Oral and written reports.
275. Seminar in Theories of International Relations (3)
Prerequisite: Political Science 170A or 170B.
Theoretical concepts used in the study of international political systems. Maximum credit six units applicable on a master's degree.
280. Seminar in General Comparative Political Systems (3)
Prerequisite: Political Science 190 or 191, and three additional units of upper division 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.
281. Seminar in Western Political Systems (3)
Prerequisite: Six units of upper division 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.
282. Seminar in the Political Systems of the Developing Nations (3)
Prerequisite: Six units of upper division 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.
283. Seminar in Latin American Political Systems (3)
Prerequisite: Political Science 190 or 191, and three additional units of upper division political science.
Political developments in selected Latin American nations, with an emphasis on the Mexican political system.

284. Seminar in Communist Political Systems (3)

Prerequisite: Six units of upper division 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.

290. 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.

291. 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.

297. Research in Political Science (3) Cr/NC

Prerequisite: Consent of the department chairman.
Research in political theory, political parties, comparative government, international relations, public law, or American government.

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

Prerequisite: Consent of staff; to be arranged with department chairman and instructor.
Individual study. Six units maximum credit.

299. 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.

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. The Master of Science degree program offers a choice of study in three concentrations: Clinical Psychology, Industrial and Organizational Psychology, and General Psychology for the Community College Teaching Credential. The Master of Science programs, although directed toward the professional preparation of students, may also serve to prepare students for doctoral programs in their 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 in other community facilities for graduate education and research in comparative, experimental and physiological psychology. Clinical practicum facilities 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 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.

APPLICATION FOR ADMISSION

In seeking admission to the graduate program in Psychology the student should write directly to the Graduate Studies Coordinator, 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 March 1.

ADMISSION TO THE UNIVERSITY AND THE GRADUATE DIVISION

After the student has received notification of eligibility for the graduate program in Psychology he must file an application for admission to San Diego State University with the Dean of Admissions and an application for admission to the Graduate Division with the Dean of the Graduate Division.

To be considered for admission to the graduate programs in Psychology 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, applicants must submit to the Psychology Department a copy of all undergraduate transcripts, three letters of recommendation from persons familiar with his academic performance, score reports for the GRE Aptitude Test and the GRE Advanced Test in Psychology and a completed departmental application form.

To qualify for admission to classified graduate standing in psychology, the student must also have:

- 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 40, 50, 70, 105, 110, 150, and one course from 111, 112, 113, 114, 115, 116, 117, or 118.
- A grade point average of not less than 3.0 in the last 60 units of his undergraduate program.
- A total scaled score above 950 on the GRE Aptitude Test.
- 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 to the department by the

March 1 deadline. It should be requested by the student that the score report for these tests be forwarded directly to the Department of Psychology; a score report of the GRE Aptitude Test must also be forwarded to the Graduate Division.

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.

GENERAL REQUIREMENTS FOR ALL MASTER'S DEGREE PROGRAMS

In addition to meeting the requirements for admission to the Graduate Division with 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 (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 200-numbered courses in psychology.

Psychology 299 (Thesis) and an oral examination on the thesis are required in all master's degree programs in the Department of Psychology. 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 foreign 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 24 units of approved graduate courses in psychology including Psychology 202A, 202B, 222, 223, and 299. Psychology 170, 175, and 177 are 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 requirements set forth above, the Master of Science degree may be obtained with the following three concentrations:

(1) *Clinical Psychology*: At least 36 units of approved upper division or graduate courses in psychology, including Psychology 202A, 202B, 204, 205 or 234, 211 or 212, 233, 296, and 299. Psychology 170 is also required for this program if similar content has not been completed as an undergraduate. Registration for 6 units of Psychology 296, Directed Field Experience, is contingent upon prior cooperative arrangement by the student and the Department of Psychology Practicum Committee.

(2) *Industrial and Organizational Psychology*: At least 30 units of approved upper division or graduate courses in psychology, including Psychology 202A, 202B, 219, 220, 223, 225, 297, and 299. Psychology 270 is required for this program if similar content has not been completed as an undergraduate.

(3) *General Psychology with the Community College Teaching Credential*: At least 28 units of approved upper division or graduate courses in psychology including Psychology 202A, 202B, 225, 233 or 296, and 299. Psychology 270, 275, and 277 are required for this program if similar content has not been completed as an undergraduate. Education 201 is also required and may be included among the 30 units required for the master's degree. The sole requirement for obtaining the Community College Instructor Credential is the completion of a master's degree in a subject matter area usually taught in a Community College. Upon completion of the master's degree the candidate should then apply directly to the Office of the Chancellor, California Community Colleges. Under current interpretation of the Education Code no additional courses in education are required; however, it is strongly suggested that graduate students enroll in professional courses in teacher education in order to enhance employment possibilities. Most Community Colleges require some professional preparation and/or experience. The following courses are suggested to enhance employment in the Community College: Education 251 (Instructional Methods and Materials: Community College) and Education 316 (Directed Teaching: Community College).

ASSISTANTSHIPS

Graduate teaching assistantships and graduate non-teaching assistantships in psychology are available to a limited number of qualified students. Application forms and further information may be obtained from the Chairman, Graduate Assistantships Committee, Department of Psychology.

FACULTY

Chairman, Department of Psychology: Robert Penn, Ph.D.

Graduate Adviser: W. A. Hunrichs

Credential Adviser: W. D. Kinnon

Professors: E. F. Alf, Ph.D.; C. F. Dicken, Ph.D.; Rosalind Feierabend, Ph.D.; P. S. Gallo, Jr., Ph.D.; J. M. Grossberg, Ph.D.; Herbert Harari, Ph.D.; R. C. Harrison, Ph.D.; W. A. Hillix, Ph.D.; W. A. Hunrichs, Ph.D.; O. J. Kaplan, Ph.D.; R. L. Karen, Ph.D.; Norman Kass, Ph.D.; W. D. Kinnon, Ph.D.; J. W. Koppman, Ph.D.; B. T. Leckart, Ph.D.; F. P. Leukel, Ph.D.; J. R. Levine, Ph.D.; Marigold Linton, Ph.D.; R. D. McDonald, Ph.D.; E. F. O'Day, Ph.D.; C. E. Parker, Ph.D.; Robert Penn, Ph.D.; Robert Radlow, Ph.D.; J. M. Sattler, Ph.D.; R. H. Schulte, Ph.D.; Evalyn F. Segal, Ph.D.; J. P. Sheposh, Ph.D.; W. R. Stevens, Ph.D.; M. B. Turner, Ph.D.

Associate Professors: J. B. Bryson, Ph.D.; R. G. Graf, Ph.D.; L. R. Franzini, Ph.D.; W. K. Graham, Ph.D.; F. W. Hornbeck, Ph.D.; Elizabeth Lynn, Ph.D.; T. T. Somas, Ph.D.; Miriam J. Rodin, Ph.D.; Margaret C. Sand, Ph.D.; J. R. Smith, Ph.D.; R. M. Yaremko, Ph.D.

Assistant Professors: R. H. Defran, Ph.D.; E. A. Jacobson, Ph.D.; A. J. Litrownik, Ph.D.; W. R. Manese, Ph.D.; Sharon M. McCordick, Ph.D.; Sandra O. Moltenauer, Ph.D.; Rod Plotnik, Ph.D.; Judy M. Price, Ph.D.; J. J. Spinetta, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN PSYCHOLOGY

UPPER DIVISION COURSES IN PSYCHOLOGY

- | | |
|--|---|
| 108. Advanced Developmental Psychology (3) | 123. Organizational Psychology (3) |
| 109. Mental Deficiency (3) | 124. Engineering Psychology (3) |
| 111. Experimental Psychology: Perception (4) | 125. Human Factors Psychology (4) |
| 112. Experimental Psychology: Social (4) | 141. Neural Bases of Behavior (4) |
| 113. Experimental Psychology: Physiological (4) | 142. Physiological Psychology (3) |
| 114. Experimental Psychology: Comparative (4) | 146. Advanced Topics in Social Psychology (3) |
| 115. Experimental Psychology: Personality and Clinical (4) | 151. Introduction to Clinical Psychology (4) |
| 116. Experimental Psychology: Learning (4) | 152. Introduction to Counseling and Therapy (3) |
| 117. Experimental Psychology: Primate Behavior (4) | 153. Advanced Abnormal Psychology (3) |
| 118. Experimental Psychology: Child Development (4) | 170. Advanced Statistics (3) |
| 121. Personnel and Industrial Psychology (3) | 171. Intermediate Correlational Analysis (3) |
| | 174. Theories of Perception (3) |
| | 175. Theories of Learning (3) |
| | 177. History of Psychology (3) |
| | 178. Theories of Personality (3) |
| | 179. Philosophical Issues in Psychology (3) |

GRADUATE COURSES

- 200. Seminar (3)**
Prerequisite: 24 upper division units of psychology and consent of the Graduate Adviser.
An intensive study in advanced psychology, topic to be announced in the class schedule. Maximum credit six units applicable on a master's degree.
- 201. Selected Topics in Clinical Psychology (3)**
Prerequisites: Psychology 151, 152 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.
- 202A-202B. Contemporary Psychology (3-3)**
Prerequisite: Bachelor's degree in psychology.
A comprehensive survey of contemporary literature in psychology, dealing with recent developments in the areas of learning and motivation, perception, psychophysiology, personality and psychodynamics, social behavior, and experimental inference.
- 204. Psychological Assessment I (4)**
Two lectures and six hours of laboratory.
Prerequisites: Psychology 105, 150, 178, and consent of the Graduate Adviser.
Theory and practice in assessment of intelligence and special abilities.
- 205. Psychological Assessment II (4)**
Two lectures and six hours of laboratory.
Prerequisites: Psychology 151, 204, and consent of the Graduate Adviser.
Theory and practice in assessment of special abilities, personality, and behavior disorders.
- 211. Seminar in Behavior Disorders of Childhood and Adolescence (3)**
Prerequisites: Psychology 106, 150, 151, and consent of the Graduate Adviser.
Contemporary approaches to emotional and behavioral problems of children and youth. Considers developmental, cognitive, and social variables as well as theory and treatment.
- 212. Seminar in Behavior Disorders of Adults (3)**
Prerequisites: Psychology 151 and consent of the Graduate Adviser.
Contemporary approaches to emotional and behavioral problems of adults. Considers developmental, cognitive and social variables as well as theory and treatment.
- 219. Seminar in Personnel Psychology (3)**
Prerequisites: Psychology 121, and consent of the 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.
- 220. Seminar in Organizational Psychology (3)**
Prerequisites: Psychology 123 or Business Administration 145, and consent of the 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.
- 221. Seminar in Problems in Social Psychology (3)**
Prerequisites: Psychology 110, 145, 175, and consent of the 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.
- 222. Seminar in Theoretical Psychology (3)**
Prerequisites: Psychology 175, 178, and consent of the Graduate Adviser.
Basic nature of theories, their relationship to data, and the characteristics of various types of constructs used in psychological theories.

GRADUATE COURSES

- 223. Experimental Design (3)**
Prerequisites: Psychology 110, 170, and consent of the Graduate Adviser.
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.
- 224. Advanced Experimental (3)**
One lecture and six hours of laboratory.
Prerequisite: Psychology 223, and consent of the Graduate Adviser.
Methods, techniques, and apparatus applicable to questions of various types. Special attention is given to sources of error, limitations on interpretations, and psychophysical methods. Students will design and carry out experiments in preparation for original independent investigations.
- 225. Principles of Test Construction (3)**
Prerequisites: Psychology 105, 170, and consent of the Graduate Adviser.
Detailed consideration of adequate sampling techniques, item construction, item analysis, determination and enhancement of reliability and validity of tests.
- 226. Seminar in Political Psychology (3)**
Prerequisites: Six units selected from: Psychology 110, 112, 145, Political Science 100A-100B, 121, 122, 190, and consent of the Graduate Adviser.
Psychological factors on the individual's political behavior; psychological theory as it applies to political variables such as: ideology, conflict, consensus, and participation. (Same course as Political Science 226.)
- 230. Seminar in Physiological Correlates of Behavior (3)**
Prerequisites: Psychology 50, 113 or 142, or nine units of biology; and consent of the Graduate Adviser.
An exploration of current research and theory in physiological psychology with emphasis on behavioral correlates and psychophysiology.
- 231. Seminar in Ethology and Comparative Psychology (3)**
Prerequisites: Psychology 114 or 117, or Biology 110 or Zoology 170, and consent of the Graduate Adviser.
Current problems in ethology and comparative animal behavior. Maximum credit six units applicable on a master's degree. (Same course as Biology 231.)
- 233. Counseling and Psychotherapy Laboratory (4)**
Two lectures and six hours of laboratory.
Prerequisites: Psychology 151, 152, 178, and consent of the graduate adviser.
Supervised practice in the application of psychotherapeutic and counseling techniques from selected cognitive, dynamic, interpersonal, and behavioral approaches.
- 234. Behavior Therapy Laboratory (4)**
Two lectures and six hours of laboratory.
Prerequisites: Psychology 151, 175, 178, and consent of the Graduate Adviser.
Supervised practice in the application of behavior therapy (individual treatment) and behavior modification (group method).
- 270. Statistical Theory (3)**
Prerequisites: Psychology 70, 105, and consent of the Graduate Adviser.
Study of quantitative methods in psychology with emphasis on normal inference and nonparametric statistics. Not open to students with credit in, or concurrent enrollment in, Psychology 170.
- 275. Advanced Principles of Learning (3)**
Prerequisites: Psychology 110, and consent of the Graduate Adviser.
The empirical data, basic principles and theoretical positions of major learning theorists. Not open to students with credit in, or concurrent enrollment in, Psychology 175.

277. Seminar in the History of Psychology (3)

Prerequisites: Psychology 110, and consent of the Graduate Adviser.
The history of modern psychology. Not open to students with credit in, or concurrent enrollment in, Psychology 177.

278. Applied Community Psychology (3)

Prerequisites: Psychology 200 (Seminar in Community Psychology), 201 and consent of the Graduate Adviser.

Systematic integration of principles of psychotherapy, behavior modification, child development, gerontology, social psychology, vocational testing, and psychological methodology into community psychology.

295. Field Work in Community Psychology (3)

Prerequisites: Psychology 199 (Special Study in Community Psychology), 200 (Seminar in Community Psychology), 201 and consent of the Graduate Adviser.

Applied community psychology in the service of the community, including supervision of undergraduate students and contact with community organizations.

296. Directed Field Experience (3 or 6) Cr/NC

Prerequisites: Psychology 205, 211 or 212, and 233.

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.

297. Research (1-3) Cr/NC

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

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

Individual projects involving library or laboratory research in any area of psychological investigation or interest. Maximum credit six units.

299. 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.

PUBLIC ADMINISTRATION AND URBAN STUDIES

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. Also, it is a participant in the NASPAA Urban Administration Fellows Program.

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 THE GRADUATE DIVISION

All students must satisfy the general requirements for admission to San Diego State University with unclassified graduate standing, and to the Graduate Division with classified graduate standing, as described in Part Three of this bulletin. The student must also satisfy the following requirements: (1) have had an adequate preparation in the social sciences as evaluated by the department (students with unclassified graduate standing may remove deficiencies in this requirement by taking courses which are in addition to the 30-unit minimum for the degree); and (2) have maintained an undergraduate grade point average of not less than 3.0 (B) in the major field.

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 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. The student must also complete as a part of his program: (1) at least 24 units of 200-numbered courses, including Public Administration 201; (2) a minimum of six additional units of upper division or graduate courses in public administration or related fields selected under advisement. Public Administration 299, 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 graduate adviser. The student's program must include a minimum of nine units in one of the fields of concentration: formulation and administration of public policy; urban administration; organizational behavior and development; recreation administration; or fiscal policy and administration. The student must include in his program Public Administration 296, Internship in Public Administration, unless this requirement is waived by the graduate adviser on the basis that he has had satisfactory qualifying experience. 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 THE GRADUATE DIVISION

All students must satisfy the general requirements for admission to San Diego State University with unclassified graduate standing, and to the Graduate Division with classified 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 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 6 units in political science, 6 units in sociology, 6 units in economics, and 3 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 college admission forms. Students are admitted to the program only in the fall semester of each year and applications must be received no later than March 31. After the student has received notification of tentative admission to the program from the Director, he must file an application for admission to San Diego State University with the Dean of Admissions, and an application for admission to the Graduate Division with the Dean of the Graduate Division.

ADVANCEMENT TO CANDIDACY

To be eligible for advancement to candidacy and admission to the second year of the program for this degree, the student must, in addition to holding classified graduate standing, have completed at least 24 units of the course work listed on the official program with an overall grade point average of 3.0 or higher, and otherwise comply with the regulations of the Graduate Division as described in Part Three of this bulletin.

SPECIFIC REQUIREMENTS FOR THE MASTER OF CITY PLANNING DEGREE

In addition to meeting the requirements for classified graduate standing in the Graduate Division 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 200-numbered courses, to include:

- a. City Planning 261, Urban Design and Land Use Planning Studio (6);
City Planning 266A, Seminar in Urban Planning (3);
City Planning 266B, Seminar in Urban Planning Methodologies (3);
City Planning 266C, Seminar in Urban Planning Implementation (3);
City Planning 266D, Seminar in Urban Planning Theory (3)
- b. Public Administration 148, The Metropolitan Area (3);
Public Administration 160, Principles of Planning (3)
- c. Nine units of 200-numbered courses in planning administration, history, readings and research.
- d. City Planning 296, Internship in Urban Planning (3-6)
- e. 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.

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 9 units in courses 297 and 298 will be accepted for credit toward the degree.

The student is required to pass a final comprehensive examination.

MASTER OF SCIENCE IN CRIMINAL JUSTICE ADMINISTRATION DEGREE

ADMISSION TO THE GRADUATE DIVISION

All students must satisfy the general requirements for admission to San Diego State University with unclassified graduate standing, and to the Graduate Division 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. After the student has received notification of tentative admission to the program from the Director, he must file an application for admission to San Diego State University with the Dean of Admissions, and an application for admission to the Graduate Division with the Dean of the Graduate Division.

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 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 and must have made up any deficiencies in his undergraduate program. The student must also complete as part of his graduate program the following: (1) at least 18 units of 200-numbered courses, including Public Administration 201, and 291 or 297, and Criminal Justice Administration 210, 216, and 245; (2) a minimum of 12 units of upper division or graduate courses in elective courses selected with the approval of the graduate adviser. Public Administration 299, 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 graduate adviser. If Plan B is selected, the student must select areas of concentration with the approval of the Director of the Criminal Justice Administration program.

Public Administration 140 and Criminal Justice Administration 146 are required in addition to the minimum 30 units unless completed as an undergraduate.

ASSISTANTSHIPS

Graduate teaching assistantships and graduate non-teaching assistantships in public administration are available to a limited number of qualified students. Application blanks and further information may be obtained from the Director of Programs in Public Administration and Urban Studies.

FACULTY

Director, Public Administration and Urban Studies: J. D. Kitchen, Ph.D.

Director, City Planning Program: J. A. Clapp, Ph.D.

Director, Criminal Justice Administration Program: R. L. Boostrom, M.Crim.

Graduate Advisers:

Master of Public Administration: W. R. Bigger, J. A. Gazell, S. H. Gilbreath, R. A. Hamilton, J. D. Kitchen, M. G. Walshok

Master of Science in Criminal Justice Administration: R. L. Boostrom, G. T. Gitchoff

Master of City Planning: J. A. Clapp

Professors: W. R. Bigger, Ph.D.; S. H. Gilbreath, Ph.D.; J. D. Kitchen, Ph.D.; A. J. Kochanski, Ph.D.; Frank Marini, Ph.D.

Associate Professors: J. A. Clapp, Ph.D.; J. A. Gazell, Ph.D.; G. T. Gitchoff, D.Crim.; R. A. Hamilton, Ph.D.

Assistant Professors: R. L. Boostrom, M.Crim.; Lorenzo Thompson, Ph.D.; M. G. Walshok, M.A.

Lecturers: A. W. Corso, M.C.R.P.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN PUBLIC ADMINISTRATION AND URBAN STUDIES

UPPER DIVISION COURSES

- | | |
|---|---|
| <i>Criminal Justice Administration</i> | 149. Comparative Public Administration (3) |
| 116. Contemporary Correctional Administration (3) | 156. Administration Systems Analysis (3) |
| 117. Juvenile Deviance and the Administrative Process (3) | 162. Fiscal and Budgetary Policy (3) |
| 188. Probation and Parole (3) | |
| <i>Public Administration</i> | <i>Urban Studies</i> |
| 114. Negotiation and Bargaining in the Public Service (3) | 148. The Metropolitan Area (3) |
| 115. Governmental Employer-Employee Relations (3) | 150. Decision-Making in the Urban Community (3) |
| | 154. Intergovernmental Relations in the United States (3) |

GRADUATE COURSES IN PUBLIC ADMINISTRATION AND URBAN STUDIES

201. Scope of Public Administration (3)
Prerequisite: Six units of upper-division public administration.
The development of public administration as an academic discipline; a systematic evaluation of the rise and operations of large-scale public bureaucracies.
203. Seminar in Theory of Administrative Organization (3)
Prerequisite: Public Administration 201.
Organization and management; the executive role, decision making; bureaucracy; authority and power; communication and control and organizational system; tactics and strategies in effective management.
- 205A. Empirical Approaches to Public Administration: Qualitative Analysis (3)
Prerequisite: Public Administration 201.
Examination of basic research approaches, i.e., legal, historical, small-group, etc.
- 205B. Empirical Approaches to Public Administration: Quantitative Analysis (3)
Prerequisite: Public Administration 201.
Study of techniques for the gathering of data in public administration with reference to survey research and methodology; examination of various data analysis methods.
230. Seminar in Public Financial Management (3)
Prerequisite: Public Administration 162.
Problems in the administration and budgeting of public revenues.
240. Seminar in Public Administration (3)
Maximum credit six units applicable to a master's degree.
241. Seminar in Public Personnel Administration (3)
Prerequisite: Public Administration 201.
Analysis of selected problems in personnel administration; special emphasis on organizational development and consultation skills as emerging personnel functions. Maximum credit six units applicable on a master's degree.
243. Science, Technology, and Public Policy (3)
Prerequisite: Public Administration 201, 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.
245. Readings in Public Administration (3)
Prerequisite: Credit or concurrent registration in Public Administration 201.
Selected readings in the literature of Public Administration.

249. Seminar in Comparative Administration (3)

Prerequisite: Public Administration 140.
Selected problems in administration, organization, and processes of foreign and international governments. Maximum credit six units applicable on a master's degree.

250. Management of Urban Governments (3)

Selected problems in the management of urban governments. Maximum credit six units applicable on a master's degree.

255. The Metropolitan Area (3)

Prerequisites: Public Administration 143, 148, or 150.
Selected problems in the government and administration of the world's major metropolitan areas.

260. Administration and Public Policy Development (3)

Prerequisite: 12 upper division units in social science.
Social, political, and administrative problems involved in governmental program development and change.

291. 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 theses.

296. Internship in Public Administration (1-6)

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.

297. Research in Public Administration (3) Cr/NC

Prerequisite: Consent of Director of City Planning Program.
Research in one of the areas of urban planning. Maximum credit six units applicable on a master's degree.

298. 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.

299. 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.

GRADUATE COURSES IN CITY PLANNING

260. Seminar in Urban Theory (3)

Prerequisite: Public Administration 160.
Study of the various empirically and normatively based theories of the city and urbanization process, with emphasis on communication and transaction and institutional approaches.

261. Urban Design and Land Use Planning Studio (6)

Two lectures and eight hours of laboratory.
Prerequisites: City Planning 266B.
Laboratory course concerned with graphic expression, principles of land use planning, land development, and urban design. Project integrating principles. (Formerly numbered Public Administration 261A-261B.)

262. History of Urban Planning (3)

History of urban development and of the field of urban planning.

265. Seminar in Planning Administration (3)

The administration of the planning function in urban government. Relationships between the planner and public and private agencies, governmental departments and elected officials. Case studies and problems.

266A. Seminar in Urban Planning (3)

Prerequisite: Public Administration 160.

Introductory seminar to the Master of City Planning Program, focusing upon the planner's perspective of urban problems and goal formation. (Formerly numbered City Planning 266.)

266B. Seminar in Urban Planning Methodologies (3)

Prerequisite: City Planning 266A.

Procedures and analytical techniques in urban planning.

266C. Seminar in Urban Planning Implementation (3)

Prerequisite: City Planning 266B.

Analysis of the content and function of zoning, subdivision regulation, codes, capital budgeting, urban renewal, model cities, and other implementation methods and programs.

266D. Seminar in Urban Planning Theory (3)

Prerequisite: City Planning 266C.

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.

267. Readings in Urban Planning. (3)

Selected topics in urban planning. Maximum credit six units applicable on a master's degree.

296. Internship in Urban Planning (3-6)

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. (Formerly numbered City Planning 293.)

297. Research in Urban Planning. (3) Cr/NC

Prerequisite: Consent of Director, Public Administration and Urban Studies. Research in one of the areas of public administration.

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

Individual study. Six units maximum credit.

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

GRADUATE COURSES IN CRIMINAL JUSTICE ADMINISTRATION

210. Seminar in the Administration of Criminal Justice (3)

Prerequisite: Criminal Justice Administration 110 or 146.

Administrative problems of criminal justice systems.

211. Seminar in Correctional Group Method (3)

Prerequisite: Sociology 113 or 114 or Criminal Justice Administration 111 or 188.

An exploration of current research and use of group methods in the correctional segment of the criminal justice system.

212. Seminar in the History of Correctional Reform (3)

Prerequisite: Criminal Justice Administration 111 or 188 or Sociology 113 or 114.

The historical development of concepts and practices in the field of corrections with particular emphasis upon developments in the United States.

216. Seminar in Correctional Administration (3)

Prerequisite: Criminal Justice Administration 116.

Selected problems in the administration of correctional problems and institutions. Maximum credit six units applicable on a master's degree.

245. Readings in Criminal Justice Administration (3)

Prerequisite: Six graduate units in criminal justice administration.

Selected readings in the literature of criminal justice administration.

RUSSIAN

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 staff in charge of the graduate program in Russian is composed of professors whose native tongue is Russian, or who are familiar with Russia through travel or intensive studies, enabling them to present authoritatively the Russian language and culture. Library facilities include resources in Russian literature and linguistics, consisting of books, periodicals and newspapers. A foreign language laboratory with modern equipment is available to both graduate and undergraduate students.

ADMISSION TO THE GRADUATE DIVISION

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. 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 200-numbered courses, including Russian 299, Thesis. If Plan B is followed, the student must pass a comprehensive examination in lieu of Russian 299.

ASSISTANTSHIPS

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

FACULTY

Chairman, Department of Germanic and Slavic Languages and Literatures: L. A. Kozlik, Ph.D.

Graduate Adviser: Vytas Dukas

Credential Adviser: Vytas Dukas

Professors: Vytas Dukas, Ph.D.; L. A. Kozlik, Ph.D.

Associate Professor: L. A. Fetzer, Ph.D.

Assistant Professor: Renate Bialy, M.A.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN RUSSIAN

UPPER DIVISION COURSES

103. Old Russian Literature (3)

104. Russian Literature of the 18th Century (3)

105A-105B. The Russian Short Story, Drama, and Poetry of the 19th Century (3-3)

110A-110B. The Russian Novel of the 19th Century (3-3)

111. Russian Literature of the 20th Century (3)

130. Russian Syntax and Stylistics (3)

131. Russian Phonology and Morphology (3)

GRADUATE COURSES

201. History of the Russian Language (3)

Prerequisite: 12 units of upper division Russian.
The historical development of the Russian language.

202A-202B. Old Church Slavic (3-3)

Prerequisite: 12 units of upper division Russian.
Structure of Old Church Slavic with readings and analysis of medieval Slavic texts.

203. Slavic Linguistics (3)

Prerequisite: 12 units of upper division Russian.
Selected topics in historical and comparative Slavic linguistics.

204A-204B. The Soviet Novel and Short Story (3-3)

Prerequisite: 12 units of upper division Russian.
Intensive study of major writers of Soviet prose fiction.

205. Russian Poetry from Pushkin to the Present (3)

Prerequisite: 12 units of upper division Russian.
The major Russian poets of the nineteenth and twentieth centuries.

253. Nineteenth Century Russian Literature (3)

Prerequisite: 12 units of upper division Russian: Major developments in the literature of the time.
Literary criticism from the early 18th century to the present.

255. Seminar: A Major Author or Movement (3)

Prerequisite: Russian 290.
A major author or movement. Maximum credit six units applicable to a master's degree.

290. Research and Criticism (3)

Prerequisite: 12 units of upper division Russian.
Purposes and methods of research in Slavic linguistics and in the literatures; theories and practice of literary criticism.

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

Individual study. Six units maximum credit.
Prerequisite: 18 units of upper division Russian and consent of staff; to be arranged with department chairman and instructor.

299. 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.

SOCIAL SCIENCE

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 THE GRADUATE DIVISION

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, 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 6 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; Anthropology 197, Investigation and Report; and at least 15 upper division units including courses in archaeology, ethnology, physical anthropology, and social anthropology.

Economics: Economics 100A-100B or 104A-104B.

Geography: Geography 1 and 2, and 15 units of upper division courses in geography, including three units from each of the following blocks of courses: 100-109, Systematic-Physical Geography; 110 or 111, Theoretical Geography; 119-139, Regional Geography; 150-179, Systematic-Cultural Geography; 180-189, 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 Catalogue.

Sociology: Sociology 1, 10, and 101.

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 200-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 fifteen units in one area on the master's degree program including at least nine units of 200-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 200-numbered courses in each.

4. Course 299, 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 205, Geographic Research and Techniques of Presentation (3).

Political Science: Political Science 200, The Scope and Method of Political Science (3).

FACULTY

Coordinator of Graduate Programs:
J. W. Leasure

Graduate Advisers:

Anthropology: L. L. Leach

Economics: J. W. Leasure

Geography: H. E. Heiges

Political Science: J. A. Hobbs

Sociology: D. S. Milne

Faculty members in the Departments of Anthropology, Economics, Geography, Political Science, and Sociology are listed in the appropriate sections of this bulletin.

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.

SOCIAL WORK

GENERAL INFORMATION

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.

The School also offers a program of professional education leading to the Master of Science in Social Work degree. Students who have completed the undergraduate social welfare major at San Diego State University, or its equivalent, can be considered for admission to this program. Approval for this new degree program was granted in February, 1970.

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.

To meet these objectives, the graduate curriculum in the School of Social Work offers a program of classroom and field instruction which includes course content in the following four major areas:

1. **Social Welfare Policy and Services.** Social welfare policy and services; their development, organization and operation; the purpose and status of current programs; the influence of social, economic and political factors; the role of the social worker in evaluation and improvement of existing programs with reference to the philosophy of social work; and the assessment of unmet needs and their resolution.
2. **Human Behavior and the Social Environment.** Normal growth and development of the individual from childhood through old age within the social contexts of the family, group relationships, occupational settings, and community structures; the nature and causes of impaired social and emotional functioning; the nature and changing character of social and cultural structures with attention to the interaction between the individual and his social environment and the reciprocal effects of the interaction.
3. **Social Work Practice.** Objectives, general theory, basic principles and values and ethics of the profession in social work practice; the first-year sequence is the same for all students and covers the fundamentals of practice; in the second year, there may be a concentration on intervention with individuals, families, and groups, or intervention with organizations and communities; appropriate attention to the enabling methods of research and administration.
4. **Field Instruction.** Practice carried on in field settings under educational direction, the objectives of which include: a beginning mastery of professional social work practice; the disciplined use of "self" to give professional service; the integrated use of knowledge, attitudes, and skills in achieving social work goals; broadening and deepening knowledge of the function and application of social work practice in a variety of fields and circumstances; and an understanding of and an involvement with the problems of concern to social work.
5. **Research.** Research methodology, its processes and decision-making; developing a research proposal, data collection and analysis and writing a report based on individual or group project; course objectives include a beginning mastery of research on social work issues or social problems and familiarity with systematic approaches to the study and analysis of practice.

APPLICATION FOR ADMISSION

In seeking tentative admission to the program leading to the Master of Social Work degree or the Master of Science in 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 Dean of the School of Social Work Admissions Committee not later than February 15.

After the student has received notification of eligibility to the School of Social Work from the Dean of the School of Social Work, he must file an application for admission to San Diego State University with the Dean of Admissions and an application for admission to the Graduate Division with the Dean of the Graduate Division as indicated below.

ADMISSION TO THE UNIVERSITY AND THE GRADUATE DIVISION

After the student receives notification of recommendation for admittance to the School of Social Work, the Admissions Office of the University will send the student all necessary application materials for admission to the University. Requirements for admission to the Graduate Division (which include the completion of the Graduate Record Examination Aptitude Test and the filing of an official program) are stated in Part Three of this bulletin under Admission of Graduate Students to the Graduate Division. Requirements for admission to the School of Social Work are listed below.

SPECIFIC REQUIREMENTS FOR ADMISSION TO THE SCHOOL OF SOCIAL WORK

In addition to satisfying the requirements for admission to the Graduate Division of San Diego State University, 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 socio-humanistic 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 a personality 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 on all courses required in the first year of his program.
2. Be recommended by the faculty of the School of Social Work.
3. Be approved for advancement by the Graduate Council of the Graduate Division.

SPECIFIC REQUIREMENTS FOR THE MASTER OF SOCIAL WORK DEGREE

1. Fifty-six units of graduate work within the curriculum of the School of Social Work are required for the degree. Of these units
 - a. At least twenty-four 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. 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 fifty-six (56) units required for the MSW degree, 6 units, with permission of the Dean 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 when all requirements for the degree are completed. In special circumstances, students may be permitted to validate credits earned outside these time limits by passing satisfactorily comprehensive examinations on the outdated course or courses.
3. A maximum of 9 units of combined credit in courses 297A-297B and 298 may be included on a student's official program for the Master of Social Work degree.
4. 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.
5. 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. In addition, the student must have earned a 3.0 (B) grade point average in both academic courses and field instruction in his program. Grade point average in academic courses is independent of grade point average in field instruction.
6. Second year electives must include at least 6 units of 2-semester Type A courses and one Type B course during the duration of the degree program.

COURSE REQUIREMENTS

The program of study normally required for all beginning first-year graduate students in the Master of Social Work degree program is as follows:

Sequence	Semester				Total units
	I	II	III	IV	
Social Welfare Policy and Services...	SW200 (3)	SW201 (3)			(6)
Human Behavior and Social Environment...	SW220 (3)	SW221 (3)			(6)
Social Work Practice...	SW230 (3)	SW231 (3)	SW232 or SW234 (3)	SW233 (3)	(12)
Field Instruction...	SW250 (4)	SW251 (4)	SW252 or SW255 (5)	SW253 or SW256 (5)	(18)
Research...	SW290A (2)	SW290B (2)	SW297A (3)	SW297B (3)	(10)
Electives*			2-3 Units	2-3 Units	(4-6)
Total units...	(15)	(15)	(13-14)	(13-14)	(56-58)

* To be chosen on individual student basis from electives but must include courses from both Type A and Type B groupings during the duration of the degree program.

MASTER OF SCIENCE DEGREE IN SOCIAL WORK

ADVANCEMENT TO CANDIDACY

Students who have been admitted to the School of Social Work and have enrolled in the Master of Science program for the fall semester will meet with their advisers during the first half of the Spring semester following to discuss the advisability of undertaking the balance of the calendar year professional degree program.

To be eligible for advancement to candidacy and for admission to the summer session of the Master of Science degree program, the student must, in addition to holding classified graduate standing:

1. Have earned a 3.0 (B) grade point average on all courses required in the first semester of his program.
2. Be recommended by the faculty of the School of Social Work.
3. Be approved for advancement by the Graduate Council of the Graduate Division.

SPECIFIC REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE

1. A minimum of thirty units of graduate work within the curriculum of the School of Social Work are required for the degree. Of these units
 - a. At least twenty-four must be completed in residence at San Diego State University.
 - b. Of the minimum thirty (30) units required for the Master of Science degree, those units designated by the course Social Work 291, Seminar, may be fulfilled, with permission of the Dean of the School of Social Work, by substituting relevant 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 when all requirements for the degree are completed. In special circumstances, students may be permitted to validate credits earned outside these time limits by passing satisfactorily comprehensive examinations on the outdated course or courses.
 3. A maximum of 6 units of combined credit in courses 297A-297B and 298 may be included on a student's official program for the Master of Science in Social Work degree.
 4. 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.
 5. 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. In addition, the student must have earned a 3.0 (B) grade point average in both academic courses and field instruction in his program. Grade point average in academic courses is independent of grade point average in field instruction.
 6. Electives must include at least one Type B course during the duration of the degree program.
 7. Student may use all M.S.W. course listings in making up program of study.
- The completion of the Master of Science in Social Work degree normally requires two full semesters' work followed by the completion of 6-8 units during the Summer Session.

COURSE REQUIREMENTS

The program of study normally required for all students in the Master of Science in Social Work degree program is as follows:

Sequence	Semester			Total units
	I	II	Summer (12 weeks)	
Social Work Practice.....	SW 232 (3) or SW 234 (3)	SW 233 or SW 235 (3)	SW 238 (6-8)	(6)
Social Work Field Instruction ...	SW 236 (4)	SW 237 (4)		(14-16)
Research.....	SW 297A (3)	SW 297B (3)		(6)
Electives.....	3 units	1-3 units		(4-6)
Total units.....	(13)	(11-13)	(6-8)	(30-34)

* To be chosen on individual student basis, but must include a Type B course during the duration of the degree program.

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 entitled "Regulations of the Graduate 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. The standing of students so withdrawn will change from classified to unclassified.

PROBATIONARY ADMISSION

Students admitted to San Diego State University with unclassified graduate standing and 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 probationary unclassified 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 that the student:

1. Be disqualified from further participation in the curriculum, or
2. Be continued in probationary unclassified 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 consideration for waivers of non-resident tuition fees and the other forms of 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 Dean 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 will be recommended for an award.

FIELD INSTRUCTION DURING PERIODS OF UNIVERSITY HOLIDAYS

Because of the nature of field instruction and the student's responsibility to the agency to which he is assigned, and the clientele it serves, field instruction may continue on the regular work schedule of the agency under certain circumstances.

FACULTY

Dean, School of Social Work: Kurt Reichert, Ph.D.

Associate Dean, School of Social Work: J. B. Kelley, D.S.W.

Professors: R. W. Griffin, Ph.D.; G. O. Haworth, D.S.W.; Gideon Horowitz, Ph.D.; W. H. Ishakawa, D.S.W.; J. B. Kelley, D.S.W.; Ruth M. Kukkonen, M.S.W.; W. F. Lee, D.S.W.; Jean M. Maxwell, M.S.S.; Ruth H. Morgan, D.S.W.; Robert Ontell, D.S.W.; Ann H. Pilcher, M.S.W.; D. M. Pilcher, M.S.W.; Kurt Reichert, Ph.D.; E. P. Stanford, Ph.D.; Jack Stumpf, Ph.D.; I. B. Tebor, Ph.D.

Associate Professors: E. F. Anderson, M.S.W.; Kamila U. Baily, M.S.W.; Virginia L. Clary, M.S.W.; Rosalind Guidry, Ph.D.; Joanne Haworth, M.S.W.; Elsie Herman, M.A.; Marion J. Kahn, M.S.; Antonia Pantoja, Ph.D.; Wilhelmina Perry, M.S.W.; Maria A. Sardinias, M.S.W.

Assistant Professors: J. A. Ajemian, Ph.D.; L. M. Cohen, M.S.W.; William Fletcher, M.S.W.; Martha Fort, M.S.W.; Winoma Gilliam, M.S.W.; P. H. Raymer, M.S.W.; Elizabeth V. Watson, M.S.S.W.; L. A. Weissman, M.A.

Lecturers: J. L. Brewer, M.S.W.; G. E. Hudson, M.S.W.; D. K. LeRoy, M.S.W.; Rita A. Morgan, M.S.W.; Olive P. P. Ngubo, M.S.W.; Florence E. Olivier, M.S.W.; G. W. Pepper, D.S.W.; W. A. Polowniak, Ph.D.; Louise A. Stanger, M.S.W.; P. S. Treske, M.S.W.

Appointments under Grants from Outside Funds:

Lecturers: M. L. Murphy, M.A.; Mark Schiffrin, M.S.W.; Barbara E. Shenko, M.S.S.

REQUIRED COURSES IN M.S.W. OR M.S.S.W. PROGRAMS

Social Work 200, 201, 220, 221, 230, 231, 236, 237, 238, 250, 251, 252 or 255, 253 or 256, 290A-290B, 297A-297B

Electives:

Type A—Social Work Roles

Social Work 205, 232, 233, 234, 235, Selected sections of 291 and 298

Type B—Substantive Content Areas

Social Work 202, 203, 222, 270, selected sections of 291 and 298

GRADUATE COURSES

Prerequisite for enrollment in all graduate courses: admission to the School of Social Work.

200. Social Welfare Policy and Services I (3)

Social welfare as a societal institution; philosophical, historical, and comparative analysis of the welfare functions, issues, and problems, with special focus on personal and social deprivation.

201. Social Welfare Policy and Services II (3)

Prerequisite: Social Work 200

Conceptual analysis of social welfare programs related to income maintenance and other social service areas, including social insurance, child welfare, and community development.

202. Social Welfare Policy and Services III (3)

Prerequisite: Social Work 201.

Problems and issues in emerging social welfare programs, including analysis of the structure of social services and of social work as a profession.

203. Social Welfare Policy and Services IV (3)

Prerequisite: Social Work 201.

Analysis of existing or projected social welfare programs or service.

205. Social Work Administration I (3)

Prerequisite: Social Work 201.

Administration as an aspect of all social work practice. Nature of social work administration involving board and staff participation in determining goals and in planning programming and management operations to achieve goals. Administrative organization; interagency policy and control; management processes.

220. Human Behavior and Social Environment I (3)

Theoretical perspectives on man in the changing world. View based on biological, psychological, interpersonal, and social structure assumptions over the life-cycle, for application to social work practice.

221. Human Behavior and Social Environment II (3)

Prerequisite: Social Work 220.

Examination of deviant behavior from relative frameworks of a medical model and a career process model. Selected social problem areas are used as illustrations.

222. Human Behavior and Social Environment III (3)

Prerequisite: Social Work 221.

Theories of natural and induced change in human behavior which have utility for social work practice.

230. Social Work Practice I (3)

Prerequisite: Concurrent registration in Social Work 250.

Principles of social work practice with individuals, families, groups, and communities. Attention is given to social work objectives, principles and skills.

231. Social Work Practice II (3)

Prerequisites: Social Work 230 and concurrent registration in Social Work 251.

Principles of social work practice with individuals, families, groups, and communities with emphasis on refinement of skills of social study and social problem analysis. Attention to interactional and small group processes in determination of goals and change.

232. Social Work Practice III (3)

Prerequisites: Social Work 231 and concurrent requirement in field work.

Social work intervention with families and groups toward personal, social, organizational, and institutional change and problem solving. Emphasis on social, ethnic, and economic interaction contexts.

233. Social Work Practice IV (3)

Prerequisites: Social Work 231 and concurrent requirement in field work.

Designed to offer opportunity for integration and application of the student's knowledge of an array of approaches to practice. Specific content relevant to selected models of social problems experienced by individuals, families, and groups in interaction with their social environment.

234. Social Work Practice V (3)

Prerequisites: Social Work 231 and concurrent requirement in field work.

Applications of major theories of social change to improve the social environment and ameliorate social problems of individuals, families and groups. Model problems in social welfare planning; mobilization of resources; analysis of issues and resistances; designing programs and structures; and reassessment.

235. Social Work Practice VI (3)

Prerequisites: Social Work 231 and concurrent requirement in field work.

Exploration of collaborative social work roles with other professional roles in planned change. Differential applications of values, strategies and power in social welfare and host settings, by and on behalf of various population groupings.

236. Social Work Practice VII (4)

Prerequisite: Concurrent registration in Social Work 232 or 234.

Laboratory field instruction enabling the student to integrate social work theory, knowledge and concepts in developing interventive skills with individuals, families, groups, organizations and communities. Enrollment limited to students admitted to the Master of Science in Social Work degree program.

237. Social Work Practice VIII (4)

Prerequisite: Social Work 236 and concurrent registration in Social Work 233 or 235.

Continuation of Social Work Practice VII with emphasis on refinements of skills in intervention with individuals, families, groups, organizations and communities.

238S. Social Work Practice IX (6-8)

Prerequisite: Social Work 237.

Emphasis on the further development of skills with individuals, families, groups, organizations, and communities. Enrollment limited to students admitted to M.S.S.W. program.

250. Field Instruction I (4)

Prerequisite: Concurrent registration in Social Work 230.

Field instruction in a public or voluntary social work setting. Experiences are drawn upon in relation to classroom learning to emphasize application of social work objectives, principles and skills to services to individuals, families, groups, and communities.

251. Field Instruction II (4)

Prerequisite: Social Work 250 and concurrent registration in Social Work 231.

Continuation of field instruction initiated in Social Work 250. Opportunities are provided for the application of social study and social problem analysis to experience with interactional and small group processes.

252. Field Instruction III: Individuals, Families and Groups (4-5)

Prerequisites: Social Work 251 and concurrent registration in Social Work 232.

Field instruction in a social work setting providing a concentration on social work practice aimed at achieving change in or on behalf of individuals, families, and groups. Practice under educational direction at an advanced level.

253. Field Instruction IV: Individuals, Families and Groups (4-5)

Prerequisite: Social Work 252.

Continuation of Field Instruction III at an advanced level. Emphasis is placed on the use of diverse problem-solving strategies and resources in social work.

255. Field Instruction V: Organizations and Communities (4-5)

Prerequisites: Social Work 251 and concurrent registration in Social Work 234.

Field instruction in a social work setting providing a concentration on social work practice aimed at achieving changes in social policies, organizations, and communities. Practice under educational direction at an advanced level.

256. Field Instruction VI: Organizations and Communities (4-5)

Prerequisite: Social Work 255.

Continuation of Field Instruction V at an advanced level. Emphasis is placed on the use of diverse social work strategies and resources in social planning or community development.

270. Seminar. Social Work Analysis (1-4)

Discussion of student experience in field instruction and its broader implications. Maximum credit four units applicable on a master's degree.

290A-290B. Social Work Research Methods and Analysis (2-2)

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.

291. Seminar (2-3)

Selected topics in social work and/or social welfare. Topics to be announced in the class schedule. Maximum credit six units applicable on a master's degree.

297A-297B. Research (3-3) Cr/NC

Prerequisite: Social Work 290.

Research in the field of social work and completion of a research project. Individual or group project.

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

Prerequisite: Consent of staff; to be arranged with Dean and instructor. Individual study. Six units maximum credit.

SOCIOLOGY

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 Research Center for use by the faculty and graduate students.

ADMISSION TO THE GRADUATE DIVISION

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, 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 101, Classical Sociological Theory, or Sociology 103, Contemporary Sociological Theory; Sociology 140, 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 majoring in sociology must also have completed Sociology 164, Methods of Social Research, either at the undergraduate or graduate level.

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 include in his graduate program a minimum of 24 units from courses in sociology listed below as acceptable on master's degree programs, of which at least 15 units must be in 200-numbered courses. 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 299, Thesis, as three of the 15 units of 200-level courses required.

In Plan B an alternative is offered to the thesis. This alternative consists of: (a) Sociology 297, or 298 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, and Sociology 297, or 298 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.

ASSISTANTSHIPS

Graduate teaching assistantships and graduate non-teaching assistantships in Sociology are available to a limited number of qualified students. Application blanks and further information may be obtained from the Chairman of the Department.

FACULTY

Chairman, Department of Sociology: T. L. Gillette, Ph.D.

Graduate Adviser: M. J. Daniels

Professors: M. J. Daniels, Ph.D.; J. R. DeLora, Ph.D.; M. M. El-Assal, Ph.D.; T. L. Gillette, Ph.D.; C. Dale Johnson, Ph.D.; B. C. Kirby, Ph.D.; D. S. Milne, Ph.D.; N. N. Mouratides, Ph.D.; Aubrey Wendling, Ph.D.; R. W. Winslow, Ph.D.

Associate Professors: R. E. Buck, Ph.D.; Shelly E. Chandler, Ph.D.; Joann S. DeLora, Ph.D.; R. E. Emerick, Ph.D.; W. C. Kennedy, Ph.D.; D. C. Scheck, Ph.D.; R. H. K. Schulze, Ph.D.; Joan T. Werner, Ph.D.

Assistant Professors: Ann W. Cottrell, Ph.D.; C. E. Drake, Ph.D.; Marilyn A. Halpern, B.A.; Kenji Ima, Ph.D.; Bohdan Kolodij, M.A.; David Preston, Ph.D.; J. S. Stephenson, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN SOCIOLOGY

UPPER DIVISION COURSES

- | | |
|---|--|
| 100. History of Social Thought (3) | 138. Sociology of Religion (3) |
| 103. Contemporary Sociological Theory (3) | 139. Sociology of Education (3) |
| 110. Social Disorganization (3) | 141. Advanced Social-Psychology: Sociological Approaches (3) |
| 111. Current Social Issues (3) | 145. Sociology of Mass Communication (3) |
| 112. Sociology of Conflict (3) | 146. Collective Behavior (3) |
| 113. Criminology and Penology (3) | 147. Sociology of Social Movements (3) |
| 114. Juvenile Delinquency (3) | 148. Small Groups (3) |
| 120. Industrial Sociology (3) | 150. Population Problems (3) |
| 121. Sociology of Occupations and Professions (3) | 151. Research Methods in Demography (3) |
| 123. Sociology of Mental Illness (3) | 157. Urban Sociology (3) |
| 124. Social Stratification (3) | 160. Quantitative Methods in Social Research (3) |
| 125. Minority Group Relations (3) | 164. Methods of Social Research (3) |
| 126. Medical Sociology (3) | 197. Investigation and Report (3) |
| 132. Formal Organization (3) | |
| 136. Sociology of the Family (3) | |
| 137. Political Sociology (3) | |

GRADUATE COURSES

- 200. Seminar in Social Theory (3)**
Prerequisites: Sociology 101 and 164.
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. Maximum credit six units applicable to a master's degree.
- 205. Directed Readings in Social Theory (3)**
Prerequisites: Sociology 101 and 164.
Selected readings providing comprehensive coverage of the field of social theory.
- 210. Seminar in Social Disorganization (3)**
Prerequisites: Sociology 110 and 164.
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. Maximum credit six units applicable to a master's degree.
- 215. Directed Readings in Social Disorganization (3)**
Prerequisites: Sociology 110 and 164.
Selected readings providing comprehensive coverage of the field of social disorganization.
- 220. Seminar in Social Organization (3)**
Prerequisites: Sociology 122 and 164.
Social groups, formal organization, organizational change, authority and leadership, special topics. See class schedule for specific content. Maximum credit six units applicable to a master's degree.
- 225. Directed Readings in Social Organization (3)**
Prerequisites: Sociology 122 and 164.
Selected readings providing comprehensive coverage of the field of social organization.
- 230. Seminar in Social Institutions (3)**
Prerequisites: Sociology 122 and 164.
The family and kinship, political organization, economic organization, religion, education, industry, occupations and professions, social stratification, special topics. See class schedule for specific content. Maximum credit six units applicable to a master's degree.
- 235. Directed Readings in Social Institutions (3)**
Prerequisites: Sociology 122 and 164.
Selected readings providing comprehensive coverage of the field of social institutions.
- 240. Seminar in Social Psychology: Sociological Approaches (3)**
Prerequisites: Sociology 140 and 164.
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. See class schedule for specific content. Maximum credit six units applicable to a master's degree.
- 245. Directed Readings in Social Psychology: Sociological Approaches (3)**
Prerequisites: Sociology 140 and 164.
Selected readings providing comprehensive coverage of the field of social psychology.
- 250. Seminar in the Community (3)**
Prerequisites: Sociology 157 and 164.
Ecological structure and process; community institutions and structure; community deterioration, planning and renewal; urbanization; suburbia; megalopolis; special topics. See class schedule for specific content. Maximum credit six units applicable on a master's degree.
- 255. Directed Readings in the Community (3)**
Prerequisites: Sociology 157 and 164.
Selected readings providing comprehensive coverage of the sociological study of human communities.
- 260. Seminar in Research Methods (3)**
Prerequisites: Sociology 101 and 164.
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 for additional credit. Six units maximum credit applicable on a master's degree.
- 265. Directed Readings in Research Methods (3)**
Prerequisite: Sociology 164.
Selected readings providing comprehensive coverage of sociological research methods.
- 270. Seminar in Population and Demography (3)**
Prerequisites: Sociology 164 and 150 or 151.
Demographic theories, fertility, mortality, migration, construction and application of demographic indices, demographic prediction, world population trends, special topics. See class schedule for specific content. Maximum credit six units applicable on a master's degree.
- 275. Directed Readings in Population and Demography (3)**
Prerequisites: Sociology 164 and 150 or 151.
Selected readings providing comprehensive coverage of the fields of population and demography.
- 297. Research (3) Cr/NC**
Prerequisite: Sociology 164.
Independent investigation of special topics.
- 298. Special Study (1-3) Cr/NC**
Prerequisite: Consent of staff; to be arranged with department chairman and instructor.
Individual study. Six units maximum credit.
- 299. 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.

SPANISH

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 THE GRADUATE DIVISION

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. 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 which includes a major consisting of at least 24 units in Spanish of which at least 18 units must be in 200-numbered courses, including Spanish 290 and either Spanish 299 in Plan A programs, or Spanish 294 in Plan B programs.

Students who plan to earn a standard teaching credential as well as the master's degree in Spanish will normally follow Plan B, which includes the passing of a comprehensive examination in lieu of the thesis.

ASSISTANTSHIPS

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

FACULTY

Chairman, Department of Spanish and Portuguese Languages and Literatures: G. L. Head, Ph.D.

Graduate Advisers: C. H. Baker (Coordinator), George Lemus

Credential Adviser: C. H. Baker

Professors: C. H. Baker, Ph.D.; T. E. Case, Ph.D.; G. L. Head, Ph.D.; George Lemus, Ph.D.; J. L. Walsh, Ph.D.

Associate Professors: E. M. Barrera, Ph.D.; Joaquín Santaló, Ph.D.; G. V. Segade, Ph.D.; Florence I. Talamantes, Ph.D.; R. D. Weeter, Ph.D.

Assistant Professors: C. B. Christensen, Ph.D.; A. Jiménez-Vera, Ph.D.; Mary E. O'Brien, Ph.D.; H. H. Windsor, M.A.; R. R. Young, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN SPANISH

UPPER DIVISION COURSES

Spanish

- | | |
|---|---|
| 104A-104B. Spanish-American Literature (3-3) | 112. Contemporary Spanish Novel (3) |
| 105A-105B. Modern Spanish Drama (3-3) | 130. Poetry of the Spanish Golden Age (3) |
| 106A-106B. Mexican Literature (3-3) | 131. Prose of the Spanish Golden Age (3) |
| 107. Caribbean Area Countries Literature (3) | 132. Drama of the Spanish Golden Age (3) |
| 108. Andean Countries Literature (3) | 149. Spanish Linguistics (3) |
| 109. River Plate Literature (3) | 150. Phonetics and Phonemics (3) |
| 110. Nineteenth-Century Spanish Novel and Short Story (3) | 170. Spanish-American Poetry (3) |
| 111. Twentieth-Century Spanish Novel and Short Story (3) | 171. Spanish-American Short Story (3) |
| | 172. Spanish-American Theatre (3) |
| | 180. Modern Spanish Poetry (3) |

Portuguese

- | | |
|--------------------------------|-------------------------------|
| 134. Portuguese Literature (3) | 135. Brazilian Literature (3) |
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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

All graduate courses in the Department of Spanish and Portuguese Languages and Literatures have a prerequisite of 12 units of upper division courses in Spanish, or consent of instructor.

201. History of the Spanish Language (3)

Prerequisite: Credit or concurrent enrollment in Spanish 149 or 150.

The development of the Spanish language in Spain and Spanish America, with particular attention to the phonology, morphology, and syntax of medieval Spanish.

202. Cervantes (3)

The principal prose works of Cervantes: *The Novelas ejemplares* and *Don Quixote*.

203. Lope de Vega and Calderon (3)

The works of Lope de Vega and Calderon.

204. The Spanish-American Novel (3)

The Spanish-American novel to 1935.

205. The Gaucho Epic (3)

The *Poesía gauchesca*, with particular emphasis on *Martín Fierro*, *Fausto*, and *Santos Vega*.

206. Modernism (3)

The *Modernista* movement in Spanish America, with special attention to representative poets.

207. Medieval Spanish Literature (3)

Prerequisite: Spanish 201.

The literature of Spain from the earliest extant works to the *Celestina*.

208. The Modern Spanish Essay (3)

The thinkers, essayists, and philosophers of Spain from the generation of 1898 to the present.

209. The Spanish-American Essay (3)

Principal Spanish-American essayists of the 19th and 20th centuries.

210. Contemporary Spanish-American Prose Fiction (3)

The principal writers of prose fiction in Spanish America from the mid-thirties to today.

220. Seminar in Spanish Golden Age Literature (3)

A representative author, a genre or movement of the Spanish Golden Age. Maximum credit six units applicable on a master's degree.

230. Seminar in 19th Century Spanish Literature (3)

A representative author, a genre or movement of the 19th century in Spain. Maximum credit six units applicable on a master's degree.

240. Seminar in 20th Century Spanish Literature (3)

A representative author, a genre or movement of the 20th century in Spain. Maximum credit six units applicable on a master's degree.

250. Seminar in Spanish-American Literature (3)

A genre or movement of Spanish America. Maximum credit six units applicable on a master's degree.

255. Seminar in Spanish-American Culture and Thought (3)

Works of representative authors of Spanish America. Maximum credit six units applicable on a master's degree.

260. Seminar in Medieval Spanish Literature (3)

A representative author of the medieval period. Maximum credit six units applicable on a master's degree.

270. Applied Spanish Linguistics for Teachers (3)

Prerequisite: Spanish 149 or 150.
The application of linguistic theory to the teaching of Spanish at the secondary and college levels.

290. Research and Criticism (3)

Purposes and methods of research in the fields of language and literature, including bibliography, literary terms, and textual criticism.

294. Comprehensive Reading and Survey Course (3)

Prerequisite: Consent of graduate adviser and department chairman.
A study of important movements, authors, and works in Spanish literature. Designed to supplement the reading done in previous courses, in preparation for the comprehensive examination in literature for candidates for the Master of Arts degree.

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

Prerequisite: Consent of staff, to be arranged with department chairman and instructor.
Individual study. Six units maximum credit.

299. 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.

SPEECH COMMUNICATION

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, communication, and interpretation. An emphasis in oral interpretation within the speech communication degree program is also available.

ADMISSION TO THE GRADUATE DIVISION

In addition to the general requirements for admission to the Graduate Division 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.

ADVANCEMENT TO CANDIDACY

All students must meet the general requirements for advancement to candidacy, which are described in Part Three of this bulletin. In addition, students seeking the Master of Arts degree in Speech Communication are required to have attained classified graduate standing and to have completed Speech Communication 200.

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 24 units from courses listed below as acceptable on master's degree programs in speech of which at least 18 units must be in 200-numbered courses. Speech Communication 200, 235, 250, 251 or 290, and 299 (Thesis) are required courses for those electing Plan A. If Plan B is followed six additional units in 200-numbered courses in speech communication must be taken, and a comprehensive examination must be passed in lieu of the thesis.

Emphasis in Oral Interpretation

The requirements for students electing an emphasis in oral interpretation are as follows:

- (1) A minimum of 30 units, including at least 21 units of 200-numbered courses.
- (2) Speech Communication 200 (3), 208 (6), 235 (3), 250 (3), and 298 (3).
- (3) Nine units to be taken from the courses listed below:

(2) Speech Communication					
(3) Nine units to be taken from the courses listed below					
	<i>English</i>		150.	The History of Literary Criticism (3)	
104. Milton (3)			153.	Modern Criticism (3)	
114A or 114B. Nineteenth Century British Poetry (3)			243.	Poetry (3)	
115. Nineteenth Century British Prose (3)			291.	Seminar: A Major Author (3)	
116. Modern British Poetry (3)			292.	Seminar: A Cultural Period (3)	
117. Modern British Fiction (3)			293.	Seminar: A Literary Problem (3)	
118. Modern British Drama (3)				<i>Drama</i>	
121A or 121B. English Fiction (3)			120.	Play Analysis (3)	
134. Modern American Fiction (3)			122.	Playwriting the One-Act Play (3)	
135. Modern American Poetry (3)			160A or 160B.	History of the Theatre (3)	
136. American Drama (3)			247.	Seminar in History of Theatre and Drama (3)	
140. Poetry (3)			248.	Seminar in Dramatic Theory (3)	
144. Drama (3)					
149. Topics in the Study of Literary Genres (3)					

- (4) Speech Communication 299, Thesis (3)

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 Chairman.

FACULTY

Chairman, Department of Speech Communication: F. C. Sanders, Ph.D.
 Graduate Adviser: F. C. Sanders
 Professors: W. J. Adams, Ph.D.; R. L. Benjamin, Ph.D.; Jack Mills, Ph.D.; L. A. Samovar, Ph.D.
 Associate Professor: F. C. Sanders, Ph.D.
 Assistant Professors: D. M. Hunsaker, J.D.; S. W. King, Ph.D.; Meredith Moore, Ph.D.; A. R. Weitzel, Ph.D.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN SPEECH COMMUNICATION

UPPER DIVISION COURSES

- | | |
|--|--|
| 108. Advanced Interpretation (3)
130. Semantics (3)
135. Theories of Human Communication (3)
137. Empirical Study in Speech Communication (3)
152. Rhetorical Theory and Criticism 400 A.D. to 1900 (3)
154. Contemporary Rhetorical Theory and Criticism (3) | 162. Advanced Argumentation (3)
189. Ethics of Speech Communication (3)
191. Group Communication (3)
192A. Advanced Public Speaking (3)
192B. Persuasion (3)
194. History of Public Address (3)
198. Selected Topics in Speech Communication (3) # |
|--|--|

Not more than three units of Speech Communication 198 are acceptable on master's degree programs in Speech Communication.

GRADUATE COURSES

200. **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.
208. **Seminar in Oral Interpretation** (3)
 Prerequisite: Speech Communication 108.
 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. May be repeated with new content for maximum of six units.
230. **Seminar in the Analysis of Language** (3)
 Prerequisite: Speech Communication 130.
 Special problems in language theory which may be integrated into the larger bodies of rhetorical and communication theory.
235. **Seminar in Communication Theory** (3)
 Prerequisite: Speech Communication 135.
 Theories of communication; communication models, codes, perception and effects.
250. **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.
251. **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.
262. **Seminar in Argumentation** (3)
 Prerequisite: Speech Communication 162.
 Significant topics in argumentation: the formulation of problems for argument; analysis; the brief with patterns of argument, traditional and recent; presumption; probability; laws of evidence; fallacies.
280. **Seminar in Public Address, 1600-1850** (3)
 Examination of the problems confronting American speakers and the solutions they offered. Special emphasis placed on the rhetorical means used to solve major crises in American history.
281. **Seminar in American Public Address, 1850 to Present** (3)
 Examination of the problems confronting American speakers and the solutions they offered. Special emphasis placed on the rhetorical means used to solve major crises in American history.
282. **Seminar: Contemporary American Public Address** (3)
 Prerequisites: Speech Communication 192A or 192B.
290. **Experimental Procedures in Speech Communication** (3)
 Prerequisites: Credit or concurrent registration in Speech Communication 192B and 200.
 Examination and evaluation of appropriate experimental procedures and traditional methods; special problems in research design.
291. **Seminar in Group Discussion Theory** (3)
 Prerequisite: Speech Communication 191.
 A study of descriptive and experimental literature on group discussion covering such topics as interaction, leadership, and means of evaluation.
292. **Seminar in Persuasion** (3)
 Prerequisite: Speech Communication 192B.
 Contemporary theories and models of persuasion, methods of assessing persuasive effect, and analysis of research literature.
293. **Seminar: Greek and Roman Public Address** (3)
 Prerequisites: Speech Communication 150 and 192A or 192B.
294. **Seminar: 18th Century British Public Address** (3)
 Prerequisites: Speech Communication 192A or 192B.
298. **Special Study** (1-3) Cr/NC
 Individual Study. Six units maximum credit.
 Prerequisite: Consent of staff; to be arranged with department chairman and instructor.
299. **Thesis or Project** (3) Cr/NC
 Prerequisite: An officially appointed thesis committee and advancement to candidacy.
 Preparation of a project or thesis for the master's degree.

SPEECH PATHOLOGY AND AUDIOLOGY

GENERAL INFORMATION

The Department of Speech Pathology and Audiology, in the College of Professional Studies, offers graduate study leading to the Master of Arts degree in Speech Pathology and Audiology, to the Restricted Credential Authorizing Service as a Speech and Hearing Specialist (Plan II), and to the Standard Credential to teach the Deaf. 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, offering observation and diagnostic and therapeutic experience with outpatient children and adults. Field experience is offered in the public schools and the San Diego Speech and Hearing Center, Children's Hospital. Additional opportunities for practicum and observation experiences include the United Cerebral Palsy Center, the Home of Guiding Hands (mental retardation), Anderson and Lafayette schools (deaf and severely hard of hearing), the Head Start programs (disadvantaged), Rolando School (congenital aphasia), the University of California Medical School Hospital, and the U.S. Naval Hospital, Balboa Park, and Veteran's Administration Hospital.

ADMISSION TO THE GRADUATE DIVISION

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.

ADVANCEMENT TO CANDIDACY

All students must meet the general requirements for advancement to candidacy, which are 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 attained classified graduate standing and to have completed Speech Pathology and Audiology 200.

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, of which 15 units must be in 200-numbered courses in speech pathology and audiology, including Speech Pathology and Audiology 200, Research and Bibliography, and Speech Pathology and Audiology 245 or 246 or 256 if 145 or 146 or 156 was not taken as an undergraduate, and Speech Pathology and Audiology 299, Thesis, for the student electing Plan A. If Plan B is elected the student must complete a research project as approved by the Department, complete 2 units of Speech Pathology and Audiology 297, Research, and pass a comprehensive examination (which may be repeated only once) in lieu of the thesis.

FACULTY

Chairman, Department of Speech Pathology and Audiology: Harriet G. Kopp, Ph.D.
 Graduate Adviser: A. C. Nichols
 Credential Adviser: Speech and Hearing Specialist: E. L. Thile
 Credential Adviser: Deaf: Harriet G. Kopp
 Professors: Harriet G. Kopp, Ph.D.; A. C. Nichols, Ph.D.
 R. M. Riedman, Ph.D.
 Associate Professors: K. D. Dimmick, Ph.D.; E. L. Thile, Ph.D.
 Assistant Professors: Elizabeth J. Allen, Ph.D.; Leonard Ellis, Ph.D.; Sally A. Wood, M.A.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN SPEECH PATHOLOGY AND AUDIOLOGY

UPPER DIVISION COURSES

- | | |
|---|--|
| 127. Diagnostic Methods in Speech Pathology (3) | 147. Hearing Conversation (3) |
| 128. Diagnostic Practicum in Speech Pathology (3) | 150. Education of Deaf Children (3) |
| 130. Family Communication Dynamics (3) | 151. Speech Reading and Auditory Training (3) |
| 131. Language Structure (3) | 152. Speech for the Hearing Impaired (3) |
| 132. Assessment of Language Disorders (3) | 153. Language for the Hearing Impaired (3) |
| 143. Hearing Amplification (1-3) | 198. Selected Topics in Speech Pathology and Audiology (1-3) # |

Not more than three units of Speech Pathology and Audiology 198 are acceptable on master's degree programs in Speech Pathology and Audiology.

GRADUATE COURSES

200. Research and Bibliography (3)
 Bibliographical techniques in 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.

201. Voice Science (3)
 Prerequisite: Speech Pathology and Audiology 120.
 Relationship of basic principles of sound to the speech mechanism. Analysis of speech sound production. Application of mechanical and electronic equipment to speech.

202. Problems of Aphasia (3)
 Prerequisite: Speech Pathology and Audiology 121.
 Evaluation of aphasia, familiarity with diagnostic tools, theories of aphasia, and therapy for persons with disorders of symbolization (adult and congenital aphasia). It is recommended that the student take one unit of Speech Pathology and Audiology 226 concurrently with this course.

203. Problems of Cerebral Palsy (3)
 Prerequisites: Speech Pathology and Audiology 123 and 124.
 Evaluation, theories of treatment and therapy for persons with speech disorders in cerebral palsy. It is recommended that the student take one unit of Speech Pathology and Audiology 226 concurrently with this course.

204. Problems in Cleft Palate and Orofacial Anomalies (3)
 Prerequisites: Speech Pathology and Audiology 123, 124, 140.
 Minimum of 75 hours of supervised clinical practicum.
 Ethiological considerations, evaluation and remediation of individuals with orofacial anomalies and cleft palate. Concurrent registration in Speech Pathology and Audiology 226 is recommended.

205. Problems of Stuttering (3)
 Prerequisite: Speech Pathology and Audiology 122.
 Differential diagnosis of stuttering, theories of stuttering, individual and group therapy for children and adults with dysfluency problems. It is recommended that the student take one unit of Speech Pathology and Audiology 226 concurrently with this course.

206. Problems of Voice Pathology (3)
 Prerequisites: Speech Pathology and Audiology 123 and 124.
 Structural medical and functional voice problems. Differential diagnosis of vocal anomalies, theories and therapy for vocal problems. It is recommended that the student take one unit of Speech Pathology and Audiology 226 concurrently with this course.

226. Advanced Clinical Practice in Speech Pathology (1 or 2)

Two hours for each unit of credit.

Prerequisite: Speech Pathology and Audiology 124.

Supervised work with representative advanced speech cases such as stuttering, aphasia, laryngectomies, etc. Maximum credit four units. Maximum credit four units of 226, 245, and/or 246 applicable on a master's degree.

228. Advanced Diagnostic Methods in Speech Therapy (3)

Prerequisites: Speech Pathology and Audiology 126 and 128.

Diagnosis of individuals with complicated speech problems as brain injury, congenital aphasia, adult aphasia, cerebral palsy, hearing loss, laryngectomy, mental retardation, stuttering and voice problems.

240. Medical Audiology (3)

Prerequisites: Speech Pathology and Audiology 145 and 244.

Problems of diagnosis, referral and report writing. Testing in a medical setting and medically significant hearing pathologies.

244. Audiology (3)

Prerequisite: Speech Pathology and Audiology 141.

Psychophysical concepts underlying clinical audiology. Relationship of audiologic test results to the conditions under which they were obtained.

245. Advanced Clinical Practice in Audiologic Assessment (1-2)

Two hours for each unit of credit.

Prerequisite: Speech Pathology and Audiology 244.

Advanced casework in hearing evaluation. Maximum credit four units. Maximum credit four units of Speech Pathology and Audiology 226 and 245 applicable on a master's degree.

246. Advanced Clinical Practice with Hard of Hearing (1-2)

Two hours for each unit of credit.

Prerequisite: Speech Pathology and Audiology 151.

Supervised practice with problem hearing cases. Maximum credit four units of Speech Pathology and Audiology 226, 245, and 246 applicable on a master's degree.

249. Seminar in Audiology (3)

Prerequisite: Speech Pathology and Audiology 244.

Major research in clinical audiology. Audiologic techniques used in differential diagnosis. Maximum credit six units applicable on a master's degree.

254. Physiological Phonetics (3)

Prerequisite: Speech Pathology and Audiology 152.

Physiology underlying the production of continuous speech, including transitional movements, based upon a syllabic concept.

256. Advanced Field Work with the Deaf (1-3)

Two hours for each unit of credit.

Prerequisites: Speech Pathology and Audiology 152 and 153.

Supervised clinic practicum at an advanced level with representative deaf cases. Maximum credit six units of Speech Pathology and Audiology 256 and 257 applicable on a master's degree.

257. Differential Diagnosis of the Hearing Impaired (3)

Prerequisite: Speech Pathology and Audiology 6, 150, 151, or 127.

Diagnosis of multiply-handicapped, hearing impaired children, including clinical teaching; assessment methods; materials and equipment; prognosis; current philosophies and trends. Maximum credit six units of Speech Pathology and Audiology 256 and 257 applicable on a master's degree. Twenty-six hours observation are included.

258. Seminar in Deaf Education (3)

Prerequisites: Speech Pathology and Audiology 150, 156; Education 179.

Problems of deafness, evaluation of research, interdisciplinary approach to habilitation.

297. Research (2) Cr/NC

Prerequisite: Advancement to candidacy and consent of graduate adviser.

Research in speech pathology, deaf education or audiology. Maximum credit two units applicable on a master's degree.

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

Individual study. Six units maximum credit.

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

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.

TELECOMMUNICATIONS AND FILM

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 public television producing and directing, telecommunications management, instructional telecommunications, and film production and direction. In addition, the department participates in the Master of Science degree in Mass Communications (see separate listing). Facilities now in use include a two-studio television production center, a five-control room, a three-studio radio complex, 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.

ADMISSION TO THE GRADUATE DIVISION

In addition to the general requirements for admission to the Graduate Division with classified graduate standing, as described in Part Three of this bulletin, the student must have earned a grade point average of not less than 3.0 on the last 60 units of his undergraduate program.

ADVANCEMENT TO CANDIDACY

All students must meet the general requirements for advancement to candidacy, which are described in Part Three of this bulletin. In addition, students seeking the Master of Arts degree in Radio and Television are required to have attained classified graduate standing and to have completed Telecommunications and Film 200.

SPECIFIC REQUIREMENTS FOR THE MASTER OF ARTS DEGREE IN RADIO AND TELEVISION

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 radio and television, of which a minimum of 15 units must be in 200-numbered courses, including Telecommunications and Film 200 and 299.

ASSISTANTSHIPS

Graduate teaching 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 Chairman.

FACULTY

Chairman, Department of Telecommunications and Film: K. C. Jameson, Ph.D.
Graduate Adviser: D. G. Wylie
Professors: K. K. Jones, M.A.; R. E. Lee, M.A.; R. P. Madsen, Ph.D.
Associate Professors: H. L. Anderson, Ph.D.; Elizabeth J. Heighton, M.S.; K. C. Jameson, Ph.D.; J. S. Johnson, Ph.D.; D. R. Martin, Ph.D.; D. G. Wylie, Ph.D.
Assistant Professors: Thomas Meador, M.A.; R. A. Misiorowski, M.F.A.

COURSES ACCEPTABLE ON MASTER'S DEGREE PROGRAMS IN RADIO AND TELEVISION

UPPER DIVISION COURSES

Telecommunications and Film

- | | |
|--|--|
| 101. Broadcast Management (3) | 163. International Cinema (3) |
| 103. Broadcast Advertising (3) | 165. Animated Film Techniques (3) |
| 104. Broadcast Commercial Practices (3) | 168A-168B. Film Production (3-3) |
| 105. Regulation of Broadcasting (3) | 170. Educational Telecommunications (3) |
| 108. International Broadcasting (3) | 180. Directing Television and Film Drama (3) |
| 110. Writing and Producing for Broadcasting and Film (3) | 181. Acting for TV and Film (3) |
| 130. Radio Programming (3) | 183. Advanced Programming and Development for Television (4) |
| 156. Advanced Lighting and Staging for Television and Film (4) | 184. Advanced Television Directing (4) |
| 162. Film Techniques (3) | 198. Selected Topics in Telecommunications and Film (3) # |

Not more than three units in Telecommunications and Film 198 are acceptable on master's degree in Radio and Television.

GRADUATE COURSES

Telecommunications and Film

200. 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. Recommended for first semester of graduate work, and prerequisite to advancement to candidacy.
201. 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.
202. Seminar in Broadcast Advertising Problems (3)
Prerequisite: The equivalent of an undergraduate major in telecommunications and film.
Analysis of the 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.
203. 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 upon broadcasting in the U.S.
205. Mass Communications Research (3)
Prerequisite: Telecommunications and Film 200.
Design and execution of a media research project; audience and message analysis; experimental design and survey research methodology.
207. Seminar in Broadcast Law and Regulations (3)
Prerequisite: Telecommunications and Film 105.
Analysis of legal concepts and issues as applied to commercial and noncommercial broadcasting; relationship of local, state, and federal government to broadcast media.
210. Seminar in Writing for Broadcast and Film (3)
Prerequisites: Telecommunications and Film 110, 162, and 163.
Dramatic structures as they apply to broadcasting and cinema. Writing a full-length script or scenario.

212. Criticism of Broadcasting and Cinema (3)

Prerequisites: 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.

268. Directing the Dramatic Film (3)

Prerequisites: Telecommunications and Film 168, 180 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.

270. Seminar in Educational Telecommunications (3)

Prerequisite: The equivalent of an undergraduate major in telecommunications and film or educational technology.

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.

272. Seminar in Mass Communication Theory (3)

Prerequisite: Speech Communication 135.

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.

273. Mass Communications Message Design (3)

Prerequisite: Speech Communication 135.

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.

275. Teaching Broadcasting and Film (3)

Broadcast and film curriculum development. Methods of teaching both theory and lab courses in broadcasting and film. Analysis of organizations for administering broadcast and film curriculums in colleges and universities with public TV stations and/or on-campus instructional TV systems.

284. Seminar in Programming and Production (3)

Prerequisite: The equivalent of an undergraduate major in telecommunications and film.

Theory and analysis of programming and production of broadcasting.

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

Individual study. Six units maximum credit.

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

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.

GRADUATE COURSES

IN

RECREATION

204. Problems in Recreation (3) (Alternate years)

(Same course as Physical Education 204)

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.

205. Park Management (3) (Alternate years)

Prerequisite: Recreation 165.

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.

260. Recreation Administration and Supervision (3) (Alternate years)

Prerequisites: Recreation 165 and 184.

Methods, techniques and evaluation systems used by chief administrators, department heads and supervisors in both public and private agencies.

261. Seminar in Specialized Facilities (3)

Prerequisite: Recreation 175.

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.

APPENDIX

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 and fourteen of the nineteen campuses received 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 is offered jointly with the University of California.

Presently, under the system's "New Approach 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 underway 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 1973 totaled nearly 290,000 students, who were taught by a faculty of 16,000. Last year the system awarded over 55 percent of the bachelor's degrees and 35 percent of the master's degrees granted in California. Over 400,000 persons have been graduated from the nineteen campuses since 1960.

BOARD OF TRUSTEES OF THE CALIFORNIA STATE UNIVERSITY AND COLLEGES

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Los Angeles, California 90036

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Speaker of the Assembly	
Hon. Wilson C. Riles	721 Capitol Mall, Sacramento 95814
State Superintendent of Public Instruction	
Dr. Glenn S. Dumke	5670 Wilshire Blvd., Los Angeles 90036
Chancellor of The California State University and Colleges	

APPOINTED TRUSTEES

The term of the appointed trustees is eight years, and terms expire March 1 of the years indicated in parentheses. Names are listed in order of accession to the board.

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9220 Sunset Boulevard
Los Angeles 90069 | Robert F. Beaver (1976)
254 East 27th Street
Los Angeles 90011 |
| Daniel H. Ridder (1975)
604 Pine Avenue
Long Beach 90801 | Roy T. Brophy (1980)
2160 Royale Rd., Suite 20
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111 Sutter Street
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1064 Creek Drive
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P.O. Box 2073
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San Rafael 94901 | Frank P. Adams (1981)
235 Montgomery Street
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810 South Flower Street
Los Angeles 90017 | Richard A. Garcia (1979)
P.O. Box 2073
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45 Montgomery Street
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P.O. Box 5166
Walnut Creek 94596 |
| Mrs. Winifred H. Lancaster (1977)
P.O. Drawer JJ
Santa Barbara 93102 | * Dr. Claudia H. Hampton (1982)
450 North Grand, Room G-53
Los Angeles 90012 |
| Gene M. Benedetti (1978)
8990 Poplar Avenue
Cotati 94952 | * Mrs. Yvonne W. Larsen (1975)
1405 Savoy Circle
San Diego 92107 |

* Subject to confirmation by California State Senate.

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OFFICE OF THE CHANCELLOR OF THE CALIFORNIA STATE UNIVERSITY AND COLLEGES

5670 Wilshire Boulevard
Los Angeles, California 90036
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|--|--------------------|
| Chancellor | Glenn S. Dumke |
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| Vice Chancellor, Academic Affairs | Alex C. Sheriffs |
| Vice Chancellor, Business Affairs | D. Dale Hanner |
| Vice Chancellor and General Counsel | Norman L. Epstein |
| Vice Chancellor, Physical Planning and Development | Harry Harmon |

THE CALIFORNIA STATE UNIVERSITY AND COLLEGES

- | | |
|--|--|
| California State College, Bakersfield
9001 Stockdale Highway
Bakersfield, California 93309
Philip S. Wilder, Jr.,
Vice President-in-Charge
(805) 833-2011 | California State Polytechnic
University, Pomona
3801 West Temple Avenue
Pomona, California 91768
Robert C. Kramer, President
(714) 598-4592 |
| California State University, Chico
1st & Normal Streets
Chico, California 95926
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(916) 345-5011 | California State University, Sacramento
6000 J Street
Sacramento, California 95819
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(916) 454-6011 |
| California State College,
Dominguez Hills
1000 E. Victoria Street
Dominguez Hills, California 90747
Leo F. Cain, President
(213) 532-4300 | California State College, San Bernardino
5500 State College Parkway
San Bernardino, California 92407
John M. Pfau, President
(714) 887-6311 |
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Shaw and Cedar Avenues
Fresno, California 93710
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(209) 487-9011 | San Diego State University
5402 College Avenue
San Diego, California 92115
Brage Golding, President
(714) 286-5000 |
| California State University, Fullerton
Fullerton, California 92634
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(714) 870-2011 | Imperial Valley Campus
720 Heber Avenue
Calxico, California 92231
(714) 357-3721 |
| California State University, Hayward
25800 Hillary Street
Hayward, California 94542
Ellis E. McCune, President
(415) 884-3000 | San Francisco State University
1600 Holloway Avenue
San Francisco, California 94132
Paul F. Romberg, President
(415) 469-2141 |
| Humboldt State University
Arcata, California 95521
Milton Dobkin, Acting President
(707) 826-3011 | San Jose State University
125 South Seventh Street
San Jose, California 95192
John H. Bunzel, President
(408) 277-2000 |
| California State University, Long Beach
6101 East Seventh Street
Long Beach, California 90840
Stephen Horn, President
(213) 498-4111 | California Polytechnic State University,
San Luis Obispo
San Luis Obispo, California 93407
Robert E. Kennedy, President
(805) 546-0111 |
| California State University, Los Angeles
5151 State University Drive
Los Angeles, California 90032
John A. Greenlee, President
(213) 224-0111 | California State College, Sonoma
1801 East Cotati Avenue
Rohnert Park, California 94928
Thomas H. McGrath, President
(707) 795-2880 |
| California State University, Northridge
18111 Nordhoff Street
Northridge, California 91324
James W. Cleary, President
(213) 885-1200 | California State College, Stanislaus
800 Monte Vista Avenue
Turlock, California 95380
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(209) 634-9101 |

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Associate Members

Mrs. George Coltrin	President, San Diego Branch, American Association of University Women
Mrs. H. Maurice Linette	President, Ninth District, California Congress of Parents and Teachers, Inc.
Robert P. Battenfield	President, Alumni Association, San Diego State University

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